



## MotionGrade™ DIN M23/M40 Connectors and Servo Cable



 MOTIONGRADE™ Family

[www.amphenol-sine.com](http://www.amphenol-sine.com) | +1 800 394 7732



# We Are Amphenol

## Global Interconnect Solution Supplier

For over 80 years Amphenol has enjoyed success as the interconnection technology provider of choice for industry leading companies around the world. Our organization works with leading manufacturers across a wide range of applications - including Energy Generation & Distribution, Transportation, Heavy Equipment, Factory Automation, Wireless Outdoor, Information Technology and Data Communications Equipment, Mobile Devices, Mobile Networks, Broadband Communication, Military and Commercial Aerospace, Industrial, Automotive and Chip Card Readers - enabling smarter, faster and better technologies to connect products to customer solutions.

Our engineers design innovative combinations of industry standard connectors and application specific shielding components to create assembly systems that set the standards for performance, reliability, and cost effectiveness. Our engineering, materials, and manufacturing organizations meet the high standards imposed by ISO 9001:2008 as well as many customer specific quality systems. Our performance has earned us ship to stock and world class performance awards from many major OEMs.

We are one of the largest interconnect solution suppliers in the world and supply a wide range of product solutions globally. The industrial market footprint of Amphenol covers more than 30 countries.



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# MotionGrade™ DIN M23/M40

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### Connector Solutions M23 Elite Series

#### Signal

12 POSITIONS 10A / 160V E type	Checkmate™ Quick Locking	33
12 POSITIONS 10A / 160V E type	Threaded	37
12 POSITIONS 10A / 160V P type	Checkmate™ Quick Locking	41
12 POSITIONS 10A / 160V P type	Threaded	45
16 POSITIONS 9A / 125V E type	Checkmate™ Quick Locking	49
16 POSITIONS 9A / 125V E type	Threaded	53
16 POSITIONS 9A / 125V P type	Checkmate™ Quick Locking	57
16 POSITIONS 9A / 125V P type	Threaded	61
17 POSITIONS 9A / 125V E type	Checkmate™ Quick Locking	65
17 POSITIONS 9A / 125V E type	Threaded	69
17 POSITIONS 9A / 125V P type	Checkmate™ Quick Locking	73
17 POSITIONS 9A / 125V P type	Threaded	77

#### Power

6 POSITIONS 28A / 630V	Checkmate™ Quick Locking	81
6 POSITIONS 28A / 630V	Threaded	87
8 (4+4) POSITIONS Power 30A/ 630V Signal 10A/ 250V	Checkmate™ Quick Locking	93
8 (4+4) POSITIONS Power 30A/ 630V Signal 10A/ 250V	Threaded	99
9 (4+5) POSITIONS Power 30A/ 630V Signal 10A/ 250V	Checkmate™ Quick Locking	105
9 (4+5) POSITIONS Power 30A/ 630V Signal 10A/ 250V	Threaded	111

### M23 Hybrid Series

8 POSITIONS 18A PE/1A Signal/0.5A Quadrax / 850V PE & Signal/ 30V Quadrax	117
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## Connector Solutions M23 Standard Series

### Signal

12 POSITIONS 10A / 160V E type	Checkmate™ Quick Locking & Threaded	121
12 POSITIONS 10A / 160V P type	Checkmate™ Quick Locking & Threaded	129
16 POSITIONS 9A / 125V E type	Checkmate™ Quick Locking & Threaded	139
16 POSITIONS 9A / 125V P type	Checkmate™ Quick Locking & Threaded	147
17 POSITIONS 9A / 125V E type	Checkmate™ Quick Locking & Threaded	155
17 POSITIONS 9A / 125V P type	Checkmate™ Quick Locking & Threaded	165
19 POSITIONS 7A / 63V E type	Checkmate™ Quick Locking & Threaded	175
19 POSITIONS 7A / 63V P type	Checkmate™ Quick Locking & Threaded	181

### Power

6 POSITIONS 28A / 630V	Checkmate™ Quick Locking & Threaded	187
8 (4+4) POSITIONS Power 30A/ 630V Signal 10A/ 250V	Checkmate™ Quick Locking & Threaded	197
9 (4+5) POSITIONS Power 30A/ 630V Signal 10A/ 250V	Checkmate™ Quick Locking & Threaded	207
9 (3+6) POSITIONS Power 30A/ 250V Signal 10A/ 630V	Checkmate™ Quick Locking & Threaded	217

## Connector Solutions M40 Series

### Power

6 (4+2) POSITIONS Power 75A/ 630V Signal 30A/ 250V	Checkmate™ Quick Locking	225
6 (4+2) POSITIONS Power 75A/ 630V Signal 30A/ 250V	Threaded	229
8 (4+4) POSITIONS Power 75A/ 630V Signal 30A/ 250V	Checkmate™ Quick Locking	233
8 (4+4) POSITIONS Power 75A/ 630V Signal 30A/ 250V	Threaded	237

## Assembly Instructions

M23 Elite Series 12,16,17 Position Plug Assembly Instructions	240
M23 Elite Series 6,8,9 Position Plug Assembly Instructions	244
M23 Elite Series 12,16,17 Position 90° Receptacle Assembly Instructions	248
M23 Elite Series 6,8,9 Position 90° Receptacle Assembly Instructions	251
M23 Standard Series Straight Receptacle Assembly Instructions	255
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# Standard Products. Custom Solutions.

Our MotionGrade™ DIN Style Automation product lines, which include M23, Checkmate™, Hybrid DMC and the M40 Series, have key placement in all areas of automation. Based on our superior build quality, high-performance capabilities and compatibility with existing standard products industry-wide, our MotionGrade™ DIN Style products are the right choice for your interconnect needs.

We can custom design, engineer and manufacture cable assemblies to your exact customer specifications and produce them in large or small quantities, manufactured at the industry's highest standards. Delivered on-time and in-specification, all with a significant cost-savings over the competition.

The cost savings derived by combining Michigan based program management & engineering and our low-cost production centers in North America and Asia allows our team to work with you to design the most cost-efficient and reliable interconnect system available on the market today.

## MOTIONGRADE™ Family



# Features and Benefits

## Superior Shielding

First quality components coupled with a simplistic design provide maximum EMI/RFI shielding capabilities while reducing assembly preparation times.

## Cable Strain Relief

Your choice of the innovative design features of FlexGrip™, Metrifi™, or traditional cable strain relieving similar to existing standard systems.

For an ovemolded option, the Metrifi™ Strain Relief System provides maximum 360° EMI/RFI shielding, with advanced sealing capability

## Fluid Resistance and Sealing

In combination with our strain relief systems, Amphenol utilizes advanced sealing technologies & materials to ensure highest reliability when subjected to the harshest environments.

## RoHS Compliant

RoHS All materials meet the requirements of the European Directive 2002/95/EC, Issue 13.2.2003.

## Approvals

ISO 9001/2000, UL Listed, E224856, CYJV2/CYJV8

Our Standard Series M23 products have ECBT2 UL list E336860

All Elite Products are UL E491265



# MotionGrade™ DIN M23/M40 Connectors and Servo Cable

## Typical Applications



INDUSTRIAL



ON-MACHINE



PACKAGING MACHINERY



DISTRIBUTED POWER



MOTION CONTROL



ENTERTAINMENT



MEDICAL



COMMUNICATIONS



RENEWABLE ENERGY

# MotionGrade™ DIN M23/M40 Connectors and Servo Cable

## Product Overview

Amphenol Sine Systems' MotionGrade™ M23 and M40 Connector Systems are designed to excel in performance and reliability in our customers' most demanding environments. Amphenol's MotionGrade™ M23 and M40 products are ideally suited for advanced servo drive encoder feedback applications, packaging, robotic, printing, machine tool, medical and automation environments where control signal transmission or power are required in a robust and compact delivery system.

## INTRODUCING the ELITE™ SERIES



Starting at page 33

### M23 Elite Threaded and Checkmate™ Series State-of-the-art Design Features

6, 8, 9, 12, 16 and 17 positions available

- Next Generation Single Pc Design
- Reduced Cost
- Faster Assembly
- Checkmate™ Coupling.  
(See page 22 for more details)
- Compatible with other industry standard products
- Loose Pc Insert Assembly
- Ground Protection
- Industry Standard Insert Design
- 360° Shielding

### M23 Standard Threaded and Checkmate™ Series Offering Expanded Connector Options

6, 8, 9, 12, 16, 17 and 19 positions available

Starting at page 149

- 10A Max Current; 160V (12 pos), 125V (16-19 pos); 18-28AWG
- 28A Max Current; 630V Power; 14-18 AWG (6 Postions)
- 30A Max Current , 630V Power; 10A Max Current / 250V Signal ; 14-28 AWG (8,9 Postions)
- High-performance, cost-effective
- Superior environmental seal retention
- Compatible with existing standard products industry-wide
- Available with Checkmate™ quick locking technology. (See page 22 for more details)

# Standard Products. Custom Solutions.



Starting at page 141

## M23 Hybrid Series

2 Power + PE + 1 Signal + 4 Quadrax  
Ethernet Element

- 18A (2.0mm), 1A (1.0mm), 0.5A (Quad Element)  
Max Current
- 850V (2.0/1.0mm Contacts), 30VDC (Quad Element)  
Max. Volt.
- High-performance, cost-effective
- Superior environmental seal retention
- Ideally suited for advanced servo-drive encoder  
feedback applications where POWER, SIGNAL and  
COMMUNICATION are required in a robust and  
compact delivery system.



Starting at page 255

## M40 Series Threaded and Checkmate™ 6 and 8 positions available





Amphenol's MotionGrade™ M40 products are ideally suited for advanced servo drive encoder feedback applications, packaging, robotic, printing, machine tool, medical and automation environments where control signal transmission or power are required in a robust and compact delivery system.



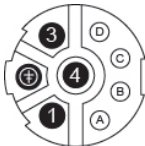
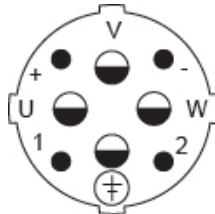
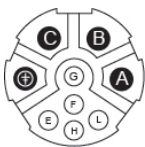
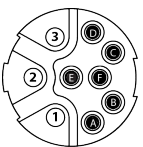
- Power: 75A Max Current; 630V Max Voltage;  
8-12AWG
- Signal: 30A Max Current; 250V Max Voltage;  
14-18AWG
- High-performance, cost-effective
- Superior environmental seal retention
- Compatible with existing standard products  
industry-wide
- Available with Checkmate™ quick locking  
technology.



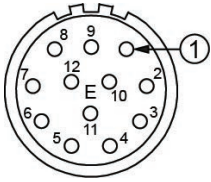
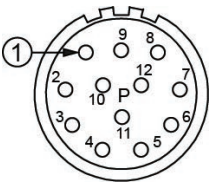
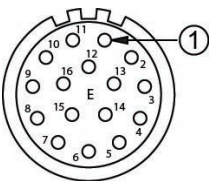
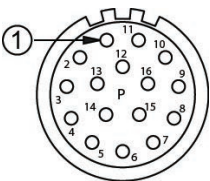
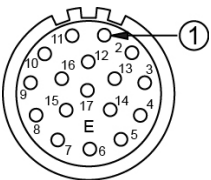
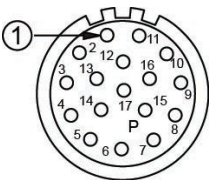
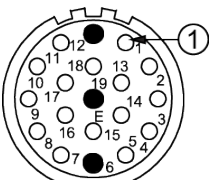
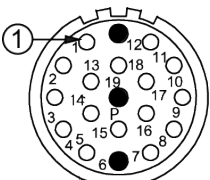
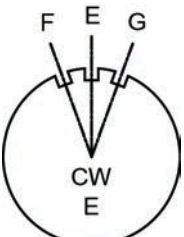
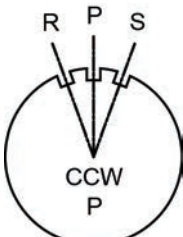
# MotionGrade™ DIN M23/M40

## Insert Arrangements

		M23 Hybrid			
contact size	2 Power + PE (2.0mm) + 1 Signal (1.0mm), 4 Quadrax Ethernet Element (.7mm)				
No. of Positions	Plugs		Receptacles		
8					
	female 18A PE/1A Signal/0.5A Quad /850V PE & Signal/ 30V Quadrax <b>Checkmate™</b> see page 107	female 18A PE/1A Signal/0.5A Quad /850V PE & Signal/ 30V Quadrax <b>Threaded</b> see page 141	male 18A PE/1A Signal/0.5A Quad /850V PE & Signal/ 30V Quadrax <b>Checkmate™</b> see page 107	male 18A PE/1A Signal/0.5A Quad /850V PE & Signal/ 30V Quadrax <b>Threaded</b> see page 141	

		M23 Series	M40 Series
contact size	2.0mm Power / 1.0mm Signal		3.6mm Power /2.0mm Signal
No. of Positions			
6	 28A /630V see pages 105,111,213		 75A /630V Power 30A/250V Signal see pages 251,255
8	 30A Power/ 10A Signal 630V Power/250V Signal see 117,123,223		 75A /630V Power 30A/250V Signal see pages 259,263
9	 30A-Power/ 10A Signal 630V Power/250V Signal see pages 129,135,233,243	 30A-Power/ 10A Signal 630V Power/250V Signal see page 243	Note: Faceviews shown on this chart are of female inserts

# Connector Guide

		M23 Series	
contact size	1.0mm		
No. of Positions	E Type	P Type	
12	 <p>10A / 160V see pages 33,39,149</p>	 <p>10A / 160V see pages 45,39,157</p>	
16	 <p>9A / 125V see pages 63,69,165</p>	 <p>9A / 125V see pages 75,81,173</p>	
17	 <p>9A / 125V see pages 81,87,181</p>	 <p>9A / 125V see pages 93,99,189</p>	
contact size	1.0mm and 1.5 mm		
19	 <p>7A / 63V see page 197</p>	 <p>7A / 63V see page 205</p>	
Coding Keys			
	<p>interconnection key "F" mates with "S", "E" mates with "P" and "G" mates with "R"</p>		

# MotionGrade™ DIN M23/M40

## M23 Elite Series Connector Configurations - Positions 12,16,17

### STEP 1

Choose a Plug "P" Style ←

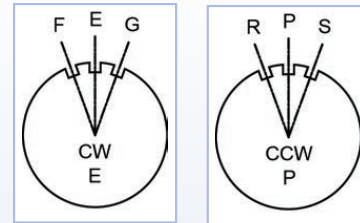
Choose a Plug "E" Style ←

MATING PARTS



### STEP 2

Choose Contacts



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*

Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S.

#### interconnection key

"E" mates with "P"

"F" mates with "S"

"G" mates with "R"

# Connector Guide

Connector Solutions:  
see page 31 for parts grouped by insert arrangement

Need a complete Cable Assembly?

See page 23 or  
contact the factory for assistance  
Toll Free: 1-800-394-7732

## STEP 3

→ Choose a Receptacle "E" Style

→ Choose a Receptacle "P" Style



Rotatable 90 °



Straight,  
Flange Mount  
Receptacle



Receptacle  
Extension



Use A  
Receptacle Kit  
and skip steps 4 & 5

## STEP 4

Choose Contacts



## STEP 5

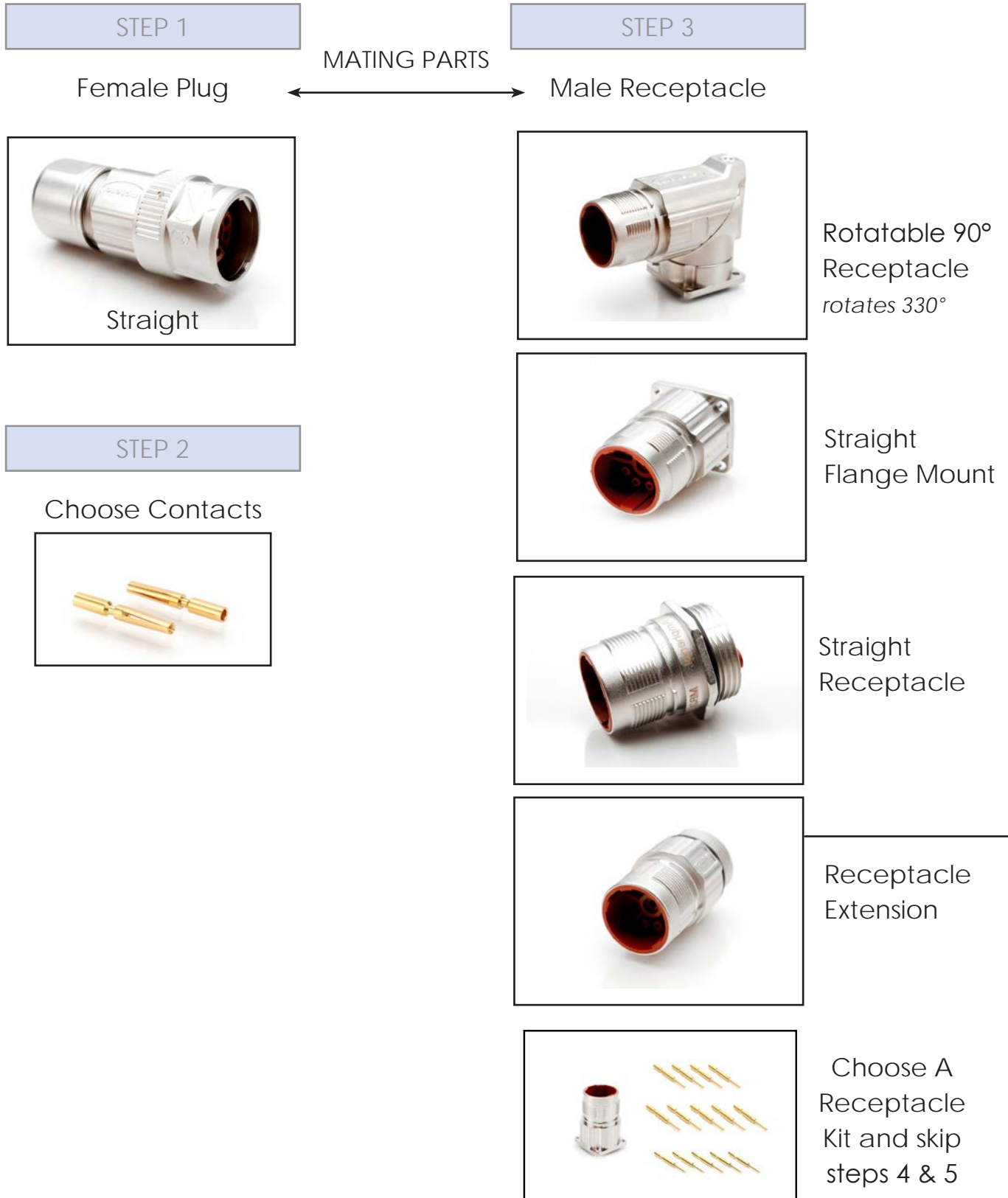
Choose a Cord Grip

*Step 5 is only required when  
utilizing the receptacle extension*



# MotionGrade™ DIN M23/M40

## M23 Elite Series Connector Configurations - Positions 6,8,9





# Connector Guide

Connector Solutions:  
see page 31 for parts grouped by insert arrangement

## STEP 4

### Choose Contacts



## Need a complete Cable Assembly?

See page 23 or  
contact the factory for assistance

Toll Free: 1-800-394-7732

## STEP 5

*Step 5 is only required when utilizing  
the receptacle extension*

### Cord Grip



# MotionGrade™ DIN M23/M40

## M23 Standard Series Connector Configurations - Positions 12,16,17,19

### STEP 1

Choose a Plug "P" Style ←

Choose a Plug "E" Style ←

### MATING PARTS



Straight Plug



90° Plug

### STEP 2

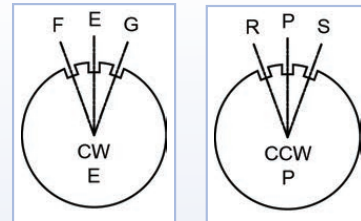
Choose Contacts



OR



Plug Kit



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*

Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S.

#### interconnection key

- "E" mates with "P"
- "F" mates with "S"
- "G" mates with "R"

### STEP 3

Choose a Cord Grip



or FlexGrip™ Backshell System *details page 282*



overmolded option

# Connector Guide

Connector Solutions:  
see page 31 for parts grouped by insert arrangement

## STEP 4

- Choose a Receptacle "E" Style
- Choose a Receptacle "P" Style



Straight,  
Flange Mount  
Receptacle



Rotatable 90°  
Receptacle  
*rotates 330°*



Bulkhead  
Receptacle



Receptacle  
Extension



overmolded option

Need a complete Cable Assembly?

See page 23 or  
contact the factory for assistance  
Toll Free: 1-800-394-7732

## STEP 5

Choose Contacts



OR  
A Receptacle Kit



## STEP 6

Choose a Cord Grip

*Step 6 is only required when  
utilizing the receptacle extension*



or Flex Grip™  
Backshell  
*details page 282*



# MotionGrade™ DIN M23/M40

## M23 Standard Series Connector Configurations - Positions 6,8,9

STEP 1

Female Plug



Straight Plug



Rotatable 90° Plug

Choose a Plug Kit  
and skip steps 2 & 3



MATING PARTS

Need a complete Cable Assembly?

See page 23 or  
contact the factory for assistance  
Toll Free: 1-800-394-7732

STEP 2

Choose Contacts



STEP 3

Cord Grip



or FlexGrip™  
Backshell System  
*details page 282*



overmolded option

# Connector Guide

Connector Solutions:  
see page 31 for parts grouped by insert arrangement

STEP 4

Male Receptacle



Rotatable 90 °  
Receptacle  
*rotates 330°*



Straight



Bulkhead  
Receptacles



Receptacle  
Extension



Choose A  
Receptacle Kit  
and skip Steps 5 & 6

Need a complete Cable Assembly?

See page 23 or  
contact the factory for assistance  
Toll Free: 1-800-394-7732

STEP 5

Choose Contacts



STEP 6

Step 6 is only required when  
utilizing the receptacle  
extension

Cord Grip



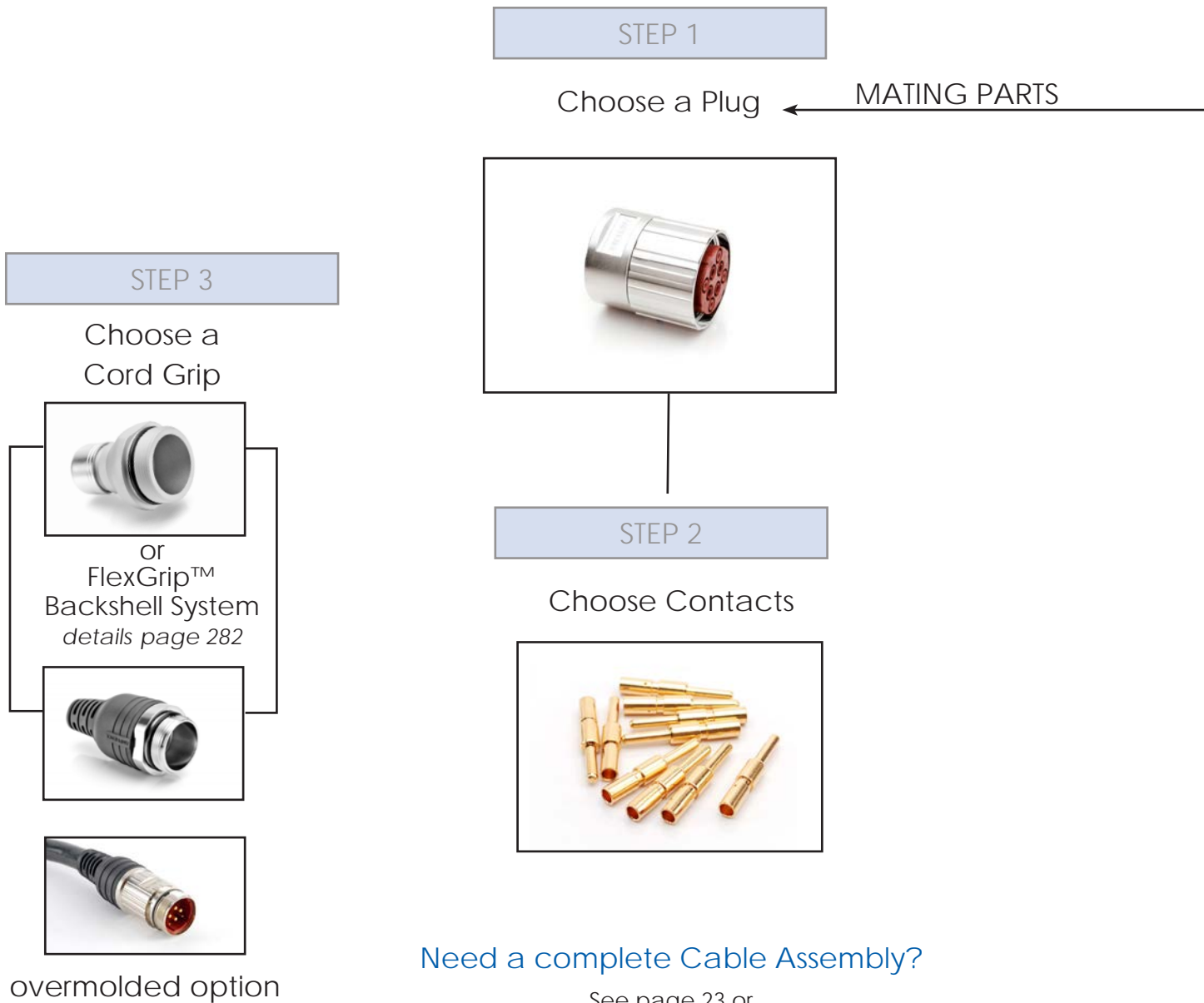
or FlexGrip™  
Backshell System  
*details page 282*



overmolded option

# MotionGrade™ DIN M23/M40

## M40 Connector Configurations - Positions 6, 8



Need a complete Cable Assembly?

See page 23 or  
contact the factory for assistance

Toll Free: 1-800-394-7732

# Connector Guide

Connector Solutions:  
see page 31 for parts grouped by insert arrangement

STEP 4

Choose a Receptacle



Straight  
Flange Mount



90 °  
Receptacle



Receptacle  
Extension

STEP 5

Choose Contacts



STEP 6

*Step 6 is only required when  
utilizing the receptacle extension*

Choose a  
Cord Grip



or FlexGrip™  
Backshell  
*details page 282*



overmolded option

# Connector Guide



## M23 Checkmate™ Quick Locking Connectors Featuring Metrifit™ Strain Relief System



Amphenol presents the M23 Checkmate™ Quick Locking connector series featuring the Metrifit™ strain relief system.

Ideally suited for the Motion marketplace, the Checkmate™ connector system's robust metal housing features add enhanced performance to today's standard systems by increasing the reliability and performance of one of the most dependable interconnect systems today.

Amphenol began with first quality components in a highly functional and intuitive design incorporating a self-aligning cam locking pathway utilizing shell coding which eliminates mis-mating, component damage, or an unintended connection even in adverse conditions. Once proper insert alignment is assured, proper contact engagement is maintained with a precision anti-vibration ratcheting coupling eliminating unintentional disconnects. This secure Quick Locking capability is accomplished in 1/8 of a turn. The resulting connection integrity ensures the highest reliability achieving vibration and shock capability up to 20g (vibration) and 50g (shock) in 3 axis.

Metrifit's integral strain relief system provides maximum 360° EMI/RFI shielding, with advanced sealing capability (IP67) suitable for harsh environments. Tamper proof design ensures a safe and secure system.



Options available for your next move.

All materials meet the requirements of ISO 9001/2008



- Enhanced next generation anti-vibration dual-ratcheting coupling system. Checkmate™ is intermateable and compatible with rival M23 quickcoupling products.
- Distinctive alignment arrows with lock/unlock identifiers (ensures a solid connection every time)
- Quick locking reliability. 1/8th turn locks the connector vs traditional threaded style coupling
- Functional design allows for rapid orientation with tactile, visual and audible confirmation.
- Vibration and shock tested up to 20g (vibration) and 50g (shock) in 3 axis
- Secure connection ensures signal integrity and longer contact life
- Superior 360° shielding available
- Compact strain relief design allows for tighter clearances
- Greater fluid resistance with IP67 sealing
- Custom colors and labeling available





# Connector Guide

## Bulk Cable Offerings









### Bulk Cable Offering

Cable solutions for power supply, feedback, resolver, static and continuous flex

- PUR, TPE, DESINA styles available
- Custom cable assembly solutions available
- More cable options available. Contact the factory for more information

### Power Cables, Non-Flex

Part #	Description / Connector Options	Jacket Color Jacket Material	Flex Life Nominal Cable OD Shielding
KA-50960-ORG 	4/C, 16AWG, Shielded, 90°C 600V, TYPE TC-ER, RoHS Compliant  <b>Connector Options:</b> 6 positions pages 105,111,213 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.36" (9.2mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-50961-ORG 	4/C, 14AWG, Shielded, 90°C 600V, TYPE TC-ER, RoHS Compliant  <b>Connector Options:</b> 6 positions pages 105,111,213 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.40" (10.2mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56338 	4/C, 16AWG 2PR, Shielded 18AWG, Overall Shielded 90°C, 600V, TYPE TC-ER, RoHS Compliant  <b>Connector Options:</b> 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Black TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.60" (15.2mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56578 	4/C, 16AWG, 1PR, Shielded, 18AWG+ Overall Shield, 90°C, 600V, TYPE TC-ER, RoHS Compliant  <b>Connector Options:</b> 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.50" (12.7mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56579 	4/C, 14AWG, 1PR, Shielded, 18AWG+ Overall Shield, 90°C, 600V, TYPE TC-ER, RoHS Compliant  <b>Connector Options:</b> 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.52" (13.3mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56580 	4/C, 10AWG, 1PR, Shielded, 18AWG+ Braided Shield, 90°C, 600V, TYPE TC-ER, RoHS Compliant  <b>Connector Options:</b> 6 positions (M40) pages 251,255 8 positions (M40) pages 259,263	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.66" (16.8mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>

## Power Cables, Non-Flex (con't)

Part #	Description / Connector Options	Jacket Color Jacket Material	Flex Life Nominal Cable OD Shielding
KA-50960 	4/C 16AWG Shielded 90°C 600V TC-ER  <b>Connector Options:</b> 6 positions pages 105,111,213 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Black TPE	<ul style="list-style-type: none"> <li>• Non-Flex</li> <li>• 0.36" (9.2mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-50961 	4/C 14AWG Shielded 90°C 600V TC-ER  <b>Connector Options:</b> 6 positions pages 105,111,213 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Black TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.40" (10.2mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56340 	4/C, 10AWG, 2PR, Shielded, 18AWG Pairs Overall Shielded, 90°C, 600V, TYPE TC-ER, RoHS Compliant  <b>Connector Options:</b> 8 positions (M40) pages 259,263	Black TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.72" (18.2mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56029 	4/C, 14AWG, 105°C, 600V, RoHS Compliant  <b>Connector Options:</b> 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Black TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.40" (10.2mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56030 	4/C, 10AWG shielded, 105°C, 600V, RoHS Compliant  <b>Connector Options:</b> 6 positions (M40) pages 251,255 8 positions (M40) pages 259,263	Black TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.615" (15.6mm)</li> <li>• Aluminum Foil-Coverage 100%</li> </ul>
KA-56339 	4/C, 14AWG, 2PR, Shielded, 18AWG Pairs Overall Shielded, 90°C, 600V, TYPE TC-ER, RoHS Compliant  <b>Connector Options:</b> 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Black TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.62" (15.7mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56028 	4/C, 16AWG Shielded, 105°C, 600V AWM Style, RoHS Compliant  <b>Connector Options:</b> 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Black TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.37" (9.4mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-50967 	6/C, 16AWG Shielded, 105°C, 600V, RoHS Compliant  <b>Connector Options:</b> 6 positions pages 105,111,213	Black ELEXAR	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.45" (10.8mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>


## Power Cables, Cont-Flex

Part #	Description / Connector Options	Jacket Color Jacket Material	Flex Life Nominal Cable OD Shielding
KA-56313-ORG 	4/C, 16AWG Shielded 105°C, 600V, AWM Style, RoHS Compliant  <b>Connector Options:</b> 6 positions pages 105,111,213 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange ELEXAR 8730	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10X O.D.</li> <li>• 0.46" (11.8mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56314-ORG 	4/C, 14AWG Shielded, 105°C 600V, RoHS Compliant  <b>Connector Options:</b> 6 positions pages 105,111,213 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange ELEXAR 8730	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10X O.D.</li> <li>• 0.49" (12.7mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56349 	4/C, 16AWG, 2PR 18AWG Shielded 105°C, 600V, AWM Style, RoHS Compliant  <b>Connector Options:</b> 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• 5M Cycles @ 15 X O.D.</li> <li>• 0.55" (13.9mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56351 	4/C, 14AWG, 2PR 18AWG Shielded 105°C, 600V, AWM Style, RoHS Compliant  <b>Connector Options:</b> 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• 10M Cycles @ 12 X O.D.</li> <li>• 0.61" (15.5mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56593 	4/C, 16AWG, 1PR, Shielded, 18AWG+ Overall Shield, 105°C, 600V, AWM Style, RoHS Compliant  <b>Connector Options:</b> 8 positions pages 117,129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• 10M Cycles @ 12 X O.D.</li> <li>• 0.46" (11.7mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56594 	4/C, 14AWG, 1PR, Shielded, 18AWG+ Overall Shield, 90°C, 600V, UL TYPE TC-ER, RoHS Compliant  <b>Connector Options:</b> 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• 10M Cycles @ 12 X O.D.</li> <li>• 0.50" (12.7mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56595 	4/C, 10AWG, 1PR, Shielded, 18AWG+ Overall Shield, 90°C, 600V, UL TYPE TC-ER, RoHS Compliant  <b>Connector Options:</b> 6 positions (M40) pages 251,255 8 positions (M40) pages 259,263	Orange ELEXAR 8730	<ul style="list-style-type: none"> <li>• 10M Cycles @ 12 X O.D.</li> <li>• 0.66" (16.8mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56623 	4/C, 16AWG (1.5mm <sup>2</sup> ) Shielded  <b>Connector Options:</b> 6 positions pages 105,111,213	Orange PUR	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10X O.D.</li> <li>• 0.43" (10.9mm)</li> <li>• Shielded Tinned Copper Braid-Coverage 85%</li> </ul>






## Power Cables, Cont-Flex (con't)

Part #	Description / Connector Options	Jacket Color Jacket Material	Flex Life Nominal Cable OD Shielding
KA-56624	4/C, 14AWG (2.5mm <sup>2</sup> ) Shielded  <i>Connector Options:</i> 6 positions pages 105,111,213	Orange PUR	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10X O.D.</li> <li>• 0.42" (10.6mm)</li> <li>• Shielded Tinned Copper Braid-Coverage 85%</li> </ul>
KA-56625	4/C, 16AWG (1.5MM <sup>2</sup> ), 16AWG (1.5MM <sup>2</sup> )-1PR Shielded  <i>Connector Options:</i> 6 positions pages 105,111,213	Orange PUR	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10X O.D.</li> <li>• 0.456" (11.6mm)</li> <li>• Shielded Tinned Copper Braid-Coverage 85%</li> </ul>
KA-56626	4/C, 14AWG (2.5MM <sup>2</sup> ), 16AWG (1.5MM <sup>2</sup> )-1PR Shielded  <i>Connector Options:</i> 6 positions pages 105,111,213	Orange PUR	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10X O.D.</li> <li>• 0.53" (13.4mm)</li> <li>• Shielded Tinned Copper Braid-Coverage 85%</li> </ul>
KA-56627	4/C, 12AWG (4.0mm <sup>2</sup> ), 16AWG (1.5mm <sup>2</sup> )-1PR Shielded  <i>Connector Options:</i> 6 positions (M40) pages 251,255	Orange PUR	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10X O.D.</li> <li>• 0.58" (14.8mm)</li> <li>• Shielded Tinned Copper Braid-Coverage 85%</li> </ul>
KA-56645	CBL, 1.0-4C, 22G-1PR, .75-1PR, 80°C, 1000V, AWM Style, RoHS Compliant  <i>Connector Options:</i> 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• 5M Cycles @ 5 X O.D. (Static); 5M Cycles @ 7 X O.D. (Dynamic)</li> <li>• 0.47" (11.9mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56646	CBL, 4X2, 5+(2 X 22AWG)C, 80°C, 1000V, AWM Style, RoHS Compliant  <i>Connector Options:</i> 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• 5M Cycles @ 5 X O.D. (Single); 5M Cycles @ 7.5 X O.D. (Multiple)</li> <li>• 0.51" (12.9mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56647	CBL, 2.5-4C, 22G-1PR, 1.0-1PR, 80°C, 1000V, AWM Style, RoHS Compliant  <i>Connector Options:</i> 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Orange DESINA RAL 2003 TPE	<ul style="list-style-type: none"> <li>• 5M Cycles @ 5 X O.D. (Static); 5M Cycles @ 7 X O.D. (Dynamic)</li> <li>• 0.55" (13.9mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56313	4/C, 16AWG Shielded 105°C, 600V, AWM Style, RoHS Compliant  <i>Connector Options:</i> 6 positions pages 105,111,213 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Black TPE	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10 X O.D.</li> <li>• 0.46" (11.8mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>


## Power Cables, Cont-Flex (con't)

Part #	Description / Connector Options	Jacket Color Jacket Material	Flex Life Nominal Cable OD Shielding
KA-56314 	4/C, 14AWG Shielded, 105°C, 600V, AWM Style, RoHS Compliant.  <b>Connector Options:</b> 6 positions pages 105,111,213 8 positions pages 117,123,223 9 positions (4+5) pages 129,135,233 9 positions (3+6) page 243	Black TPE	<ul style="list-style-type: none"> <li>• 10M @10XOD</li> <li>• 0.47" (11.8mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>



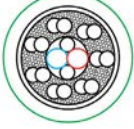

## Signal Cables, Non-Flex

Part #	Description / Connector Options	Jacket Color Jacket Material	Flex Life Nominal Cable OD Shielding
KA-56615 	5PR, 22AWG, shielded, 90°C, 300V, PLTC-ER, RoHS Compliant  <b>Connector Options:</b> 12 positions pages 33,39,45,51,149,157 16 positions pages 57,63,69,75,165,173 17 positions pages 81,87,93,99,181,189	Green RAL 6018 TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.38" (9.7mm)</li> <li>• Aluminum Foil - Coverage 100% + Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-50203 	8PR, 28AWG, 1PR 16AWG, Shielded, 105°C, 300V, VW-1 AWM Style, RoHS Compliant  <b>Connector Options:</b> 17 positions pages 81,87,93,99,181,189 19 positions pages 197,205	Black TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.39" (9.9mm)</li> <li>• Aluminum Foil - Coverage 100% + Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-50959 	4PR, 24AWG, 90°C, 30V, UL Recognized, AWM Style  <b>Connector Options:</b> 12 positions pages 33,39,45,51,149,157 16 positions pages 57,63,69,75,165,173 17 positions pages 81,87,93,99,181,189	Black TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.255"</li> <li>• Aluminum Polyester tape, Aluminum Side facing In, 25% Overlap</li> </ul>
KA-56133 	1PR, 16AWG, 7PR 28AWG, 1PR 22AWG, Shielded, 105°C, 300V, VW-1 AWM Style, RoHS Compliant  <b>Connector Options:</b> 17 positions pages 81,87,93,99,181,189 19 positions pages 197,205	Black TPE	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 0.38" (9.7mm)</li> <li>• Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
KA-56441 	8GA-4COND/14GA-1PR,TC-ER/STOOW  <b>Connector Options:</b> 6 positions (M40) pages 251,255	Black PVC	<ul style="list-style-type: none"> <li>• Non-flex</li> <li>• 1.058" (26.8mm)</li> <li>• Shielded Tinned Copper Braid - Coverage 85%</li> </ul>

Signal Cables, Non-Flex (con't)

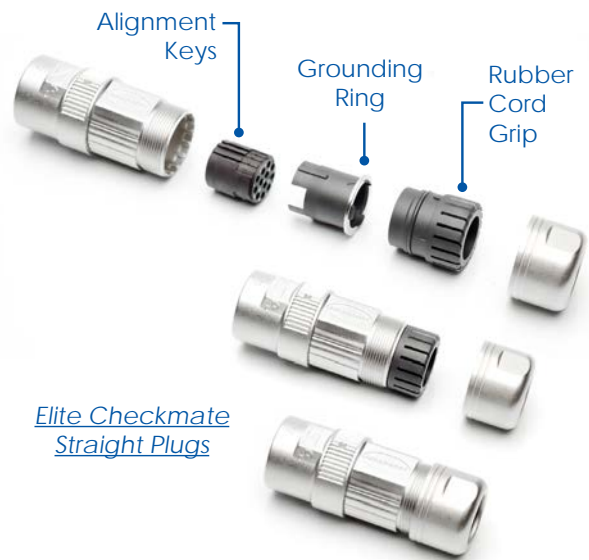
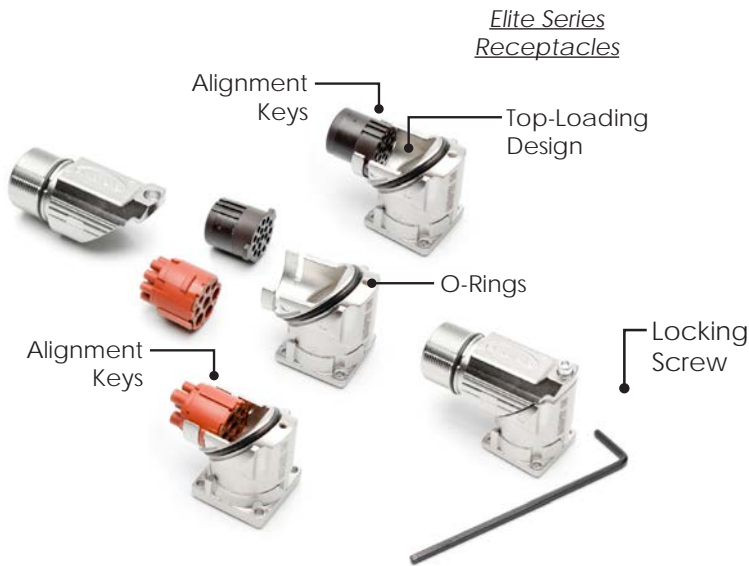
Part #	Description / Connector Options	Jacket Color Jacket Material	Flex Life Nominal Cable OD Shielding
<p>KA-56631</p> 	<p>CBL,12G-5C,Shielded</p> <p><i>Connector Options:</i> 6 positions pages 105,111,213</p>	<p>Black PVC</p>	<ul style="list-style-type: none"> <li>• Non-flex 0.472" (12mm)</li> <li>• Aluminum Foil-Coverage 100%</li> </ul>

## Signal Cables, Cont-Flex

Part #	Description / Connector Options	Jacket Color Jacket Material	Flex Life Nominal Cable OD Shielding
<b>KA-56312-GRN</b> 	1PR, 16AWG, 7PR 26AWG, 1PR 22AWG, Shielded, 105°C, 300V, VW-1 AWM Style, RoHS Compliant  <i>Connector Options:</i> 17 positions pages 81,87,93,99,181,189 19 positions pages 197,205	Green RAL 6018 TPE	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10X O.D.</li> <li>• 0.43" (10.9mm)</li> <li>• "Shield Tinned Copper Braid, Double Spiral Coverage = 95%</li> </ul>
<b>KA-56592</b> 	5PR, 22AWG, 90°C 300V, TYPE PLTC-ER, UL AWM Style 90°C, 600V, CSA AWM I/II A/B/ FT1, RoHS Compliant  <i>Connector Options:</i> 12 positions pages 39,45,51,149,157 16 positions pages 57,63,69,75,165,173 17 positions pages 81,87,93,99,181,189	Green RAL 6018 TPE	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10 X O.D.</li> <li>• 0.47" (11.8mm)</li> <li>• Aluminum Foil - Coverage 100% + Shield Tinned Copper Braid - Coverage ≥ 85%</li> </ul>
<b>KA-56622</b> 	18AWG (1.0mm <sup>2</sup> )-1PR, 22AWG (0.34mm <sup>2</sup> )-7PR Shielded  <i>Connector Options:</i> 12 positions pages 33,39,45,51,149,157	Green PUR	<ul style="list-style-type: none"> <li>• 10M Cycles @ 10X O.D.</li> <li>• 0.43" (10.9mm)</li> <li>• Shielded Tinned Copper Braid-Coverage 85%</li> </ul>
<b>KA-56621</b> 	20AWG (0.50mm <sup>2</sup> ) 4/C 22AWG (0.34mm <sup>2</sup> )-4PR Shielded  <i>Connector Options:</i> 12 positions pages 33,39,45,51,149,157	Green RAL 6018 PUR	<ul style="list-style-type: none"> <li>• Special-flex</li> <li>• 0.35" (8.9mm)</li> <li>• Shielded Tinned Copper Braid-Coverage 80%</li> </ul>

# Elite Series Features & Benefits

- Faster Assembly, Less Components
- Compact Design
- Loose-Piece Insert for Hand-Held Assembly
- Top-Loading Design (for Receptacles)
- Clamshell Insert for Contact Insertion (Opens for easy contact placement)
- Alignment Keys for Guided Assembly
- Rubber Cord Grips
- Grounding Rings (for Plugs)
- No Extractions Tools Required (for Power inserts)





# Connector Solutions

## Connector Solutions M23 Elite Series

### Signal

12 POSITIONS 10A / 160V E type	<b>Checkmate™</b> Qiuck Locking	33
12 POSITIONS 10A / 160V E type	Threaded	37
12 POSITIONS 10A / 160V P type	<b>Checkmate™</b> Qiuck Locking	41
12 POSITIONS 10A / 160V P type	Threaded	45
16 POSITIONS 9A / 125V E type	<b>Checkmate™</b> Qiuck Locking	49
16 POSITIONS 9A / 125V E type	Threaded	53
16 POSITIONS 9A / 125V P type	<b>Checkmate™</b> Qiuck Locking	57
16 POSITIONS 9A / 125V P type	Threaded	61
17 POSITIONS 9A / 125V E type	<b>Checkmate™</b> Qiuck Locking	65
17 POSITIONS 9A / 125V E type	Threaded	69
17 POSITIONS 9A / 125V P type	<b>Checkmate™</b> Qiuck Locking	73
17 POSITIONS 9A / 125V P type	Threaded	77

### Power

6 POSITIONS 28A / 630V	<b>Checkmate™</b> Qiuck Locking	81
6 POSITIONS 28A / 630V	Threaded	87
8 (4+4) POSITIONS Power 30A/ 630V Signal 10A/ 250V	<b>Checkmate™</b> Qiuck Locking	93
8 (4+4) POSITIONS Power 30A/ 630V Signal 10A/ 250V	Threaded	99
9 (4+5) POSITIONS Power 30A/ 630V Signal 10A/ 250V	<b>Checkmate™</b> Qiuck Locking	105
9 (4+5) POSITIONS Power 30A/ 630V Signal 10A/ 250V	Threaded	111

## M23 Hybrid Series

8 POSITIONS 18A PE/1A Signal/0.5A Quadrax / 850V PE & Signal/ 30V Quadrax	117
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## Connector Solutions M23 Standard Series

### Signal

12 POSITIONS 10A / 160V E type	<b>Checkmate™</b> Qiuck Locking & Threaded	121
12 POSITIONS 10A / 160V P type	<b>Checkmate™</b> Qiuck Locking & Threaded	129
16 POSITIONS 9A / 125V E type	<b>Checkmate™</b> Qiuck Locking & Threaded	139
16 POSITIONS 9A / 125V P type	<b>Checkmate™</b> Qiuck Locking & Threaded	147
17 POSITIONS 9A / 125V E type	<b>Checkmate™</b> Qiuck Locking & Threaded	155
17 POSITIONS 9A / 125V P type	<b>Checkmate™</b> Qiuck Locking & Threaded	165
19 POSITIONS 7A / 63V E type	<b>Checkmate™</b> Qiuck Locking & Threaded	175
19 POSITIONS 7A / 63V P type	<b>Checkmate™</b> Qiuck Locking & Threaded	181

### Power

6 POSITIONS 28A / 630V	<b>Checkmate™</b> Qiuck Locking & Threaded	187
8 (4+4) POSITIONS Power 30A/ 630V Signal 10A/ 250V	<b>Checkmate™</b> Qiuck Locking & Threaded	197
9 (4+5) POSITIONS Power 30A/ 630V Signal 10A/ 250V	<b>Checkmate™</b> Qiuck Locking & Threaded	207
9 (3+6) POSITIONS Power 30A/ 250V Signal 10A/ 630V	<b>Checkmate™</b> Qiuck Locking & Threaded	217

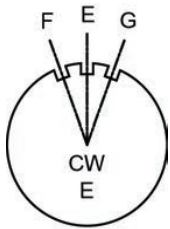
## Connector Solutions M40 Series

### Power

6 (4+2) POSITIONS Power 75A/ 630V Signal 30A/ 250V	<b>Checkmate™</b> Qiuck Locking	225
6 (4+2) POSITIONS Power 75A/ 630V Signal 30A/ 250V	Threaded	229
8 (4+4) POSITIONS Power 75A/ 630V Signal 30A/ 250V	<b>Checkmate™</b> Qiuck Locking	233
8 (4+4) POSITIONS Power 75A/ 630V Signal 30A/ 250V	Threaded	237

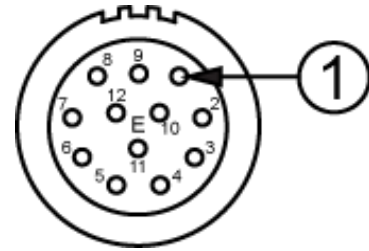
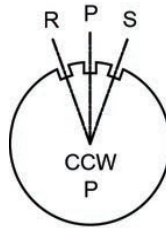
# Connector Solutions M23 Elite Series

## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 12 for connector configurations

## STEP 2 Choose Receptacle



### Plugs



### Receptacles



### Receptacle Kits



### Plug Kits



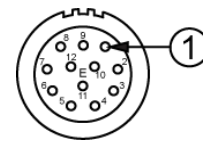
**BULK CABLE starts  
on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6



**12 POSITIONS**  
**10A / 160V**  
**E type**  
**Checkmate™**

**Style: E type Plug**    **Number of Contacts: 12**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**



### Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA5CAE1200-S1	Plug, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	E	Pin	Socket	1
MA5CAE1200-S1-KIT	Plug kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	E	Pin		1
MA5CAE1200S-S1-KIT	Plug kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	E		Socket	1
MA5CAE1200-S2	Plug, straight, <b>Checkmate™</b> 7.5-11mm cord grip	E	Pin	Socket	1
MA5CAE1200-S2-KIT	Plug, straight, <b>Checkmate™</b> 7.5-11mm cord grip	E	Pin		1
MA5CAE1200S-S2-KIT	Plug, straight, <b>Checkmate™</b> 7.5-11mm cord grip	E		Socket	1
MA5CAE1200-S3	Plug, straight, <b>Checkmate™</b> 11-15mm cord grip	E	Pin	Socket	1
MA5CAE1200-S3-KIT	Plug, straight, <b>Checkmate™</b> 11-15mm cord grip	E	Pin		1
MA5CAE1200S-S3-KIT	Plug, straight, <b>Checkmate™</b> 11-15mm cord grip	E		Socket	1
<b>RECEPTACLES</b>			<b>↑ Mating Parts ↓</b>		
MA5RAP1201	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P	Socket	Pin	2
MA5RAP1201-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P		Pin	2
MA5RAP1201-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P	Socket		2
MA5RAP1202	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P	Socket	Pin	3
MA5RAP1202-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P		Pin	3
MA5RAP1202S-Kit	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P	Socket		3

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Part Numbers continued

MA2LAP1200*	Receptacle, straight, flange mount, <b>Checkmate™</b>	P	Socket	Pin	4
MA2LAP1200-KIT*	Receptacle Kit, straight, flange mount, <b>Checkmate™</b> . Kit includes contacts.	P		Pin	4
MA2LAP1200S-KIT*	Receptacle Kit, straight, flange mount, <b>Checkmate™</b> . Kit includes contacts.	P	Socket		4
MA2JAP1200*	Receptacle extension, <b>Checkmate™</b>	P	Socket	Pin	5
↑ Contacts supplied separately see Chart 1					

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 282

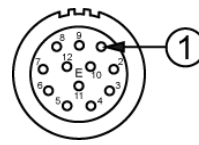
## Contacts



### CHART 1

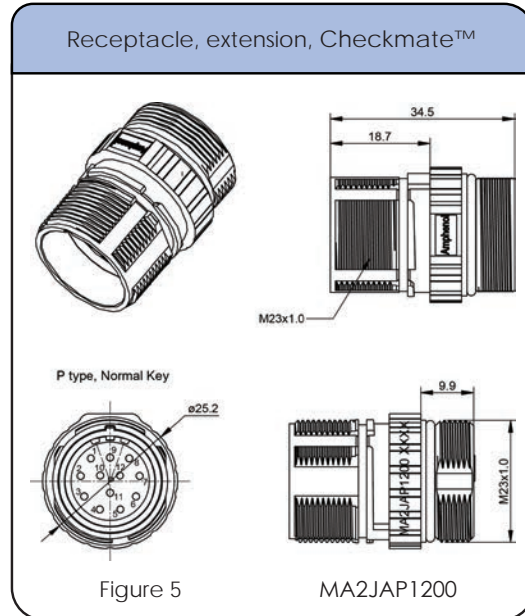
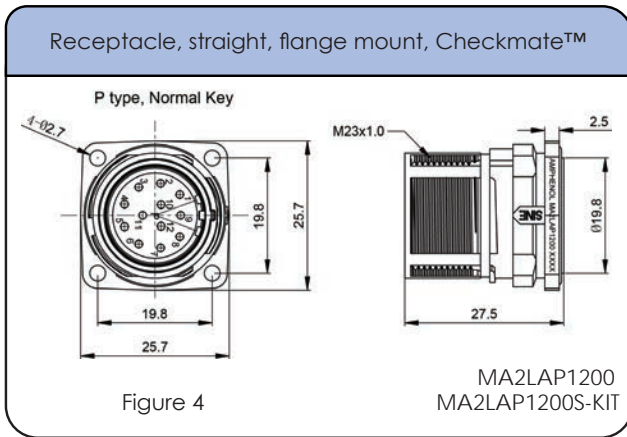
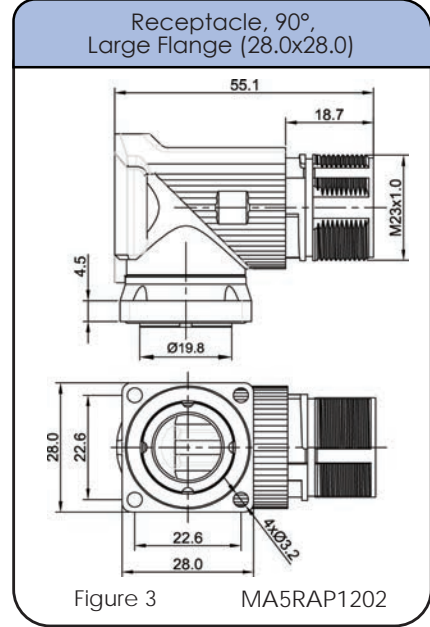
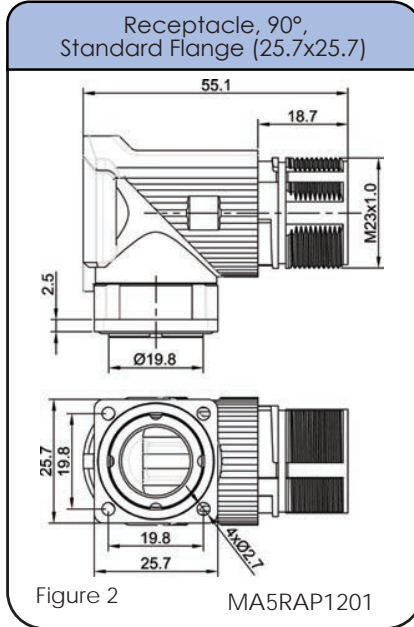
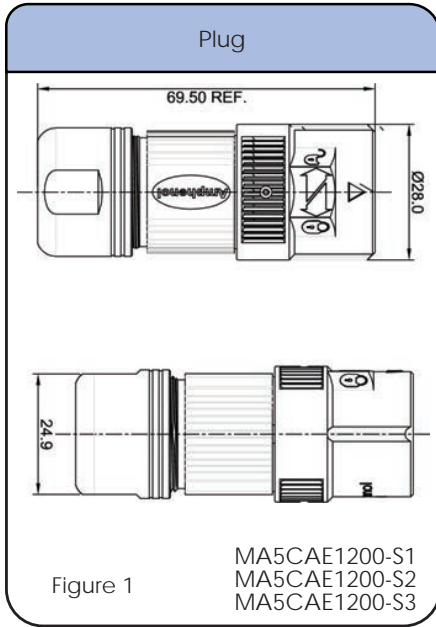
### Crimp Contacts, Machined

Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold



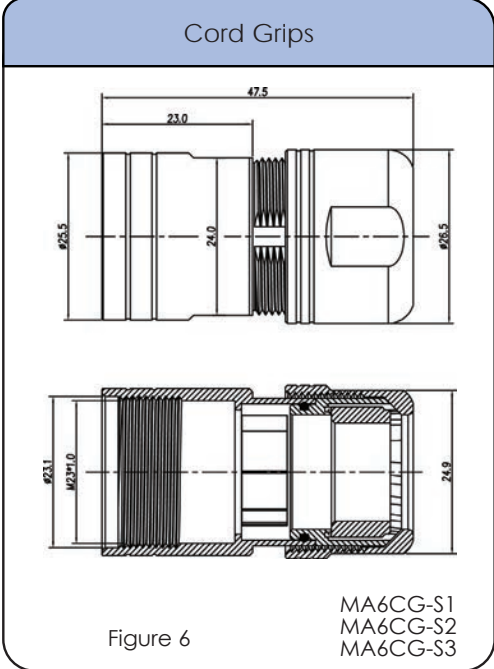
12 POSITIONS  
10A / 160V  
E type  
Checkmate™

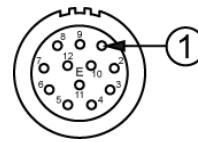
Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)



Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued








12 POSITIONS  
10A / 160V  
E type  
Checkmate™

Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

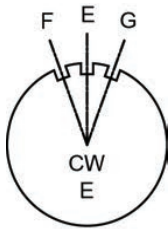
### Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>	<p>Dust Cap for Receptacle</p>  <p>P29687</p>	<p>Dust Cap for Plug</p>  <p>P31662</p>

\* The universal positioner is not included with the crimp tools and must be ordered separately.

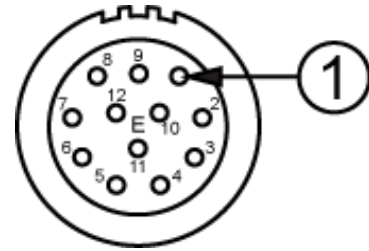
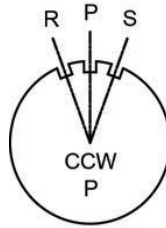
# Connector Solutions M23 Elite Series

## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 12 for connector configurations

## STEP 2 Choose Receptacle



### Plugs



### Receptacles



### Receptacle Kits



### Plug Kits



**BULK CABLE starts  
on page 23**

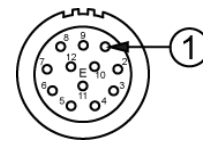
SEE TABLE ON NEXT PAGE FOR PART DETAILS

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6





**12 POSITIONS**  
**10A / 160V**  
**E type**  
**Threaded**

**Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

### Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA7CAE1200-S1	Plug, straight, threaded 4.5-7.5mm cord grip	E	Pin	Socket	1
MA7CAE1200-S1-KIT	Plug kit, straight, threaded 4.5-7.5mm cord grip	E	Pin		1
MA7CAE1200S-S1-KIT	Plug kit, straight, threaded 4.5-7.5mm cord grip	E		Socket	1
MA7CAE1200-S2	Plug, straight, threaded 7.5-11mm cord grip	E	Pin	Socket	1
MA7CAE1200-S2-KIT	Plug kit, straight, threaded 7.5-11mm cord grip	E	Pin		1
MA7CAE1200S-S2-KIT	Plug kit, straight, threaded 7.5-11mm cord grip	E		Socket	1
MA7CAE1200-S3	Plug, straight, threaded 11-15mm cord grip	E	Pin	Socket	1
MA7CAE1200-S3-KIT	Plug kit, straight, threaded 11-15mm cord grip	E	Pin		1
MA7CAE1200S-S3-KIT	Plug kit, straight, threaded 11-15mm cord grip	E		Socket	1
<b>RECEPTACLES</b>			<b>↑ Mating Parts ↓</b>		
MA7RAP1201	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	P	Socket	Pin	2
MA7RAP1201-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	P		Pin	2
MA7RAP1201S-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	P		Pin	2
MA7RAP1202	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	P	Socket	Pin	3
MA7RAP1202-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	P		Pin	3
MA7RAP1202S-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	P	Socket		3

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

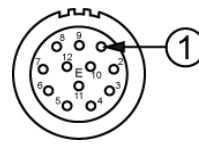
**Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 -0.10 mm<sup>2</sup>)**

Connector Part Numbers continued

MA1LAP1200*	Receptacle, straight, flange mount, threaded	P	Socket	Pin	4
MA1LAP1200-KIT*	Receptacle kit, straight, threaded, flange mount. Kit includes contacts.	P		Pin	4
MA1LAP1200S-KIT*	Receptacle kit, straight, threaded, flange mount. Kit includes contacts.	P	Socket		4
MA1JAP1200*	Receptacle extension, threaded	P	Socket	Pin	5
↑ Contacts supplied separately see Chart 1					



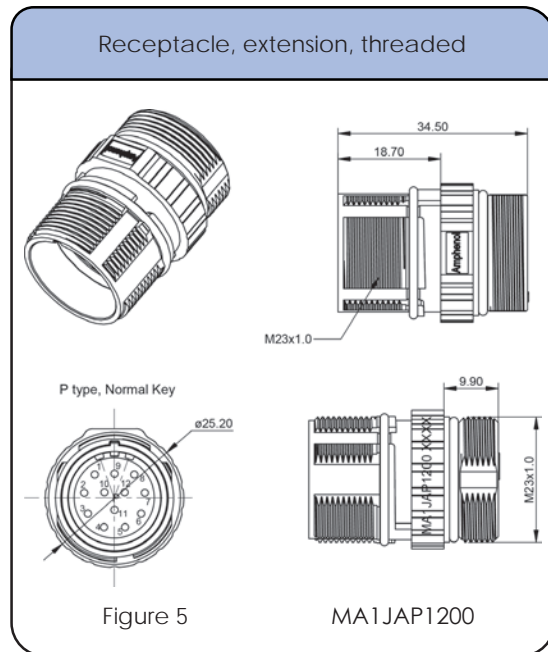
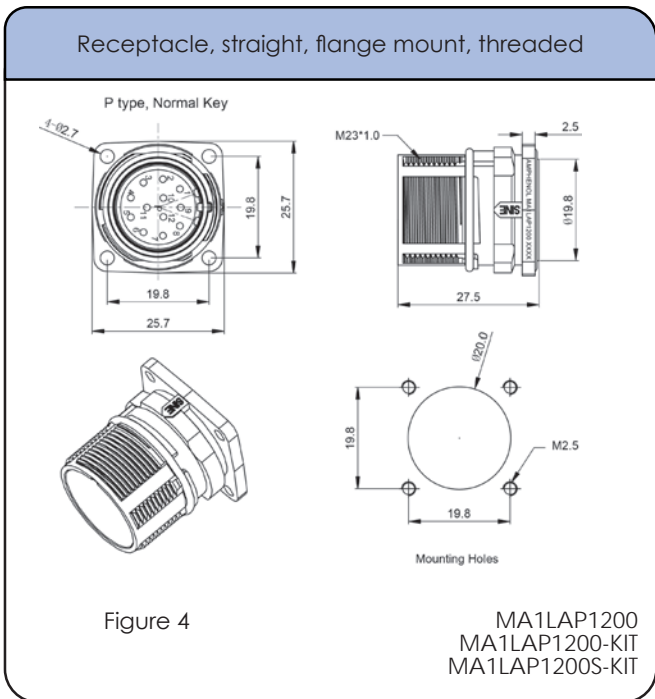
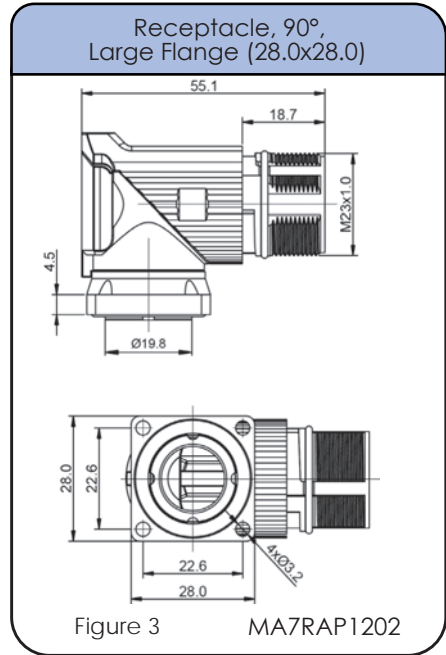
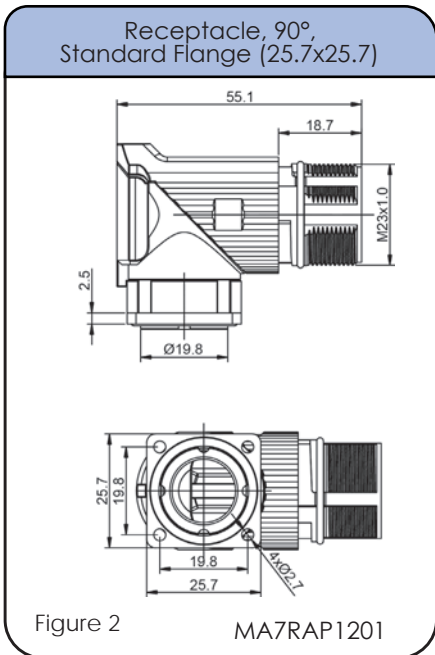
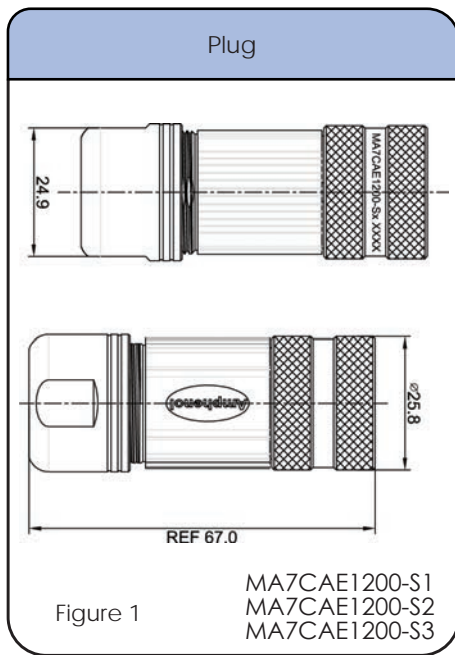
CHART 1		Crimp Contacts, Machined			
Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating	
SC000035	Pin	22-18	0.37 - 0.75	Gold	
SC000146	Pin	28-24	0.10 - 0.25	Gold	
SC000044	Socket	22-18	0.37 - 0.75	Gold	
SC000030	Socket	28-24	0.10 - 0.25	Gold	



**12 POSITIONS**  
**10A / 160V**  
**E type**  
**Threaded**

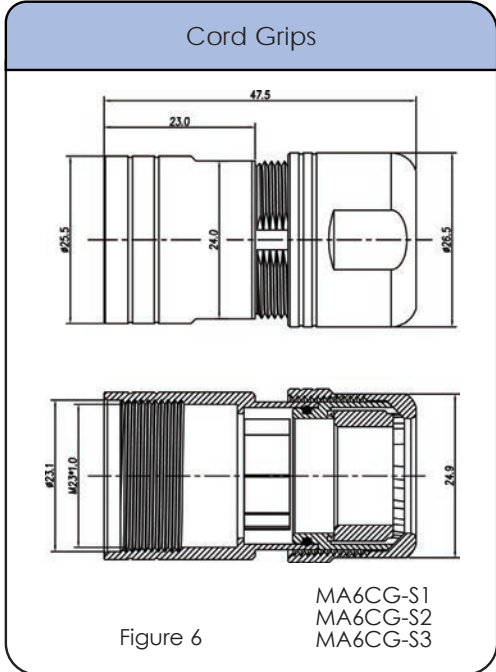
**Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

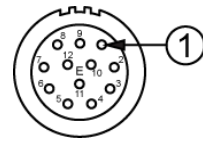
CONNECTOR SOLUTIONS



Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued





12 POSITIONS  
10A / 160V  
E type  
Threaded

Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

CONNECTOR SOLUTIONS

### Tools & Accessories

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



AFM8

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire range 12-26AWG



AF8

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



WA22

Universal positioner is used with crimp tools AFM8 and WA22.  
Wire range 20-32AWG



SK2-2

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG



UH2-5

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*.  
Wire range 12-26AWG



WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Dust Cap for Receptacle



P29687

Dust Cap for Plug, Threaded

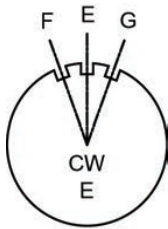


P31660

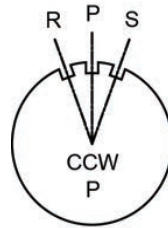
\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

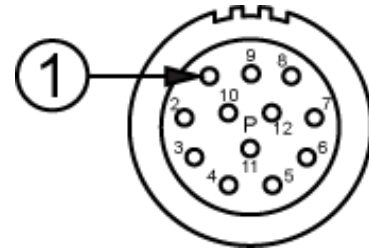
## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 12 for connector configurations



## STEP 2 Choose Receptacle



### Plugs



### Receptacles



### Receptacle Kits



### Plug Kits



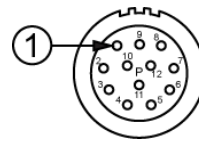
**BULK CABLE starts  
on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6



**12 POSITIONS**  
**10A / 160V**  
**P type**  
**Checkmate™**

**Style: P type Plug**    **Number of Contacts: 12**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**



### Connector Part Numbers

CONNECTOR SOLUTIONS

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA5CAP1200-S1	Plug, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	P	Pin	Socket	1
MA5CAP1200-S1-KIT	Plug kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	P	Pin		1
MA5CAP1200S-S1-KIT	Plug kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	P		Socket	1
MA5CAP1200-S2	Plug, straight, <b>Checkmate™</b> 7.5-11mm cord grip	P	Pin	Socket	1
MA5CAP1200-S2-KIT	Plug, straight, <b>Checkmate™</b> 7.5-11mm cord grip	P	Pin		1
MA5CAP1200S-S2-KIT	Plug, straight, <b>Checkmate™</b> 7.5-11mm cord grip	P		Socket	1
MA5CAP1200-S3	Plug, straight, <b>Checkmate™</b> 11-15mm cord grip	P	Pin	Socket	1
MA5CAP1200-S3-KIT	Plug kit, straight, <b>Checkmate™</b> 11-15mm cord grip	P	Pin		1
MA5CAP1200S-S3-KIT	Plug kit, straight, <b>Checkmate™</b> 11-15mm cord grip	P		Socket	1
<b>RECEPTACLES</b>			<b>↑ Mating Parts ↑</b>		
MA5RAE1201	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E	Socket	Pin	2
MA5RAE1201-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E		Pin	2
MA5RAE1201S-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E	Socket		2
MA5RAE1202	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E	Socket	Pin	2
MA5RAE1202-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E		Pin	2

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

**Style: P type Plug**    **Number of Contacts: 12**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

Connector Part Numbers continued

MA5RAE1202S-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E	Socket		2
MA2LAE1200*	Receptacle, straight, flange mount, <b>Checkmate™</b>	E	Socket	Pin	3
MA2LAE1200-KIT*	Receptacle kit, straight, flange mount, <b>Checkmate™</b>	E		Pin	3
MA2LAE1200S-KIT*	Receptacle kit, straight, flange mount, <b>Checkmate™</b>	E	Socket		3
MA2JAE1200*	Receptacle extension, <b>Checkmate™</b>	E	Socket	Pin	4
↑ Contacts supplied separately see Chart 1 page 46					

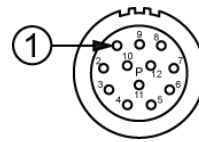


### CHART 1

### Crimp Contacts, Machined

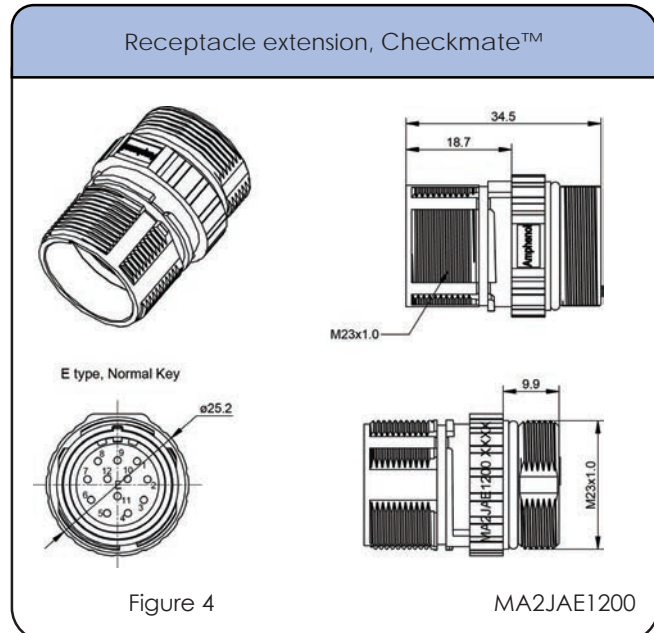
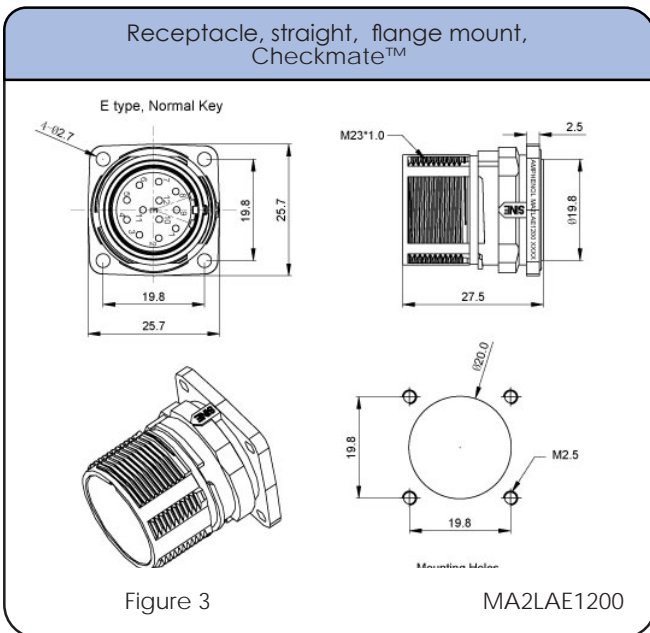
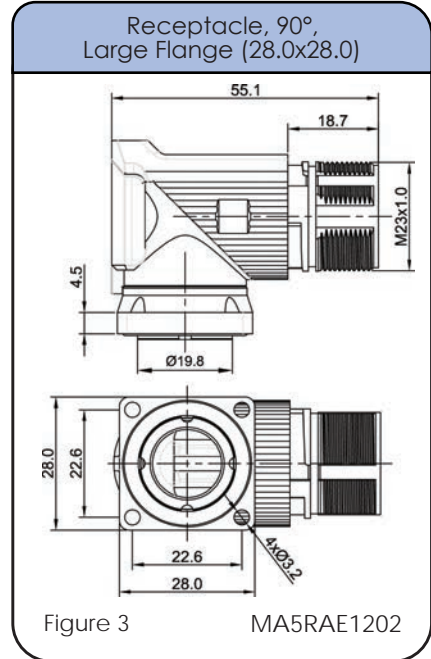
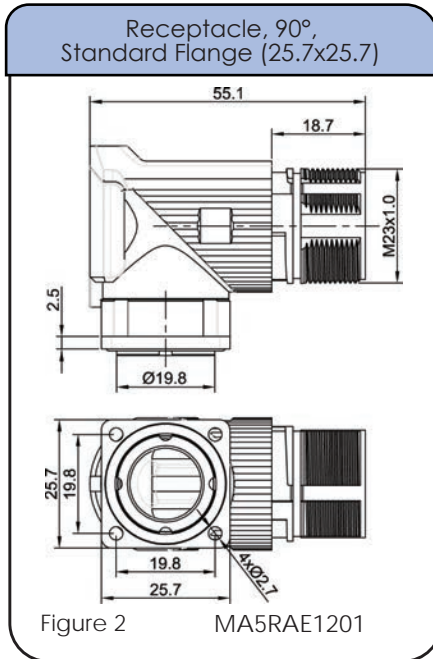
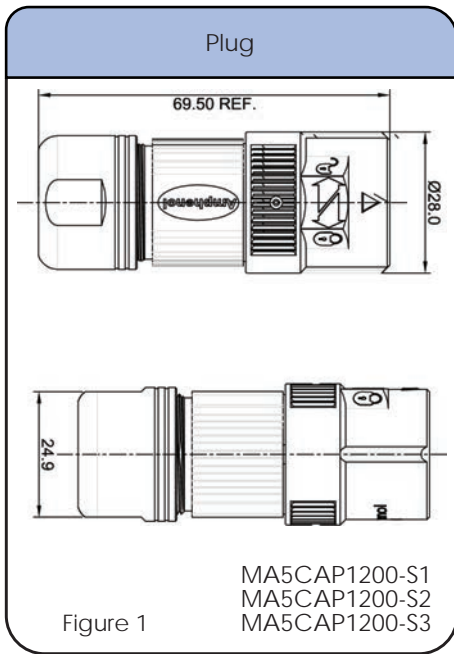
Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold





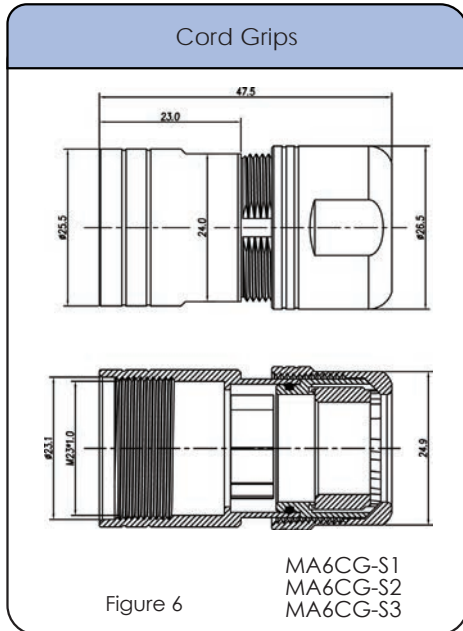
12 POSITIONS  
10A / 160V  
P type  
Checkmate™

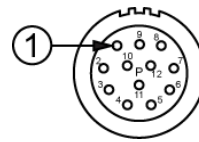
Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)






12 POSITIONS  
10A / 160V  
P type  
Checkmate™

Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

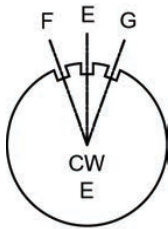
### Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>	<p>Dust Cap for Receptacle</p>  <p>P29687</p>	<p>Dust Cap for Plug, Checkmate™</p>  <p>P31662</p>

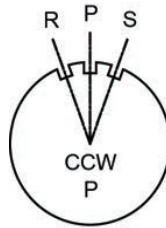
\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

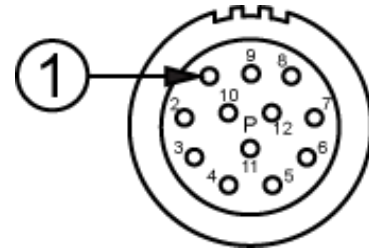
## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 12 for connector configurations



## STEP 2 Choose Receptacle



### Plugs



### Plug Kits



### Receptacles



### Receptacle Kit



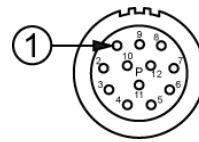
**BULK CABLE starts  
on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6



**12 POSITIONS**  
**10A / 160V**  
**P type**  
**Threaded**

**Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 18-22 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

### Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA7CAP1200-S1	Plug, straight, threaded 4.5-7.5mm cord grip	P	Pin	Socket	1
MA7CAP1200-S1-KIT	Plug kit, straight, threaded 4.5-7.5mm cord grip	P	Pin		1
MA7CAP1200S-S1-KIT	Plug kit, straight, threaded 4.5-7.5mm cord grip	P		Socket	1
MA7CAP1200-S2	Plug, straight, threaded 7.5-11mm cord grip	P	Pin	Socket	1
MA7CAP1200-S2-KIT	Plug kit, straight, threaded 7.5-11mm cord grip	P	Pin		1
MA7CAP1200S-S2-KIT	Plug kit, straight, threaded 7.5-11mm cord grip	P		Socket	1
MA7CAP1200-S3	Plug, straight, threaded 11-15mm cord grip	P	Pin	Socket	1
MA7CAP1200-S3-KIT	Plug kit, straight, threaded 11-15mm cord grip	P	Pin		1
MA7CAP1200S-S3-KIT	Plug kit, straight, threaded 11-15mm cord grip	P		Socket	1
<b>RECEPTACLES</b>			<b>↑ Mating Parts ↓</b>		
MA7RAE1201	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	E	Socket	Pin	2
MA7RAE1201-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	E		Pin	2
MA7RAE1201S-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	E	Socket		2
MA7RAE1202	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	E	Socket	Pin	3
MA7RAE1202-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	E	Socket	Pin	3
MA7RAE1202S-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	E	Socket	Pin	3

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

**Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 18-22 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

Connector Part Numbers continued

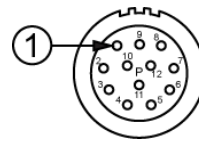
MA1LAE1200*	Receptacle, straight, flange mount, threaded	E	Socket	Pin	4
MA1LAE1200-KIT*	Receptacle kit, straight, threaded. Kit includes contacts.	E		Pin	4
MA1LAE1200S-KIT*	Receptacle kit, straight, threaded. Kit includes contacts.	E	Socket		4
MA1JAE1200*	Receptacle extension, threaded	E	Socket	Pin	5
↑ Contacts supplied separately see Chart 1 page 52					



### CHART 1

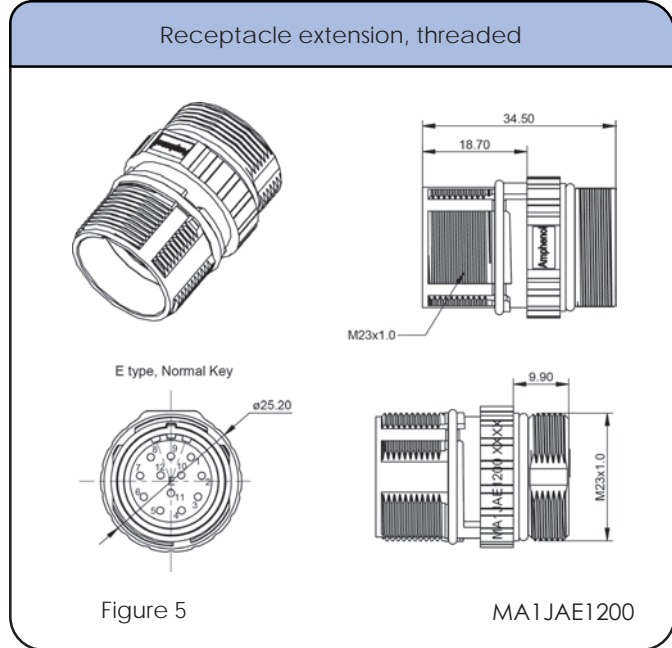
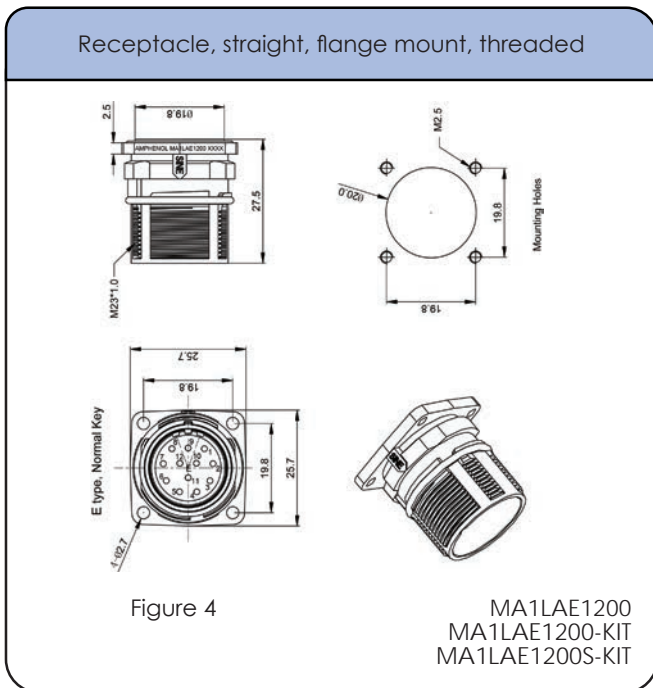
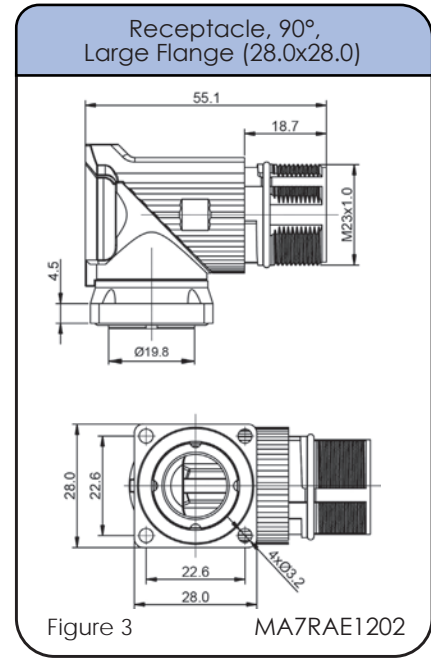
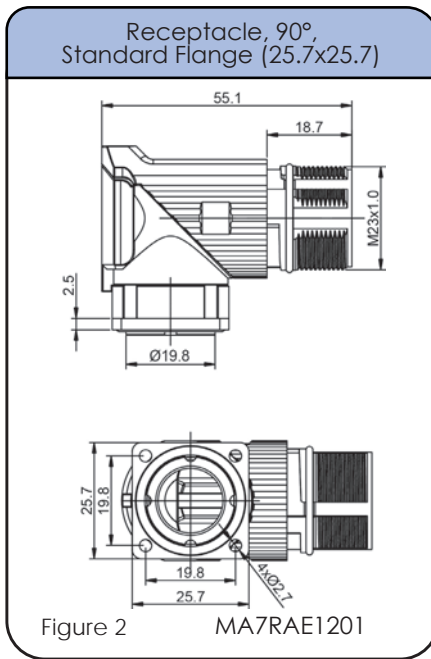
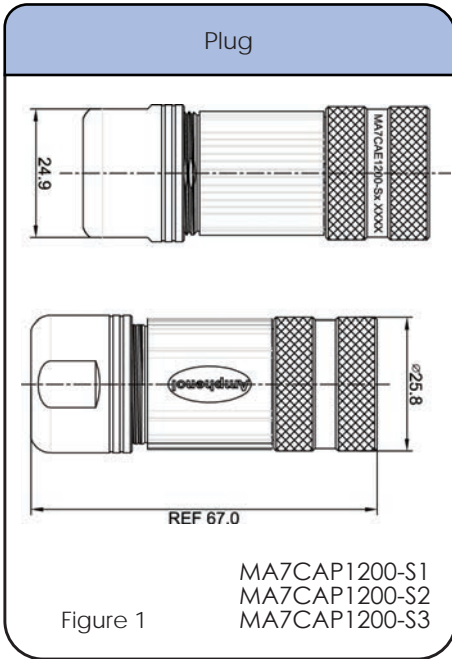
### Crimp Contacts, Machined

Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold



**12 POSITIONS**  
**10A / 160V**  
**P type**  
**Threaded**

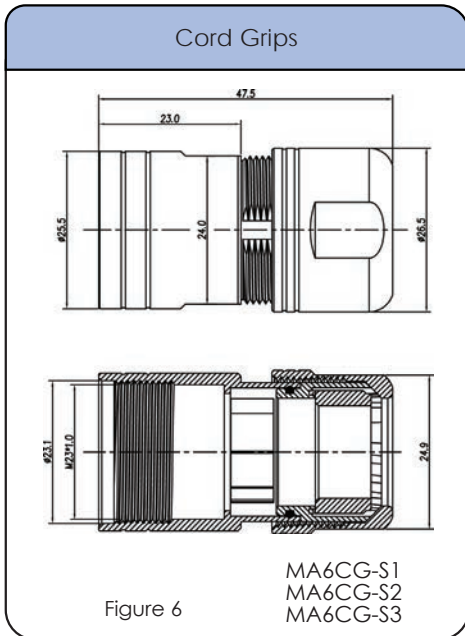
**Style: P type Plug**    **Number of Contacts: 12**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 18-22 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**



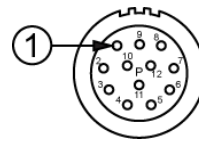
Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 18-22 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued







**12 POSITIONS**  
**10A / 160V**  
**P type**  
**Threaded**

**Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 18-22 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

CONNECTOR SOLUTIONS

**Tools & Accessories**

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
 Wire range 20-32AWG



AFM8

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
 Wire range 12-26AWG



AF8

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
 Wire range 20-32AWG



WA22

Universal positioner is used with crimp tools AFM8 and WA22.  
 Wire range 20-32AWG



SK2-2

Universal positioner is used with the universal hand crimp tool (AF8).  
 Wire range 12-26AWG



UH2-5

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*.  
 Wire range 12-26AWG



WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Dust Cap for Receptacle



P29687

Dust Cap for Plug, Threaded

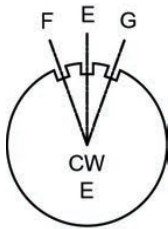


P31660

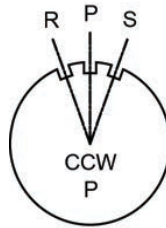
\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

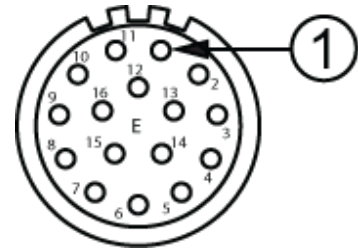
## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 12 for connector configurations



## STEP 2 Choose Receptacle



### Plugs



### Receptacles



### Receptacle Kit



### Plug Kits



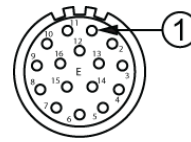
**BULK CABLE starts  
on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6



**16 POSITIONS**  
**9A / 125V**  
**E type**  
**Checkmate™**

**Style: E type Plug**    **Number of Contacts: 16**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**



## Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA5CAE1600-S1	Plug, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	E	Pin	Socket	1
MA5CAE1600-S1-KIT	Plug Kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	E	Pin		1
MA5CAE1600S-S1-KIT	Plug Kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	E		Socket	1
MA5CAE1600-S2	Plug, straight, <b>Checkmate™</b> 7.5-11mm cord grip	E	Pin	Socket	1
MA5CAE1600-S2-KIT	Plug Kit, straight, <b>Checkmate™</b> 7.5-11mm cord grip	E	Pin		1
MA5CAE1600S-S2-KIT	Plug Kit, straight, <b>Checkmate™</b> 7.5-11mm cord grip	E		Socket	1
MA5CAE1600-S3	Plug, straight, <b>Checkmate™</b> 11-15mm cord grip	E	Pin	Socket	1
MA5CAE1600-S3-KIT	Plug Kit, straight, <b>Checkmate™</b> 11-15mm cord grip	E	Pin		1
MA5CAE1600S-S3-KIT	Plug Kit, straight, <b>Checkmate™</b> 11-15mm cord grip	E		Socket	1
<b>RECEPTACLES</b>			<b>↑ Mating Parts ↑</b>		
MA5RAP1601	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P	Socket	Pin	2
MA5RAP1601-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P		Pin	2
MA5RAP1601S-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P	Socket		2
MA5RAP1602	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P	Socket	Pin	3
MA5RAP1602-KIT	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P		Pin	3

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

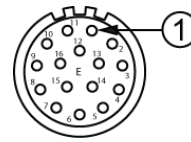
Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 -0.10 mm<sup>2</sup>)

Connector Part Numbers continued

MA5RAP1602S-KIT	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P	Socket		3
MA2LAP1600*	Receptacle, straight, flange mount, <b>Checkmate™</b>	P	Socket	Pin	4
MA2LAP1600-KIT*	Receptacle Kit, straight, flange mount, <b>Checkmate™</b>	P		Pin	4
MA2LAP1600S-KIT*	Receptacle Kit, straight, flange mount, <b>Checkmate™</b>	P	Socket		4
MA2JAP1600*	Receptacle extension, <b>Checkmate™</b>	P	Socket	Pin	5
↑ Contacts supplied separately see Chart 1					

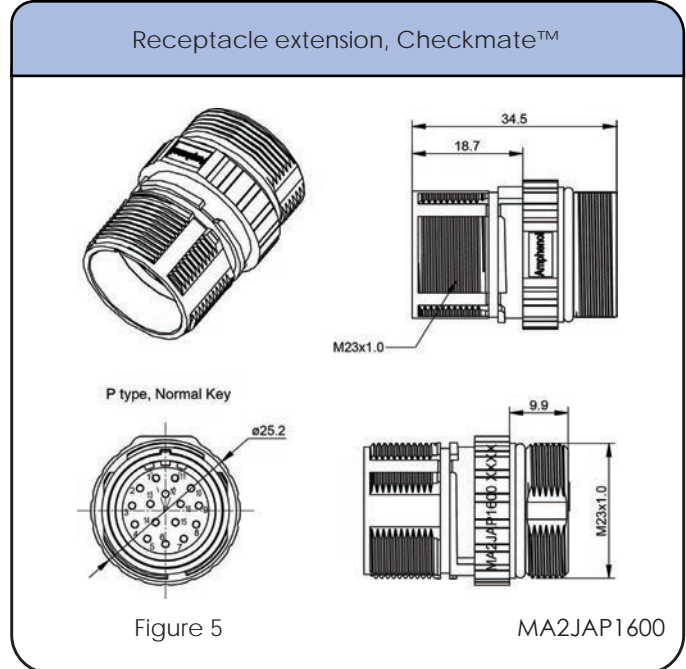
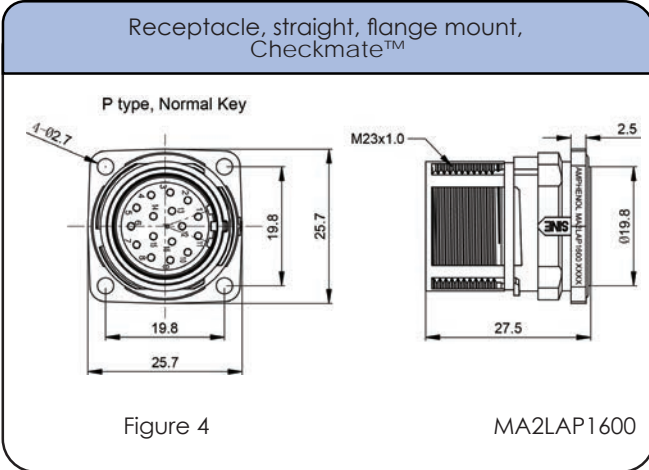
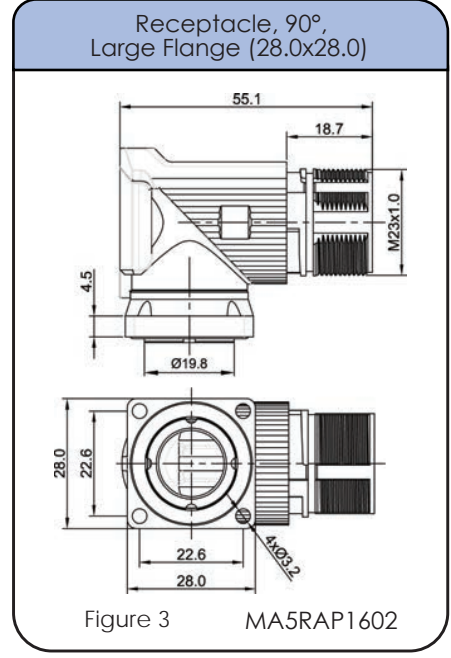
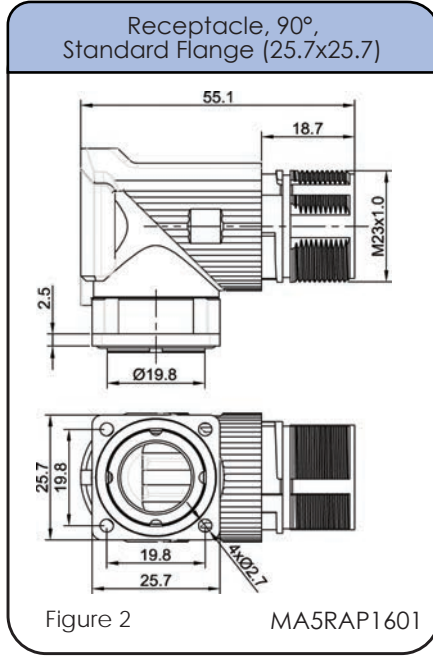
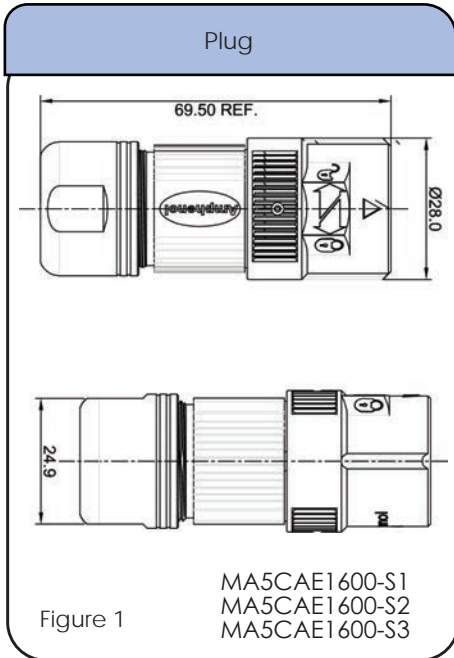


CHART 1		Crimp Contacts, Machined			
Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating	
SC000035	Pin	22-18	0.37 - 0.75	Gold	
SC000146	Pin	28-24	0.10 - 0.25	Gold	
SC000044	Socket	22-18	0.37 - 0.75	Gold	
SC000030	Socket	28-24	0.10 - 0.25	Gold	



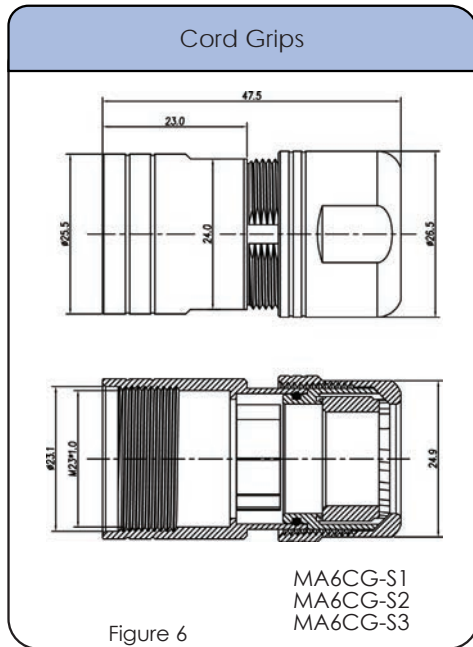
16 POSITIONS  
9A / 125V  
E type  
Checkmate™

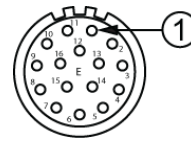
Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)



Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued





16 POSITIONS  
9A / 125V  
E type  
Checkmate™

Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

CONNECTOR SOLUTIONS

### Tools & Accessories

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



AFM8

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire range 12-26AWG



AF8

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



WA22

Universal positioner is used with crimp tools AFM8 and WA22.  
Wire range 20-32AWG



SK2-2

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG



UH2-5

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*.  
Wire range 12-26AWG




WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Dust Cap for Receptacle



P29687

Dust Cap for Plug, Checkmate™

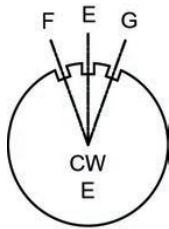


P31662

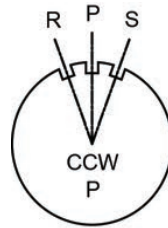
\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

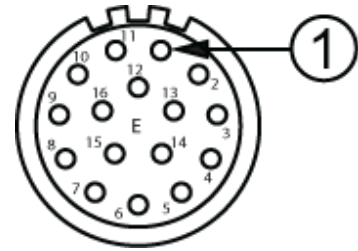
## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 23 for connector configurations



## STEP 2 Choose Receptacle



### Plugs



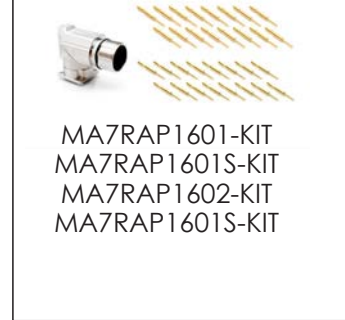
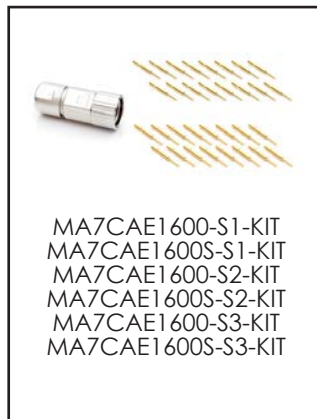
### Receptacles



### Receptacle Kit



### Plug Kits



**BULK CABLE starts  
on page 23**

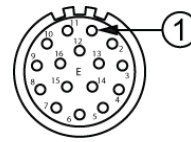
SEE TABLE ON NEXT PAGE FOR PART DETAILS

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6





**16 POSITIONS**  
**9A / 125V**  
**E type**  
**Threaded**

**Style: E type Plug**    **Number of Contacts: 16**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

### Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA7CAE1600-S1	Plug, straight, threaded 4.5-7.5mm cord grip	E	Pin	Socket	1
MA7CAE1600-S1-KIT	Plug Kit, straight, threaded 4.5-7.5mm cord grip	E	Pin		1
MA7CAE1600S-S1-KIT	Plug Kit, straight, threaded 4.5-7.5mm cord grip	E		Socket	1
MA7CAE1600-S2	Plug, straight, threaded 7.5-11mm cord grip	E	Pin	Socket	1
MA7CAE1600-S2-KIT	Plug Kit, straight, threaded 7.5-11mm cord grip	E	Pin		1
MA7CAE1600S-S2-KIT	Plug Kit, straight, threaded 7.5-11mm cord grip	E		Socket	1
MA7CAE1600-S3	Plug, straight, threaded 11-15mm cord grip	E	Pin	Socket	1
MA7CAE1600-S3-KIT	Plug Kit, straight, threaded 11-15mm cord grip	E	Pin		1
MA7CAE1600S-S3-KIT	Plug Kit, straight, threaded 11-15mm cord grip	E		Socket	1
RECEPTACLES			↑ Mating Parts ↑		
MA7RAP1601	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	P	Socket	Pin	2
MA7RAP1601-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	P		Pin	2
MA7RAP1601S-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	P	Socket		2
MA7RAP1602	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	P	Socket	Pin	3
MA7RAP1602-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	P		Pin	3
MA7RAP1602S-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	P	Socket		3
MA1LAP1600*	Receptacle, straight, flange mount, threaded	P	Socket	Pin	4

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266  
 Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

**Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

Connector Part Numbers continued

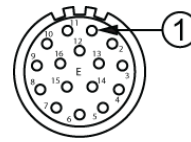
MA1LAP1600-KIT*	Receptacle Kit, threaded. Kit includes contacts.	P		Pin	4
MA1LAP1600S-KIT*	Receptacle Kit, threaded. Kit includes contacts.	P	Socket		4
MA1JAP1600*	Receptacle extension, threaded	P	Socket	Pin	5
↑ Contacts supplied separately see Chart 1 page 64					



### CHART 1

### Crimp Contacts, Machined

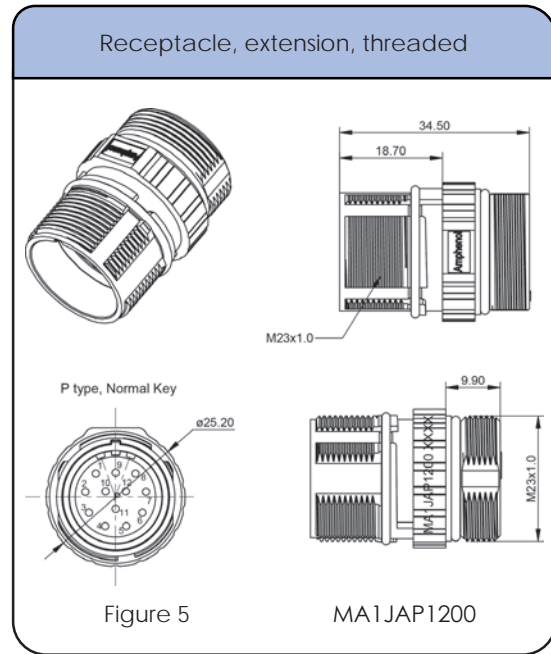
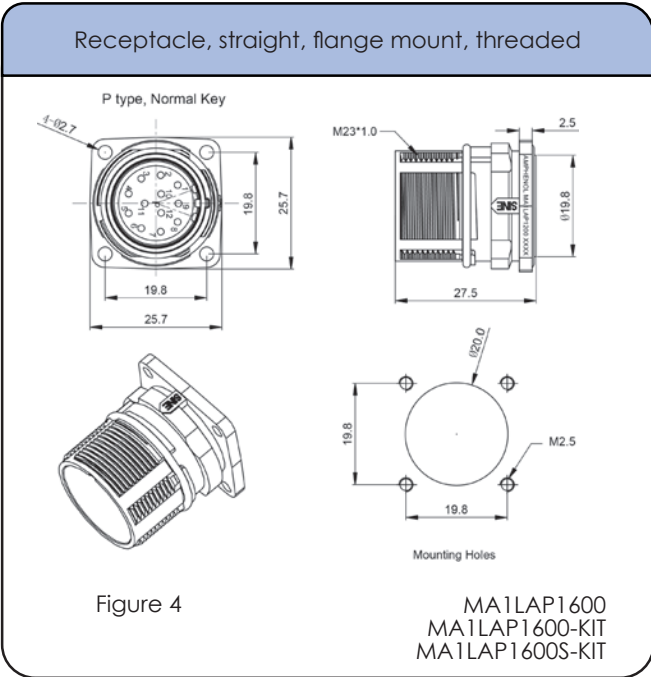
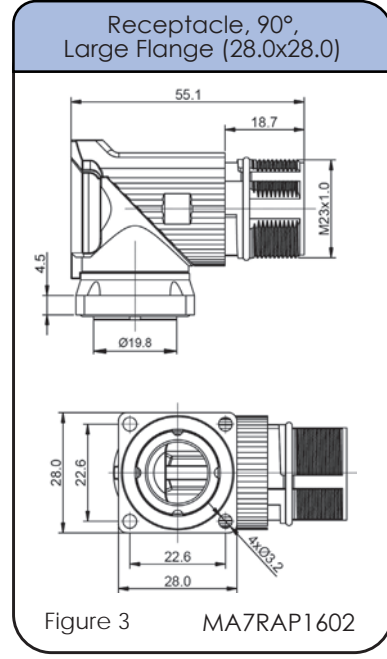
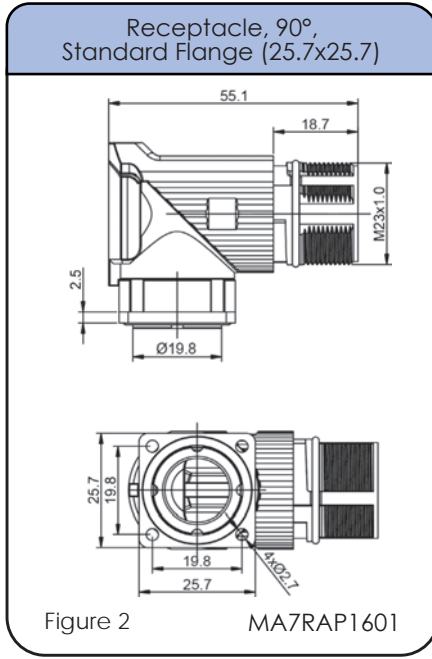
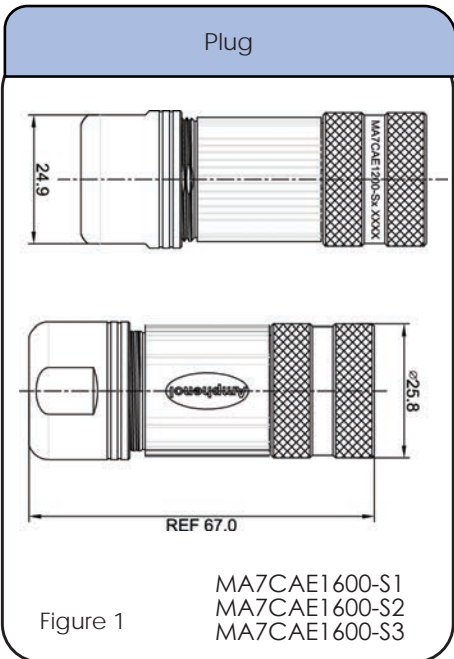
Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold



**16 POSITIONS**  
**9A / 125V**  
**E type**  
**Threaded**

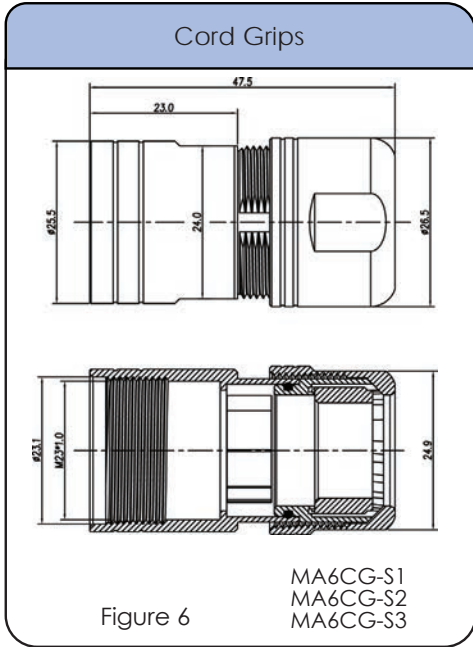
**Style: E type Plug**    **Number of Contacts: 16**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

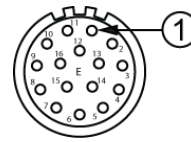
CONNECTOR SOLUTIONS



Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued







**16 POSITIONS**  
**9A / 125V**  
**E type**  
**Threaded**

**Style: E type Plug**    **Number of Contacts: 16**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 -0.10 mm<sup>2</sup>)**

**Tools & Accessories**

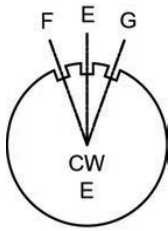
<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>	<p>Dust Cap for Receptacle</p>  <p>P29687</p>	<p>Dust Cap for Plug, Threaded</p>  <p>P31660</p>

\* The universal positioner is not included with the crimp tools and must be ordered separately.

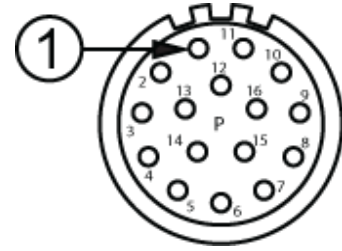
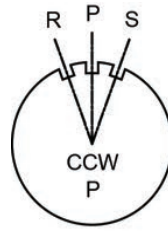
# Connector Solutions M23 Elite Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.* Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 23 for connector configurations



SEE TABLE ON NEXT PAGE FOR PART DETAILS

## Plugs



## Receptacles



## Receptacle Kit



## Plug Kits

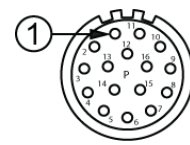


**BULK CABLE starts on page 23**

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6



**16 POSITIONS**  
**9A / 125V**  
**P type**  
**Checkmate™**

**Style: P type Plug**    **Number of Contacts: 16**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**



## Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA5CAP1600-S1	Plug, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	P	Socket	Pin	1
MA5CAP1600-S1-KIT	Plug Kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	P		Pin	1
MA5CAP1600S-S1-KIT	Plug Kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	P	Socket		1
MA5CAP1600-S2	Plug, straight, <b>Checkmate™</b> 7.5-11mm cord grip	P	Socket	Pin	1
MA5CAP1600-S2-KIT	Plug Kit, straight, <b>Checkmate™</b> 7.5-11mm cord grip	P		Pin	1
MA5CAP1600S-S2-KIT	Plug Kit, straight, <b>Checkmate™</b> 7.5-11mm cord grip	P	Socket		1
MA5CAP1600-S3	Plug, straight, <b>Checkmate™</b> 11-15mm cord grip	P	Socket	Pin	1
MA5CAP1600-S3-KIT	Plug Kit, straight, <b>Checkmate™</b> 11-15mm cord grip	P		Pin	1
MA5CAP1600S-S3-KIT	Plug Kit, straight, <b>Checkmate™</b> 11-15mm cord grip	P	Socket		1
<b>RECEPTACLES</b>			<b>↑ Mating Parts ↑</b>		
MA5RAE1601	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E	Socket	Pin	2
MA5RAE1601-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E		Pin	2
MA5RAE1601S-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E	Socket		2
MA5RAE1602	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E	Socket	Pin	3
MA5RAE1602-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E		Pin	3
MA5RAE1602S-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E	Socket		3

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266  
 Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Part Numbers continued

MA2LAE1600*	Receptacle, straight, flange mount, <b>Checkmate™</b>	E	Socket	Pin	4
MA2LAE1600-KIT*	Receptacle Kit, straight, flange mount, <b>Checkmate™</b>	E	Socket	Pin	4
MA2LAE1600S-KIT*	Receptacle Kit, straight, flange mount, <b>Checkmate™</b>	E	Socket	Pin	4
MA2JAE1600*	Receptacle extension, <b>Checkmate™</b>	E	Socket	Pin	5
↑ Contacts supplied separately see Chart 1					

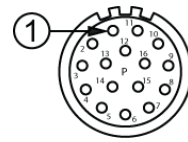


### CHART 1

### Crimp Contacts, Machined

Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold

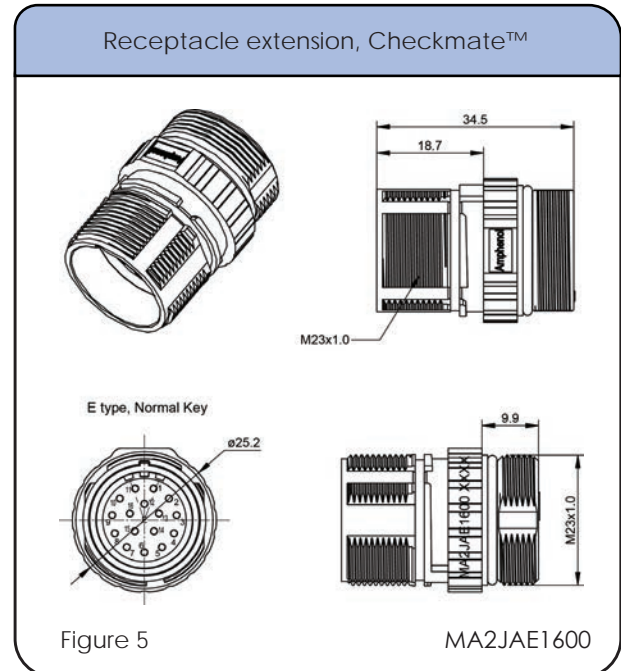
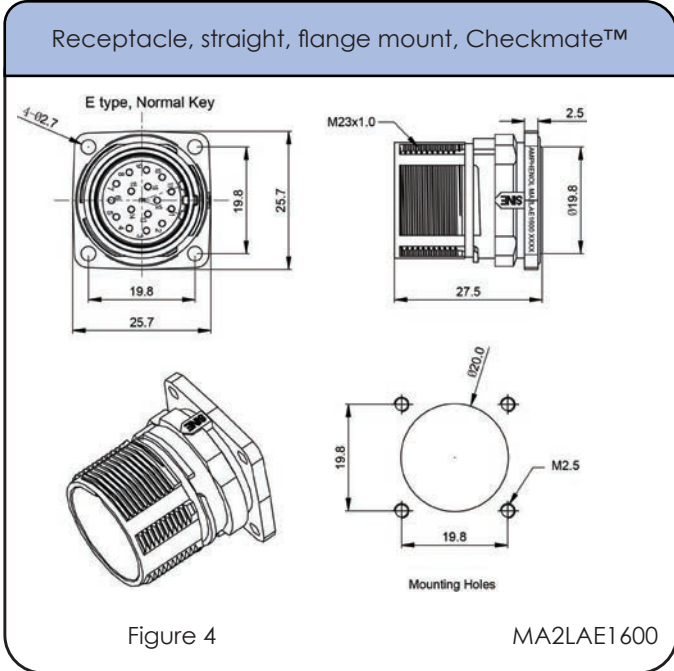
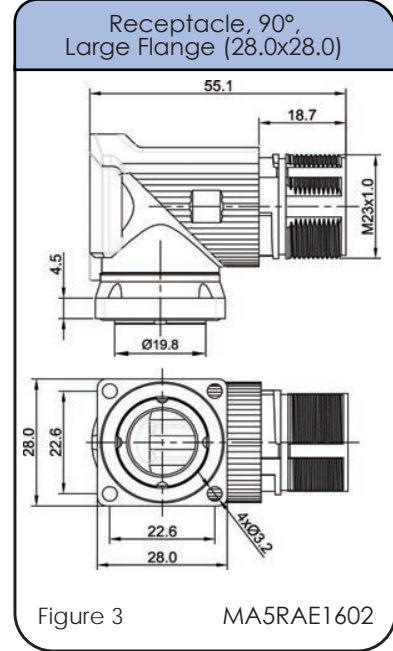
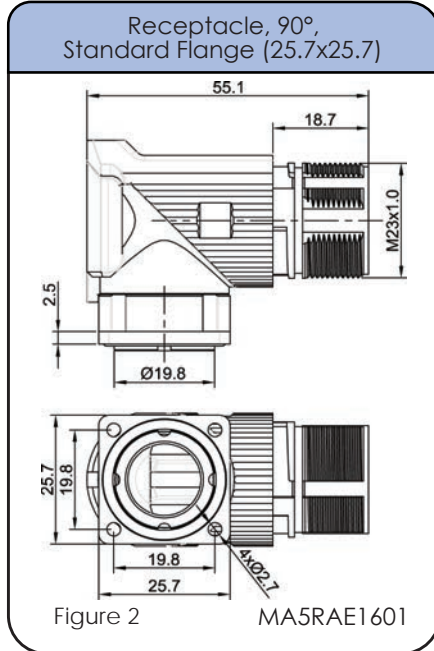
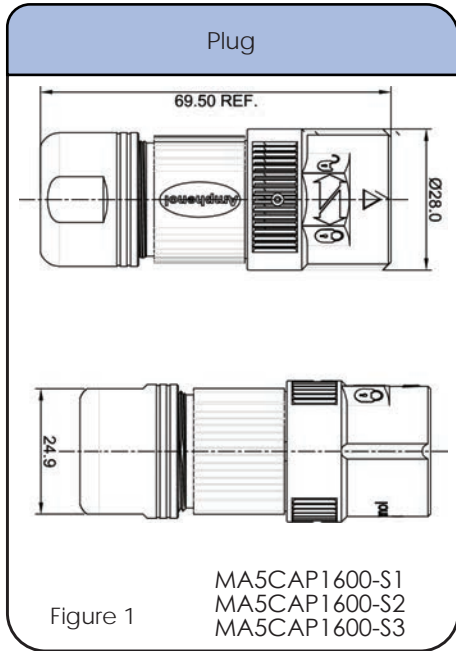




16 POSITIONS  
9A / 125V  
P type  
Checkmate™

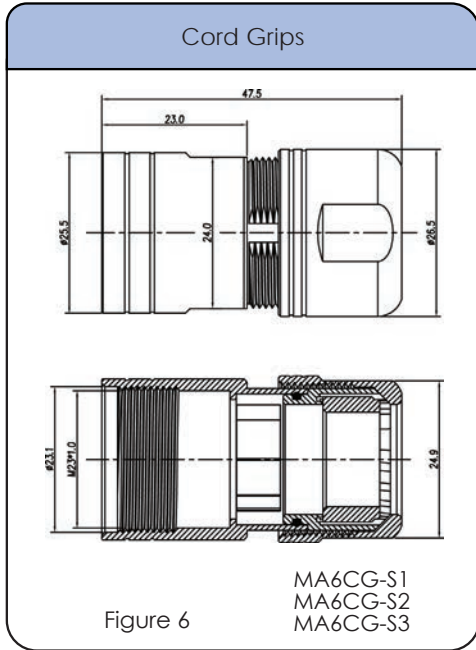
Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

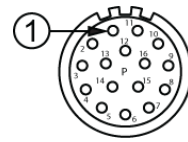
CONNECTOR SOLUTIONS



Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued





16 POSITIONS  
9A / 125V  
P type  
Checkmate™

Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

CONNECTOR SOLUTIONS

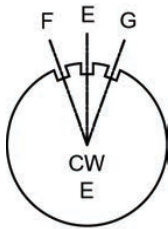
### Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>	<p>Dust Cap for Receptacle</p>  <p>P29687</p>	<p>Dust Cap for Plug, Checkmate™</p>  <p>P31662</p>

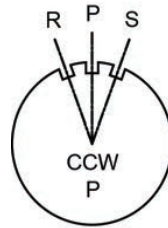
\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

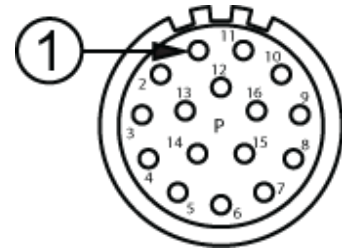
## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 12 for connector configurations



## STEP 2 Choose Receptacle



SEE TABLE ON NEXT PAGE FOR PART DETAILS

### Plugs



### Receptacles



### Receptacle Kit



### Plug Kits

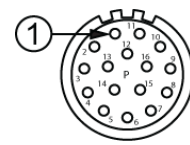


**BULK CABLE starts  
on page 23**

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6



**16 POSITIONS**  
**9A / 125V**  
**P type**  
**Threaded**

**Style: P type Plug**    **Number of Contacts: 16**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.39 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

### Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA7CAP1600-S1	Plug, straight, threaded 4.5-7.5mm cord grip	P	Pin	Socket	1
MA7CAP1600-S1-KIT	Plug Kit, straight, threaded 4.5-7.5mm cord grip	P	Pin		1
MA7CAP1600S-S1-KIT	Plug Kit, straight, threaded 4.5-7.5mm cord grip	P		Socket	1
MA7CAP1600-S2	Plug, straight, threaded 7.5-11mm cord grip	P	Pin	Socket	1
MA7CAP1600-S2-KIT	Plug Kit, straight, threaded 7.5-11mm cord grip	P	Pin		1
MA7CAP1600S-S2-KIT	Plug Kit, straight, threaded 7.5-11mm cord grip	P		Socket	1
MA7CAP1600-S3	Plug, straight, threaded 11-15mm cord grip	P	Pin	Socket	1
MA7CAP1600-S3-KIT	Plug Kit, straight, threaded 11-15mm cord grip	P	Pin		1
MA7CAP1600S-S3-KIT	Plug Kit, straight, threaded 11-15mm cord grip	P		Socket	1
<b>RECEPTACLES</b>			<b>↑ Mating Parts ↑</b>		
MA7RAE1601	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	E	Socket	Pin	2
MA7RAE1601-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	E		Pin	2
MA7RAE1601S-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	E	Socket		2
MA7RAE1602	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	E	Socket	Pin	3
MA7RAE1602-KIT	Receptacle KIT, 90° rotatable, threaded Large Flange (28.0x28.0)	E		Pin	3
MA7RAE1602S-KIT	Receptacle KIT, 90° rotatable, threaded Large Flange (28.0x28.0)	E	Socket		3
MA1LAE1600*	Receptacle, straight, flange mount, threaded	E	Socket	Pin	4

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

**Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

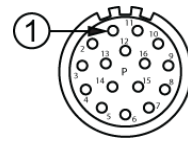
Connector Part Numbers continued

MA1LAE1600-KIT*	Receptacle kit, straight, threaded. Kit includes contacts.	E		Pin	4
MA1LAE1600S-KIT*	Receptacle kit, straight, threaded. Kit includes contacts.	E	Socket		4
MA1JAE1600*	Receptacle extension, threaded	E	Socket	Pin	5
↑ Contacts supplied separately see Chart 1 page 76					



**CHART 1**    Crimp Contacts, Machined

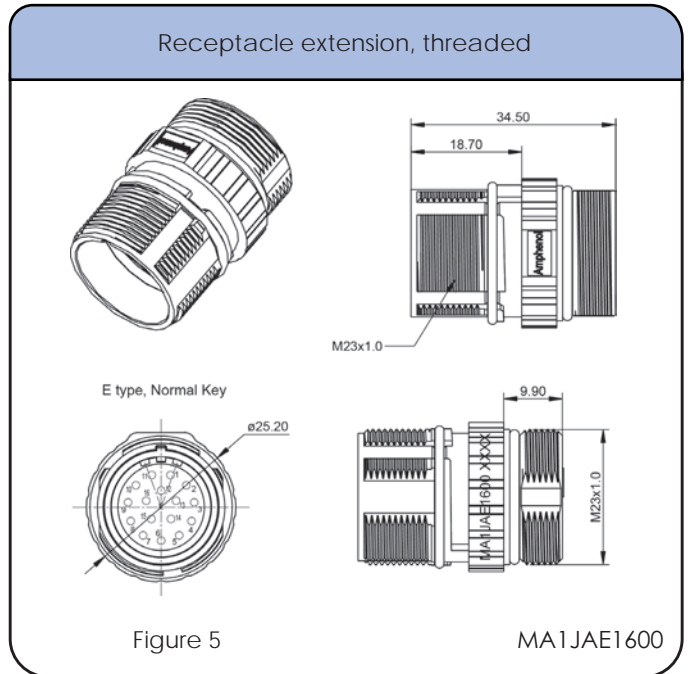
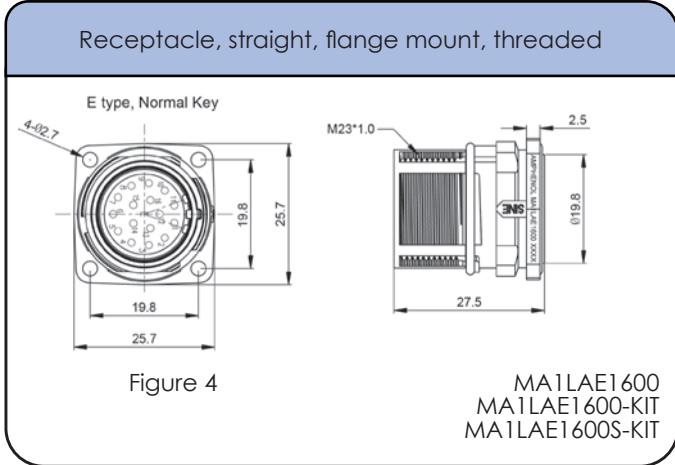
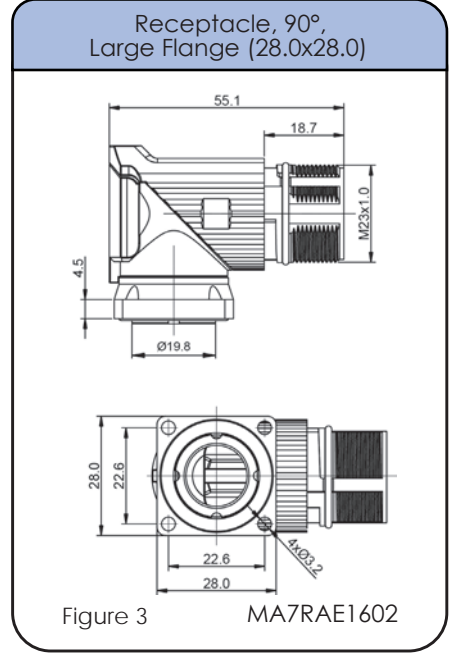
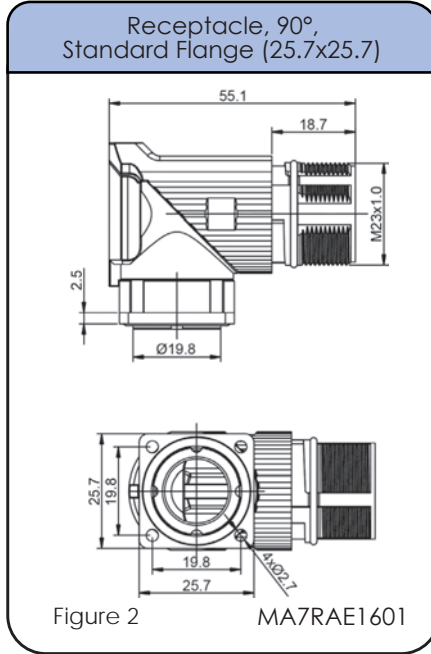
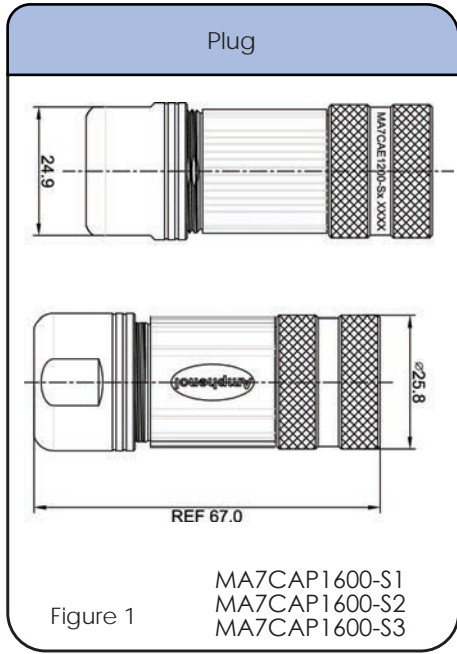
Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold



**16 POSITIONS**  
**9A / 125V**  
**P type**  
**Threaded**

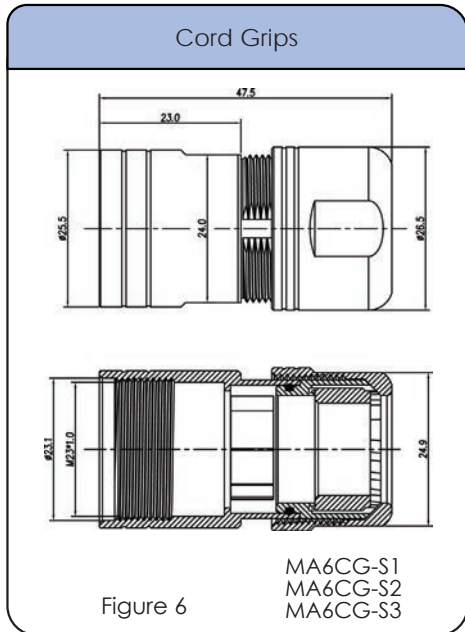
**Style: P type Plug**    **Number of Contacts: 16**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

CONNECTOR SOLUTIONS

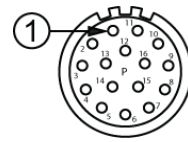


Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued














16 POSITIONS  
9A / 125V  
P type  
Threaded

Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

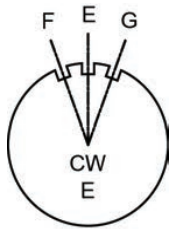
### Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>	<p>Dust Cap for Receptacle</p>  <p>P29687</p>	<p>Dust Cap for Plug, Threaded</p>  <p>P31660</p>

\* The universal positioner is not included with the crimp tools and must be ordered separately.

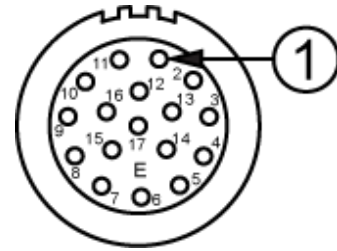
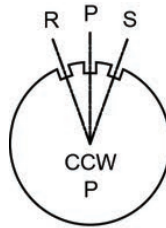
# Connector Solutions M23 Elite Series

## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 12 for connector configurations

## STEP 2 Choose Receptacle



### Plugs



### Receptacles



### Receptacles Kits



### Plug Kits



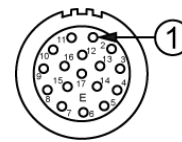
**BULK CABLE starts  
on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6



**17 POSITIONS**  
**9A / 125V**  
**E type**  
**Checkmate™**

**Style: E type Plug**    **Number of Contacts: 17**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**



## Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA5CAE1700-S1	Plug, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	E	Pin	Socket	1
MA5CAE1700-S1-KIT	Plug kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	E	Pin		1
MA5CAE1700S-S1-KIT	Plug kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	E		Socket	1
MA5CAE1700-S2	Plug, straight, <b>Checkmate™</b> 7.5-11mm cord grip	E	Pin	Socket	1
MA5CAE1700-S2-KIT	Plug kit, straight, <b>Checkmate™</b> 7.5-11mm cord grip	E	Pin		1
MA5CAE1700S-S2-KIT	Plug kit, straight, <b>Checkmate™</b> 7.5-11mm cord grip	E		Socket	1
MA5CAE1700-S3	Plug, straight, <b>Checkmate™</b> 11-15mm cord grip	E	Pin	Socket	1
MA5CAE1700-S3-KIT	Plug kit, straight, <b>Checkmate™</b> 11-15mm cord grip	E	Pin		1
MA5CAE1700S-S3-KIT	Plug kit, straight, <b>Checkmate™</b> 11-15mm cord grip	E		Socket	1
RECEPTACLES			↑ Mating Parts ↑		
MA5RAP1701	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P	Socket	Pin	2
MA5RAP1701-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P		Pin	2
MA5RAP1701S-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P	Socket		2
MA5RAP1702	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P	Socket	Pin	3
MA5RAP1702-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P		Pin	3
MA5RAP1702S-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P	Socket		3

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266  
 Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

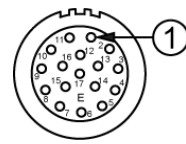
Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 -0.10 mm<sup>2</sup>)

Connector Part Numbers continued

MA2LAP1700*	Receptacle, straight, flange mount <b>Checkmate™</b>	P	Socket	Pin	4
MA2LAP1700-KIT*	Receptacle kit, straight, flange mount <b>Checkmate™</b>	P		Pin	4
MA2LAP1700S-KIT*	Receptacle kit, straight, flange mount <b>Checkmate™</b>	P	Socket		4
MA2JAP1700*	Receptacle extension, <b>Checkmate™</b>	P	Socket	Pin	5
↑ Contacts supplied separately see Chart 1					



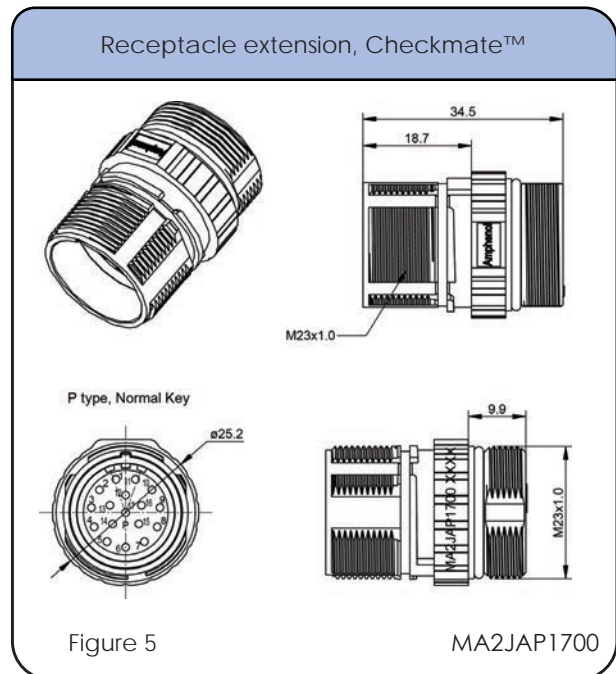
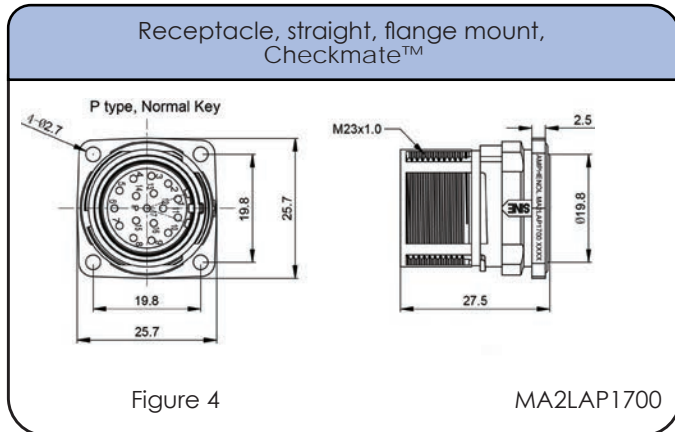
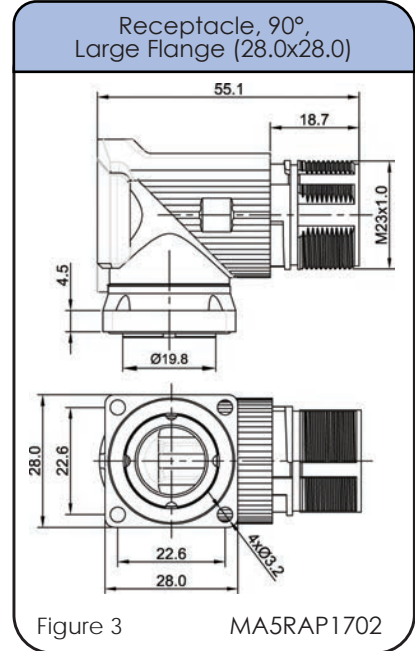
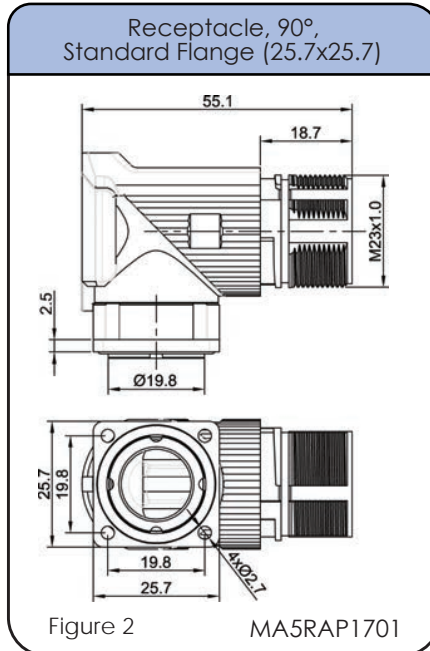
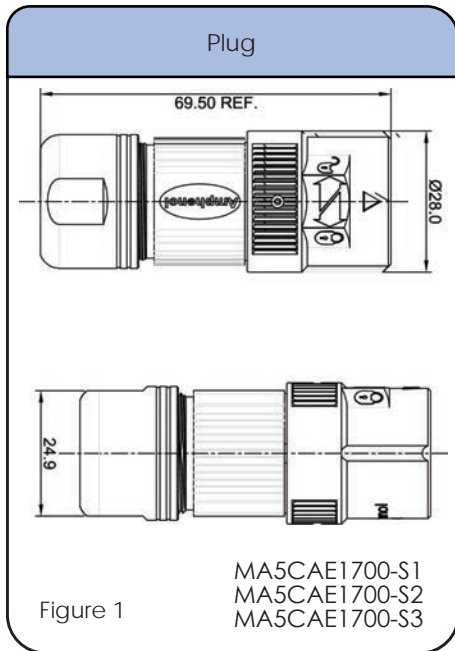
CHART 1		Crimp Contacts, Machined			
Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating	
SC000035	Pin	22-18	0.37 - 0.75	Gold	
SC000146	Pin	28-24	0.10 - 0.25	Gold	
SC000044	Socket	22-18	0.37 - 0.75	Gold	
SC000030	Socket	28-24	0.10 - 0.25	Gold	



17 POSITIONS  
9A / 125V  
E type  
Checkmate™

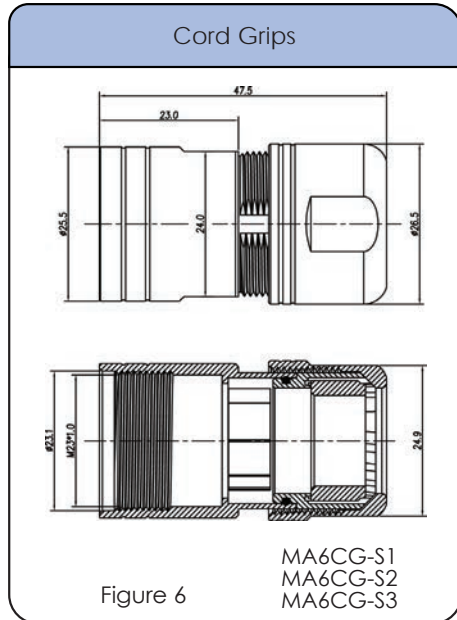
Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

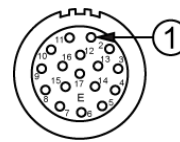
CONNECTOR SOLUTIONS



Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued











17 POSITIONS  
9A / 125V  
E type  
Checkmate™

Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

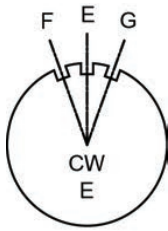
## Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>	<p>Dust Cap for receptacle</p>  <p>P29687</p>	<p>Dust Cap for Plug, Checkmate™</p>  <p>P31662</p>

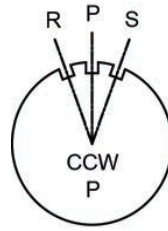
\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

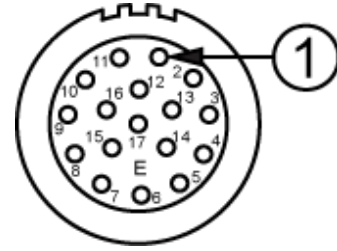
## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 12 for connector configurations



## STEP 2 Choose Receptacle



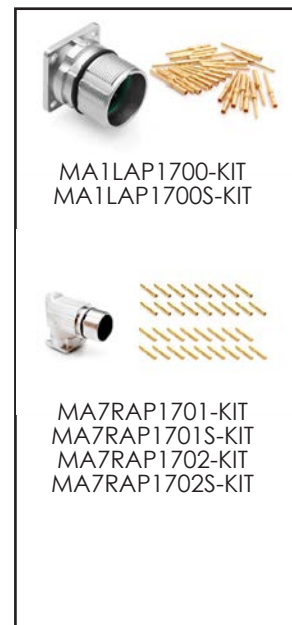
### Plugs



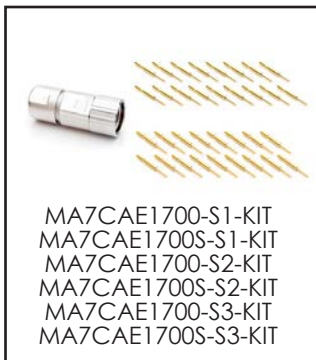
### Receptacles



### Receptacle Kits



### Plug Kits



**BULK CABLE starts  
on page 23**

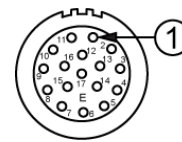
SEE TABLE ON NEXT PAGE FOR PART DETAILS

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6





**17 POSITIONS**  
**9A / 125V**  
**E type**  
**Threaded**

**Style: E type Plug**    **Number of Contacts: 17**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

### Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA7CAE1700-S1	Plug, straight, threaded 4.5-7.5mm cord grip	E	Pin	Socket	1
MA7CAE1700-S1-KIT	Plug kit, straight, threaded 4.5-7.5mm cord grip	E	Pin		1
MA7CAE1700S-S1-KIT	Plug kit, straight, threaded 4.5-7.5mm cord grip	E		Socket	1
MA7CAE1700-S2	Plug, straight, threaded 7.5-11mm cord grip	E	Pin	Socket	1
MA7CAE1700-S2-KIT	Plug kit, straight, threaded 7.5-11mm cord grip	E	Pin		1
MA7CAE1700S-S2-KIT	Plug kit, straight, threaded 7.5-11mm cord grip	E		Socket	1
MA7CAE1700-S3	Plug, straight, threaded 11-15mm cord grip	E	Pin	Socket	1
MA7CAE1700-S3-KIT	Plug kit, straight, threaded 11-15mm cord grip	E	Pin	Socket	1
MA7CAE1700S-S3-KIT	Plug kit, straight, threaded 11-15mm cord grip	E		Socket	1
RECEPTACLES			↑ Mating Parts ↓		
MA7RAP1701	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	P	Socket	Pin	2
MA7RAP1701-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	P		Pin	2
MA7RAP1701S-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	P	Socket		2
MA7RAP1702	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	P	Socket	Pin	3
MA7RAP1702-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	P		Pin	3
MA7RAP1702S-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	P	Socket		3
MA1LAP1700*	Receptacle, straight, flange mount, threaded	P	Socket	Pin	4

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

**Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 -0.10 mm<sup>2</sup>)**

Connector Part Numbers continued

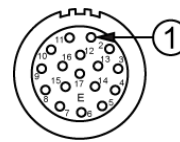
MA1LAP1700-KIT*	Receptacle kit, straight, threaded. Kit includes contacts.	P		Pin	4
MA1LAP1700S-KIT*	Receptacle kit, straight, threaded. Kit includes contacts.	P	Socket		4
MA1JAP1700*	Receptacle extension, threaded	P	Socket	Pin	5
↑ Contacts supplied separately see Chart					



**CHART 1**

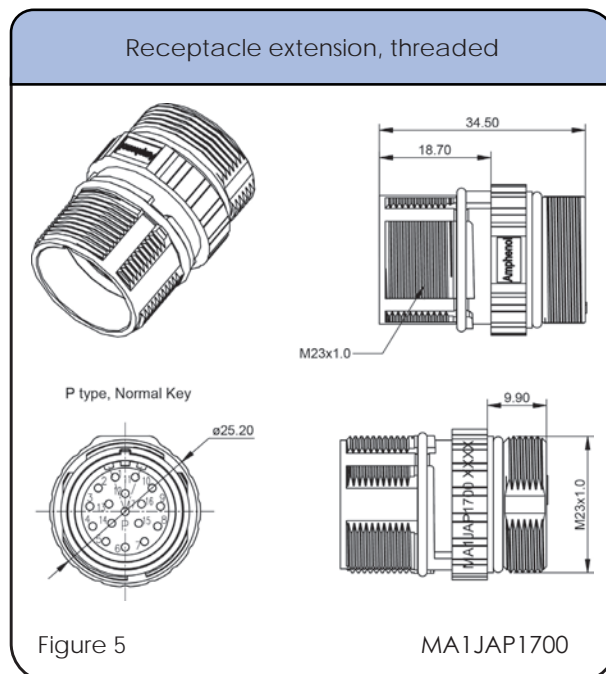
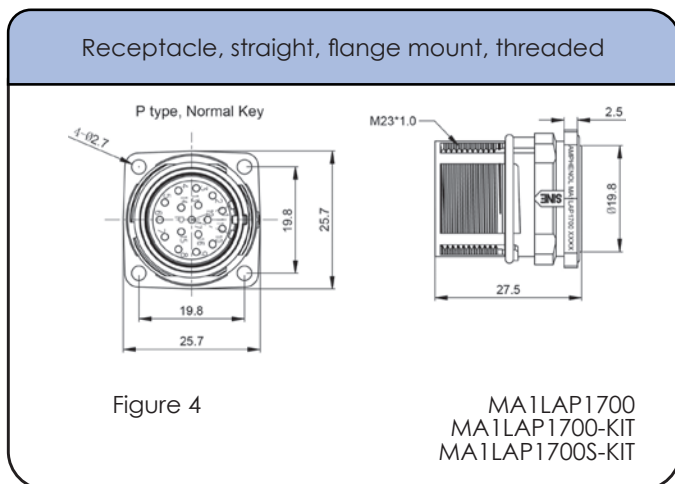
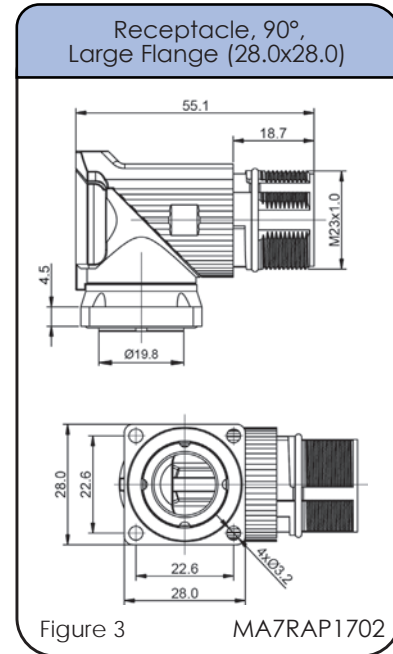
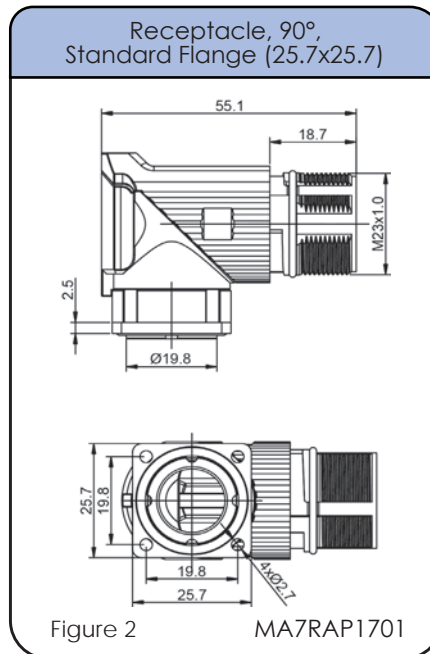
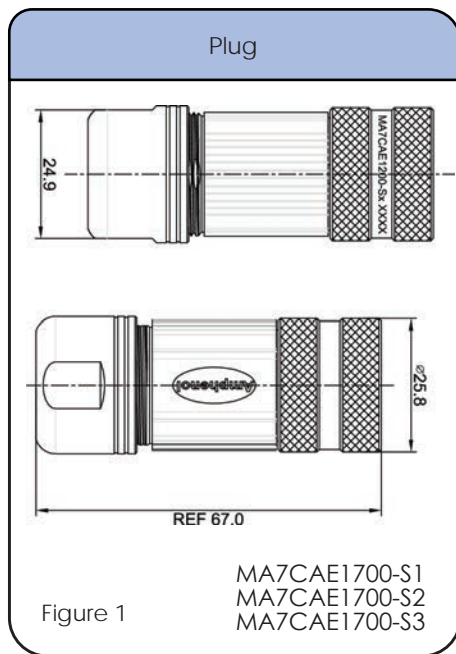
**Crimp Contacts, Machined**

Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold



17 POSITIONS  
9A / 125V  
E type  
Threaded

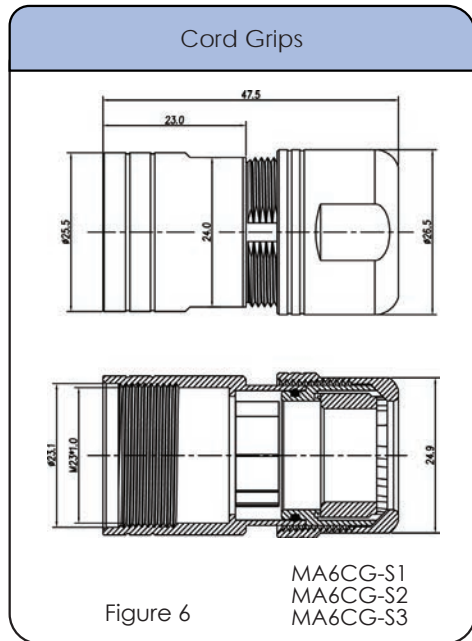
Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

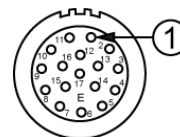


Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued










**17 POSITIONS**  
**9A / 125V**  
**E type**  
**Threaded**

**Style: E type Plug**    **Number of Contacts: 17**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

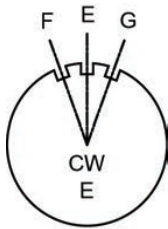
## Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>	<p>Dust Cap for Receptacle</p>  <p>P29687</p>	<p>Dust Cap for Plug, Threaded</p>  <p>P31660</p>

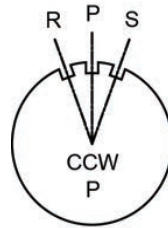
\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

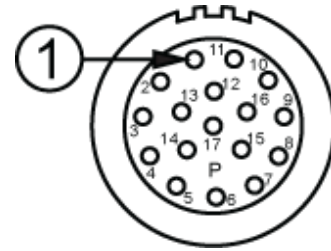
## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 12 for connector configurations



## STEP 2 Choose Receptacle



SEE TABLE ON NEXT PAGE FOR PART DETAILS

### Plugs



### Receptacles



### Receptacle Kit



### Plugs Kit

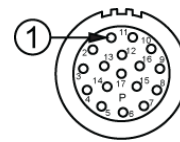


**BULK CABLE starts  
on page 23**

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6



**17 POSITIONS**  
**9A / 125V**  
**P type**  
**Checkmate™**

**Style: P type Plug**    **Number of Contacts: 17**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**



## Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA5CAP1700-S1	Plug, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	P	Pin	Socket	1
MA5CAP1700-S1-KIT	Plug, kit straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	P	Pin		1
MA5CAP1700S-S1-KIT	Plug kit, straight, <b>Checkmate™</b> 4.5-7.5mm cord grip	P		Socket	1
MA5CAP1700-S2	Plug, straight, <b>Checkmate™</b> 7.5-11mm cord grip	P	Pin	Socket	1
MA5CAP1700-S2-KIT	Plug kit, straight, <b>Checkmate™</b> 7.5-11mm cord grip	P	Pin		1
MA5CAP1700S-S2-KIT	Plug kit, straight, <b>Checkmate™</b> 7.5-11mm cord grip	P		Socket	1
MA5CAP1700-S3	Plug, straight, <b>Checkmate™</b> 11-15mm cord grip	P	Pin	Socket	1
MA5CAP1700-S3-KIT	Plug kit, straight, <b>Checkmate™</b> 11-15mm cord grip	P	Pin		1
MA5CAP1700S-S3-KIT	Plug kit, straight, <b>Checkmate™</b> 11-15mm cord grip	P		Socket	1
RECEPTACLES			↑ Mating Parts ↑		
MA5RAE1701	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E	Socket	Pin	2
MA5RAE1701-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E		Pin	2
MA5RAE1701S-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E	Socket		2
MA5RAE1702	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E	Socket	Pin	3
MA5RAE1702-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E		Pin	3
MA5RAE1702S-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E	Socket		3

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Part Numbers continued

MA2LAE1700*	Receptacle, straight, flange mount, <b>Checkmate™</b>	E	Socket	Pin	4
MA2LAE1700-KIT*	Receptacle kit, straight, flange mount, <b>Checkmate™</b>	E		Pin	4
MA2LAE1700S-KIT*	Receptacle kit, straight, flange mount, <b>Checkmate™</b>	E	Socket		4
MA2JAE1700*	Receptacle extension, <b>Checkmate™</b>	E	Socket	Pin	5

↑ Contacts supplied separately see Chart 1

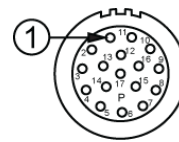


### CHART 1

### Crimp Contacts, Machined

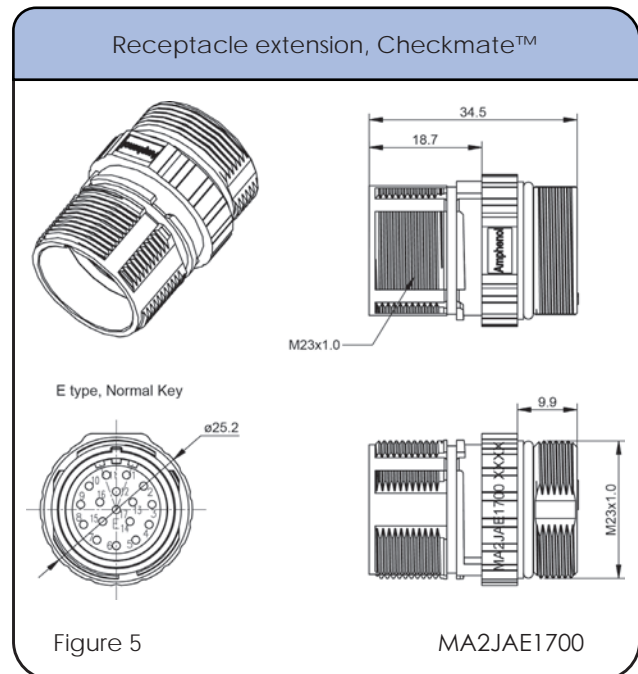
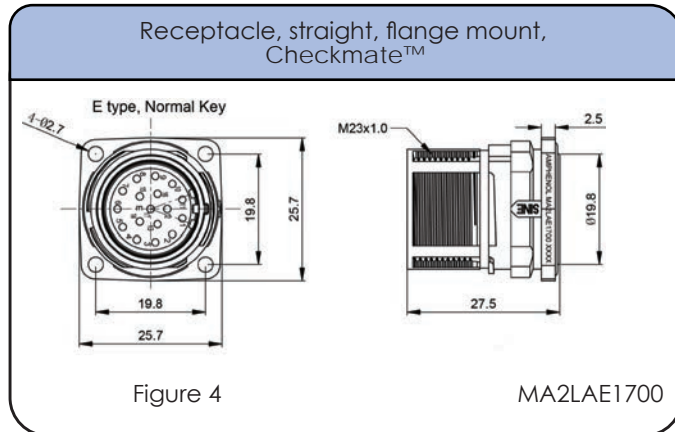
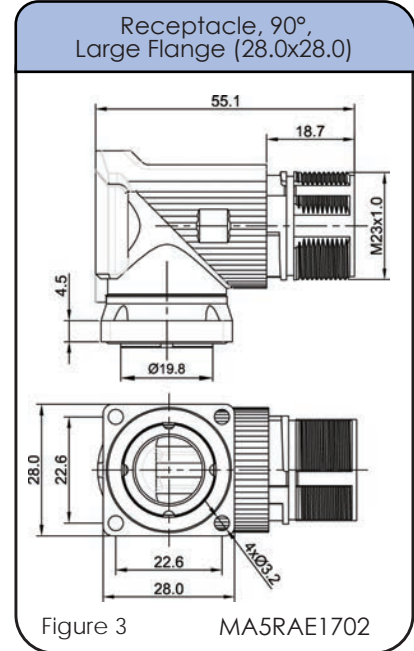
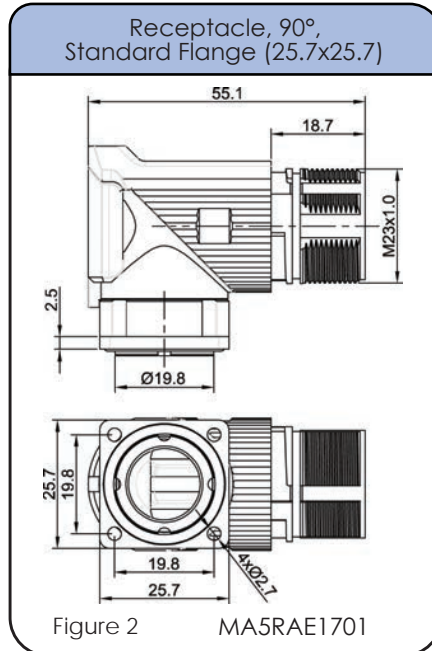
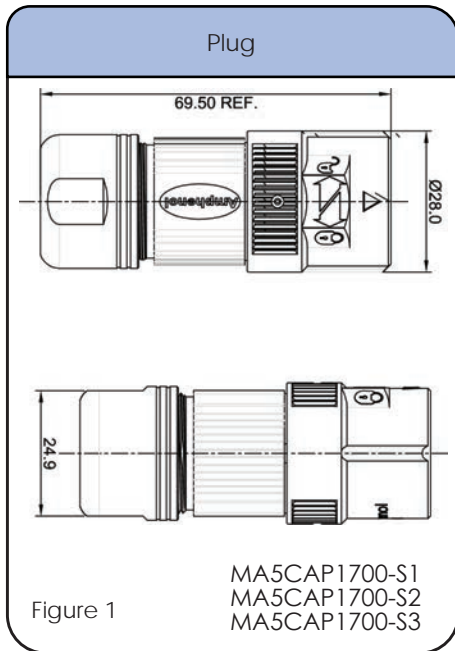
Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold





17 POSITIONS  
9A / 125V  
P type  
Checkmate™

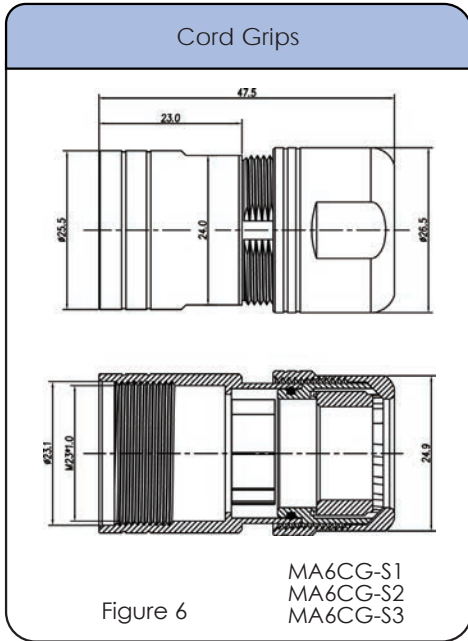
Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

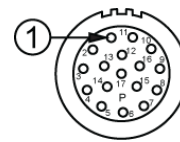


Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued













17 POSITIONS  
9A / 125V  
P type  
Checkmate™

Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

CONNECTOR SOLUTIONS

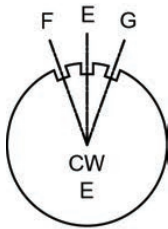
### Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>	<p>Dust Cap for Receptacle</p>  <p>P29687</p>	<p>Dust Cap for Plug, Checkmate™</p>  <p>P31662</p>

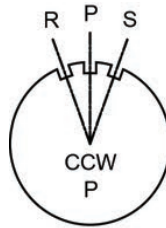
\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

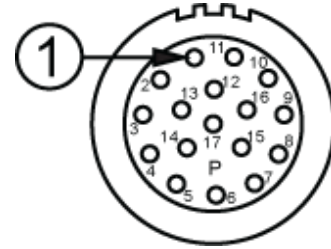
## STEP 1 Choose Plug



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 12 for connector configurations



## STEP 2 Choose Receptacle



### Plugs



### Receptacles



### Receptacle Kits



### Plug Kits



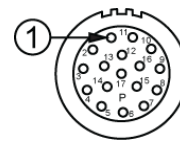
**BULK CABLE starts  
on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

## Cord Grips (Required only for Receptacle Extension)



Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	6
MA6CG-S2	Cord grip	7.5-11.0mm	6
MA6CG-S3	Cord grip	11.0-15.0mm	6



**17 POSITIONS**  
**9A / 125V**  
**P type**  
**Threaded**

**Style: P type Plug**    **Number of Contacts: 17**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.39 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

### Connector Part Numbers

Part Number	Connector Type PLUGS	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA7CAP1700-S1	Plug, straight, threaded 4.5-7.5mm cord grip	P	Pin	Socket	1
MA7CAP1700-S1-KIT	Plug kit, straight, threaded 4.5-7.5mm cord grip	P	Pin		1
MA7CAP1700S-S1-KIT	Plug kit, straight, threaded 4.5-7.5mm cord grip	P		Socket	1
MA7CAP1700-S2	Plug, straight, threaded 7.5-11mm cord grip	P	Pin	Socket	1
MA7CAP1700-S2-KIT	Plug kit, straight, threaded 7.5-11mm cord grip	P	Pin		1
MA7CAP1700S-S2-KIT	Plug kit, straight, threaded 7.5-11mm cord grip	P		Socket	1
MA7CAP1700-S3	Plug, straight, threaded 11-15mm cord grip	P	Pin	Socket	1
MA7CAP1700-S3-KIT	Plug kit, straight, threaded 11-15mm cord grip	P	Pin		1
MA7CAP1700S-S3-KIT	Plug kit, straight, threaded 11-15mm cord grip	P		Socket	1
RECEPTACLES			↑ Mating Parts ↑		
MA7RAE1701	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	E	Socket	Pin	2
MA7RAE1701-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	E		Pin	2
MA7RAE1701S-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	E	Socket		2
MA7RAE1702	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	E	Socket	Pin	3
MA7RAE1702-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	E		Pin	3
MA7RAE1702S-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	E	Socket		3
MA1LAE1700*	Receptacle, straight, threaded, flange mount	E	Socket	Pin	4

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

**Style: P type Plug**    **Number of Contacts: 17**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)**

Connector Part Numbers continued

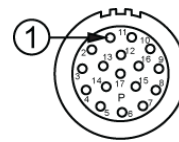
MA1LAE1700-KIT*	Receptacle kit, straight, threaded. Kit includes contacts.	E		Pin	4
MA1LAE1700S-KIT*	Receptacle kit, straight, threaded. Kit includes contacts.	E	Socket		4
MA1JAE1700*	Receptacle extension, threaded	E	Socket	Pin	5
↑ Contacts supplied separately see Chart 1 page 100					



### CHART 1

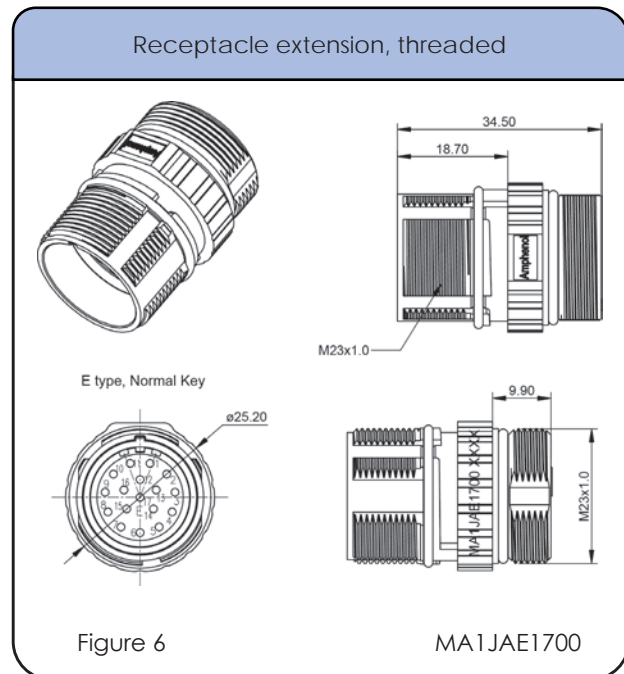
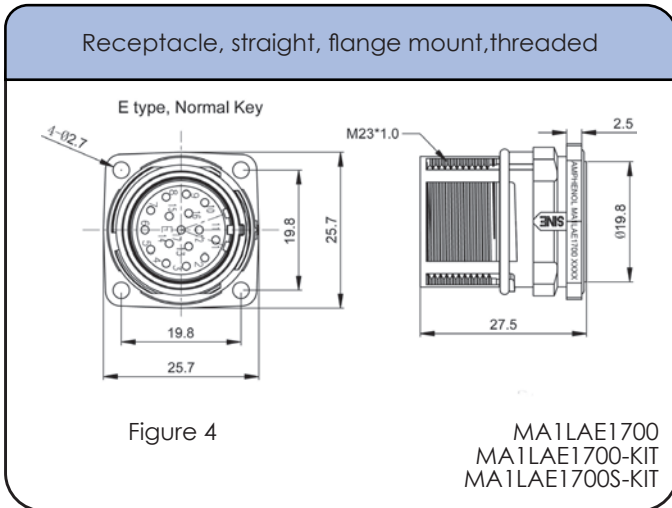
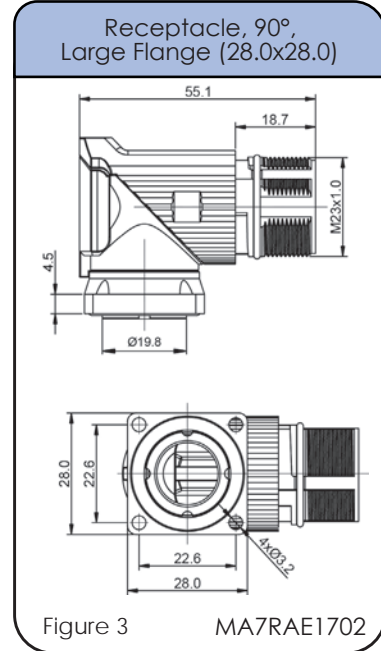
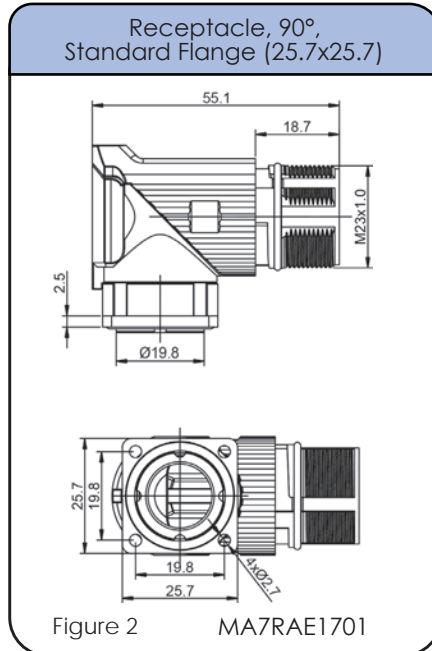
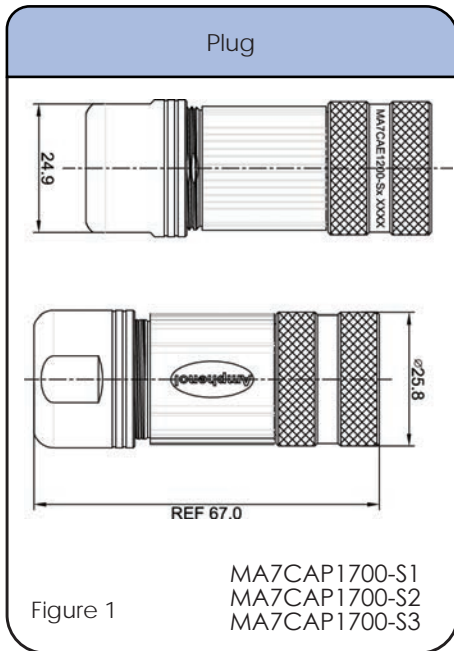
### Crimp Contacts, Machined

Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold



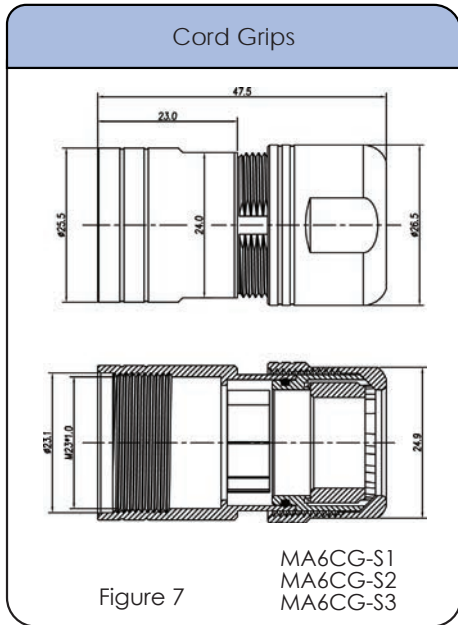
17 POSITIONS  
9A / 125V  
P type  
Threaded

Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

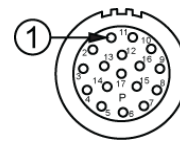


Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

Connector Drawings continued







17 POSITIONS  
9A / 125V  
P type  
Threaded

Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 28-24 (0.25 - 0.10 mm<sup>2</sup>)

### Tools & Accessories

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



AFM8

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire range 12-26AWG



AF8

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



WA22

Universal positioner is used with crimp tools AFM8 and WA22.  
Wire range 20-32AWG



SK2-2

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG



UH2-5

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*.  
Wire range 12-26AWG



WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Dust Cap



P29687

Dust Cap for Plug, Threaded



P31660

\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

## Plugs



## Plug Kits



## Receptacles



## Receptacle Kits



See page 14 for connector configurations

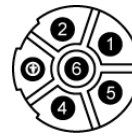
## Receptacle Extension



**BULK CABLE**  
starts on page  
23

SEE TABLE ON NEXT PAGE FOR PART DETAILS

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



6 POSITIONS  
28A / 630V  
Checkmate™

Number of Contacts: 6 Contact Size: 2.0mm  
Sealing: IP66/67 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)



## Connector Part Numbers

Part Number	Connector Type	Contact Type	Figure Drawings
	PLUGS	male = pin female = socket	
MB5CKN0600-S1	Plug, straight, <b>Checkmate™</b> 7.0-11.0mm cord grip	Socket	1
MB5CKN0600-S1-KIT	Plug kit, straight, <b>Checkmate™</b> 7.0-11.0mm cord grip	Socket	1
MB5CKN0600-S2	Plug, straight, <b>Checkmate™</b> 11.0-14.5mm cord grip	Socket	1
MB5CKN0600-S2-KIT	Plug kit, straight, <b>Checkmate™</b> 11.0-14.5mm cord grip	Socket	1
MB5CKN0600-S3	Plug, straight, <b>Checkmate™</b> 14.5-17.0mm cord grip	Socket	1
MB5CKN0600-S3-KIT	Plug kit, straight, <b>Checkmate™</b> 14.5-17.0mm cord grip	Socket	1
↑ Contacts supplied separately see Chart 1 page 108			

Part Number	Connector Type	Contact Type	Figure Drawings
	RECEPTACLES	male = pin female = socket	
MB5RJN0601	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	Pin	2
MB5RJN0601-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	Pin	2
MB5RJN0602	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	Pin	3
MB5RJN0602-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	Pin	3
MB5JJN0600-S1	Receptacle Extension, <b>Checkmate™</b> , 7.5-11.0mm Cable OD Range	Pin	4
MB5JJN0600-S2	Receptacle Extension, <b>Checkmate™</b> , 11.0-14.5mm Cable OD Range	Pin	4
MB5JJN0600-S3	Receptacle Extension, <b>Checkmate™</b> , 14.5-17.0mm Cable OD Range	Pin	4
↑ Contacts supplied separately see Chart 2 page 108			
MB2LLN0600*	Receptacle, straight flange mount, <b>Checkmate™</b>	Pin	5

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
See Assembly Instructions starting on page 266

Style:    Number of Contacts: 6    Contact Size: 2.0mm  
 Sealing: IP66/67    AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

Connector Part Numbers continued

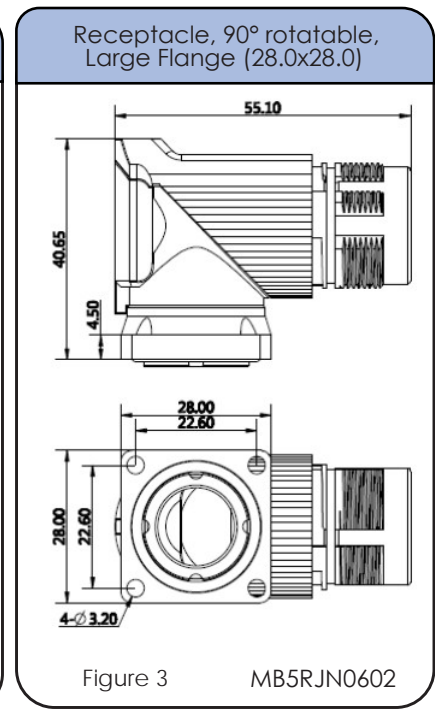
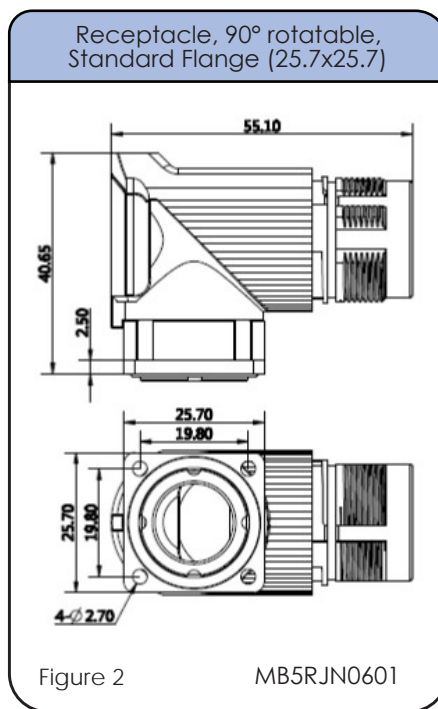
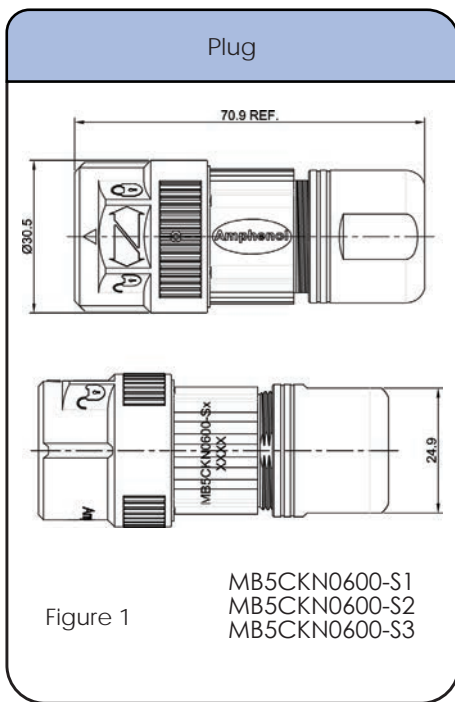
Part Number	Connector Type RECEPTACLES	Contact Type male = pin female = socket	Figure Drawings
MB2LLN0600-KIT*	Receptacle kit, straight, <b>Checkmate™</b> Kit includes contacts	Pin	5
MB2LKN0600*	Receptacle, straight, <b>Checkmate™</b>	Pin	6

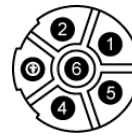
↑ Contacts supplied separately see Chart 3 page 108

## Dimensions

See Chart 1 for contacts options

See Chart 2 for contacts options for 90° Rotatable Receptacles



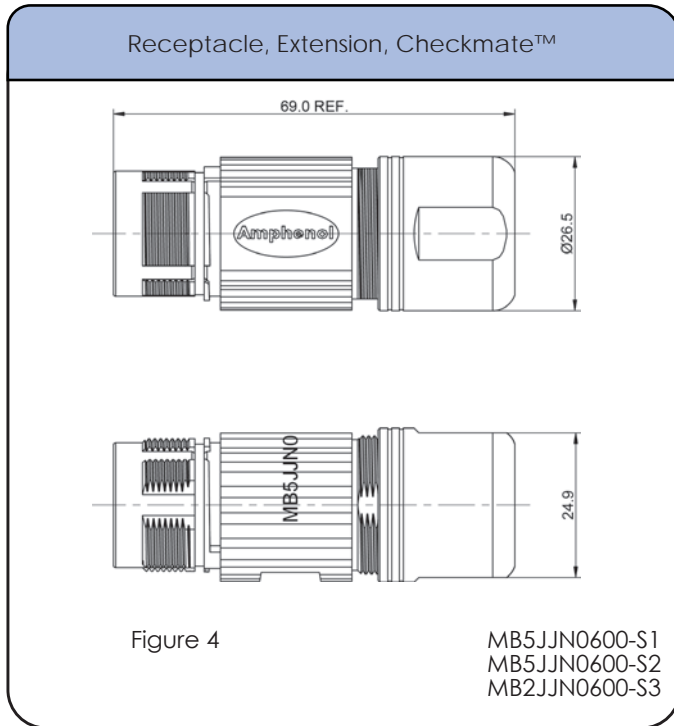


6 POSITIONS  
28A / 630V  
Checkmate™

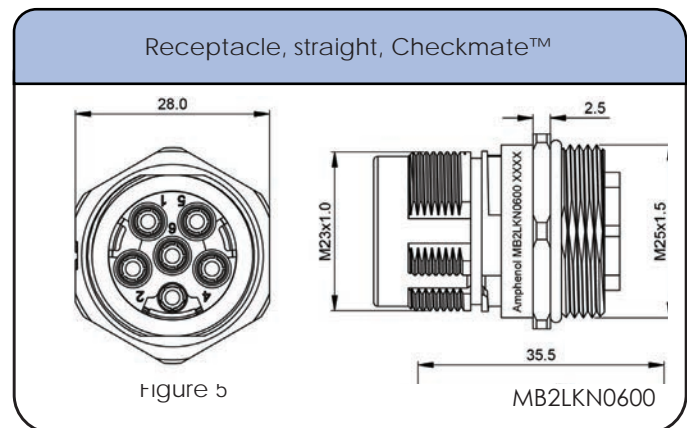
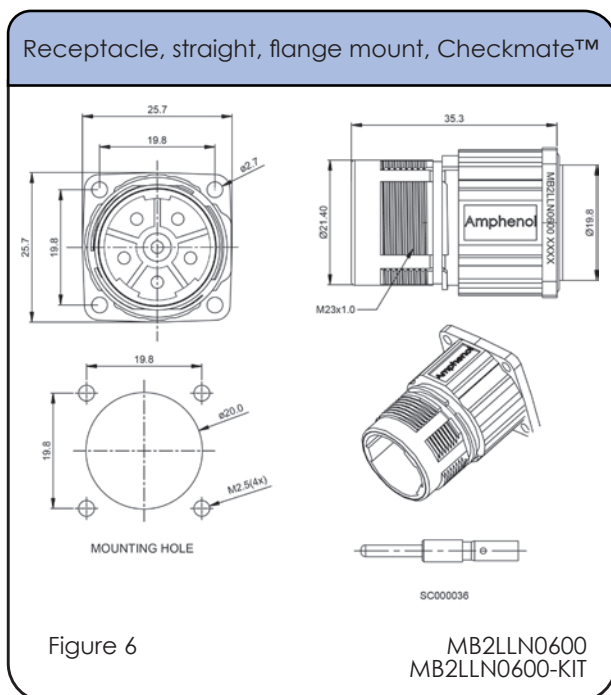
Style:      Number of Contacts: 6      Contact Size: 2.0mm  
Sealing: IP66/67      AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

## Dimensions

See Chart 2 for contacts options



See Chart 3 for contacts options



Style:    Number of Contacts: 6    Contact Size: 2.0mm  
 Sealing: IP66/67    AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

## Contacts



### CHART 1 Crimp Contacts, Machined

For parts: MB5CKN0600-S1, MB5CKN0600-S2, MB5CKN0800-S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000260	2.0mm	Socket	18-20	2.5 - 0.5	Gold

### CHART 2 Crimp Contacts, Machined

For parts: MB5RJN0601, MB5RJN0602, MB5JJN0600-S1, S2, S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000262	2.0mm	Pin	18-14	0.75 - 2.5	Gold

### CHART 3 Crimp Contacts, Machined

For Parts: MB2LLN0600, MB2LKN0600, MB2LLN0600-KIT

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000036	2.0mm	Pin	18-14	1.5 - 0.75	Gold



6 POSITIONS  
28A / 630V  
Checkmate™

Style:      Number of Contacts: 6      Contact Size: 2.0mm  
Sealing: IP66/67      AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

## Tools & Accessories



\* The universal positioner is not included with the crimp tools and must be ordered separately.

\* The extraction tool is only required to remove contacts from part numbers beginning with MB2

# Connector Solutions M23 Elite Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

## Plugs



## Receptacles



See page 14 for connector configurations

## Plug Kits



## Receptacle Extension



## Receptacle Kits



**BULK CABLE starts  
on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)





**6 POSITIONS**  
**28A / 630V**  
**Threaded**

**Number of Contacts: 6    Contact Size: 2.0mm**  
**Sealing: IP66/67    AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)**

### Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
	PLUGS		
MB7CKN0600-S1	Plug, straight, threaded 7.0-11.0mm cord grip	Socket	1
MB7CKN0600-S1-KIT	Plug kit, straight, threaded 7.0-11.0mm cord grip	Socket	1
MB7CKN0600-S2	Plug, straight, threaded 11.0-14.5mm cord grip	Socket	1
MB7CKN0600-S2-KIT	Plug kit, straight, threaded 11.0-14.5mm cord grip	Socket	1
MB7CKN0600-S3	Plug, straight, threaded 14.5-17.0mm cord grip	Socket	1
MB7CKN0600-S3-KIT	Plug kit, straight, threaded 14.5-17.0mm cord grip	Socket	1

↑ Contacts supplied separately see Chart 1 page 114

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
	RECEPTACLES		
MB7RJN0601	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	Pin	2
MB7RJN0601-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	Pin	2
MB7RJN0602	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	Pin	3
MB7RJN0602-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	Pin	3
MB7JJN0600-S1	Receptacle extension, threaded, 7.5-11.0mm Cable OD Range	Pin	4
MB7JJN0600-S2	Receptacle extension, threaded, 11.0-14.5mm Cable OD Range	Pin	4
MB7JJN0600-S3	Receptacle extension, threaded, 14.5-17.0mm Cable OD Range	Pin	4

↑ Contacts supplied separately see Chart 2 page 114

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Style:    Number of Contacts: 6    Contact Size: 2.0mm  
 Sealing: IP66/67    AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

Connector Part Numbers continued

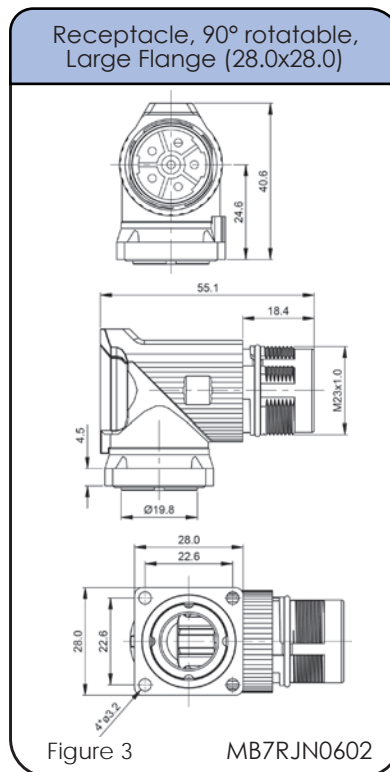
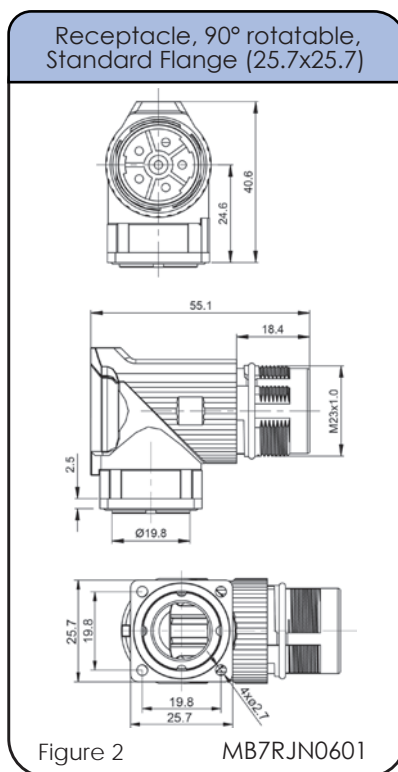
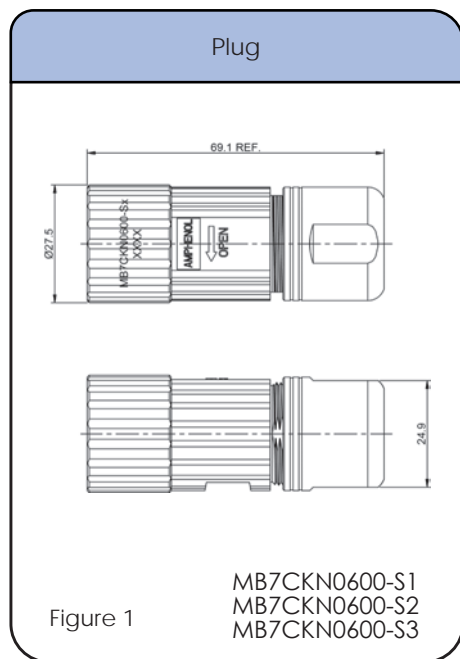
Part Number	Connector Type RECEPTACLES	Contact Type male = pin female = socket	Figure Drawings
MB1LLN0600*	Receptacle, straight, flange mount, threaded	Pin	5
MB1LLN0600-KIT*	Receptacle kit, straight, threaded. Kit includes contacts.	Pin	5
MB1LKN0600*	Receptacle, straight, threaded	Pin	6

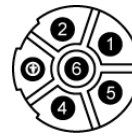
↑ Contacts supplied separately see Chart 3 page 114

## Dimensions

See Chart 1 for contacts options

See Chart 2 for contacts options for 90° Rotatable Receptacles



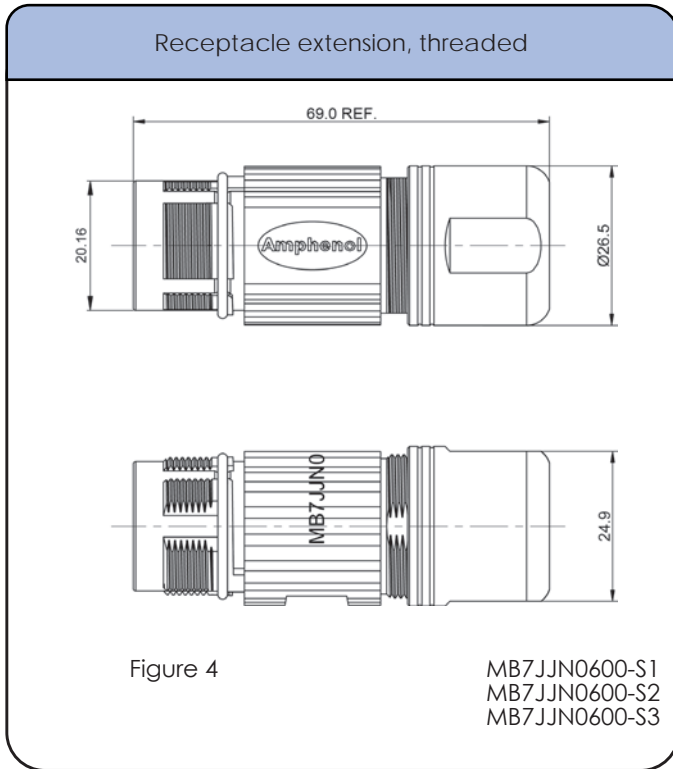


6 POSITIONS  
28A / 630V  
Threaded

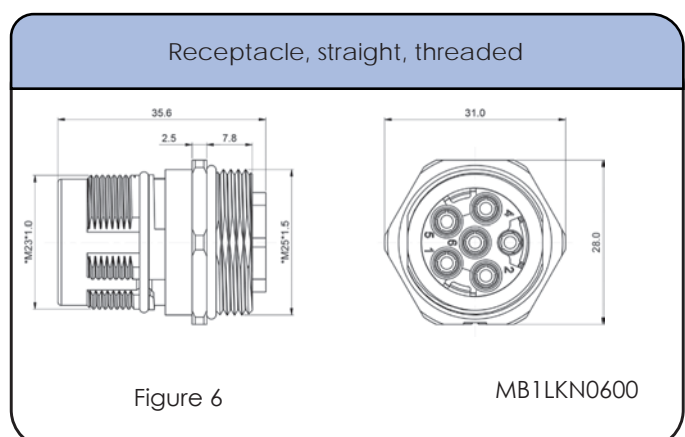
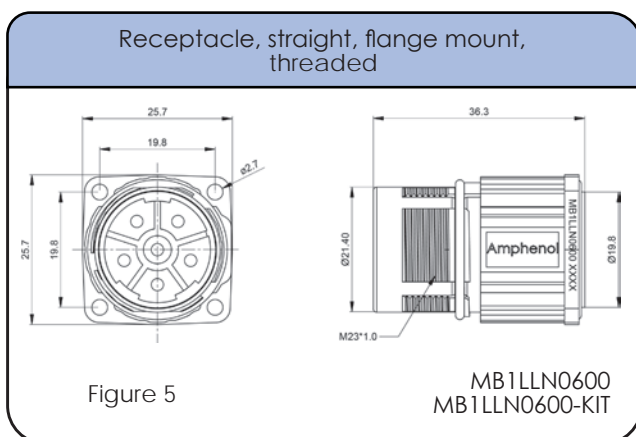
Style:      Number of Contacts: 6      Contact Size: 2.0mm  
Sealing: IP66/67      AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

## Dimensions

See Chart 2 for contacts options



See Chart 3 for contacts options for all straight receptacles



Style:    Number of Contacts: 6    Contact Size: 2.0mm  
 Sealing: IP66/67    AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

## Contacts



### CHART 1 Crimp Contacts, Machined

For parts: MB7CKN0600-S1, MB7CKN0600-S2, MB7CKN0800-S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000260	2.0mm	Socket	18-20	2.5 - 5.0	Gold

### CHART 2 Crimp Contacts, Machined

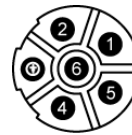
For parts: MB7RJN0601, MB7RJN0602, MB7JJN0600-S1,S2,S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000262	2.0mm	Pin	18-14	0.75 - 2.5	Gold

### CHART 3 Crimp Contacts, Machined

For Parts: MB1LLN0600, MB1LKN0600, MB1LLN0600-KIT

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000036	2.0mm	Pin	18-14	1.5 - 0.75	Gold



6 POSITIONS  
28A / 630V  
Threaded

Style:      Number of Contacts: 6      Contact Size: 2.0mm  
Sealing: IP66/67      AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

## Tools & Accessories

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire Range 12-26AWG



AF8

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*  
Wire Range 12-26AWG




WA27F

Extraction tool. Used for removal of 2.0mm contacts from inserts.



50-54931-2

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG



UH2-5

Dust Cap for Receptacle



P29687

Dust Cap for Plug, Threaded



P30663-06

\* The universal positioner is not included with the crimp tools and must be ordered separately.

\* The extraction tool is only required to remove contacts from part numbers beginning with MB1

# Connector Solutions M23 Elite Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

## Plugs



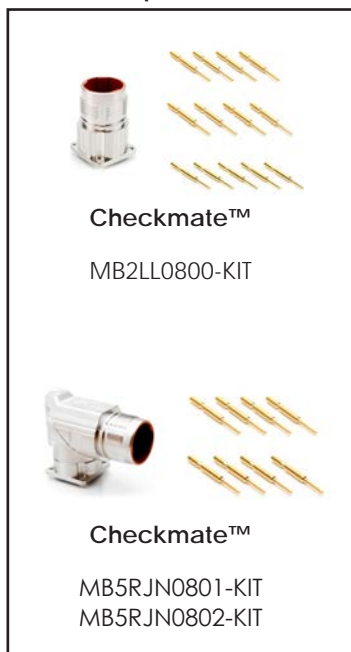
## Plug Kits



## Receptacles



## Receptacle Kits



See page 14 for  
connector configurations

## Receptacle Extension



**BULK CABLE** starts  
on page 23

SEE TABLE ON NEXT PAGE FOR PART DETAILS



**8 (4+4) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**  
**Checkmate™**

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75-0.37) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**



## Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
	PLUGS		
MB5CKN0800-S1	Plug, straight, <b>Checkmate™</b> 7.0-11.0mm cord grip	Socket	1
MB5CKN0800-S1-KIT	Plug kit, straight, <b>Checkmate™</b> 7.0-11.0mm cord grip	Socket	1
MB5CKN0800-S2	Plug, straight, <b>Checkmate™</b> 11.0-14.5mm cord grip	Socket	1
MB5CKN0800-S2-KIT	Plug kit, straight, <b>Checkmate™</b> 11.0-14.5mm cord grip	Socket	1
MB5CKN0800-S3	Plug, straight, <b>Checkmate™</b> 14.5-17.0mm cord grip	Socket	1
MB5CKN0800-S3-KIT	Plug kit, straight, <b>Checkmate™</b> 14.5-17.0mm cord grip	Socket	1

↑ Contacts supplied separately see Chart 1 page 120

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
	RECEPTACLES		
MB5RJN0801	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	Pin	2
MB5RJN0801-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	Pin	2
MB5RJN0802	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	Pin	3
MB5RJN0802-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	Pin	3
MB5JJN0800-S1	Receptacle extension, <b>Checkmate™</b> 7.5-11.0mm Cable OD Range	Pin	4
MB5JJN0800-S2	Receptacle extension, <b>Checkmate™</b> 11.0-14.5mm Cable OD Range	Pin	4
MB5JJN0800-S3	Receptacle extension, <b>Checkmate™</b> 14.5-17.0mm Cable OD Range	Pin	4

↑ Contacts supplied separately see Chart 2 page 120

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75-0.37) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

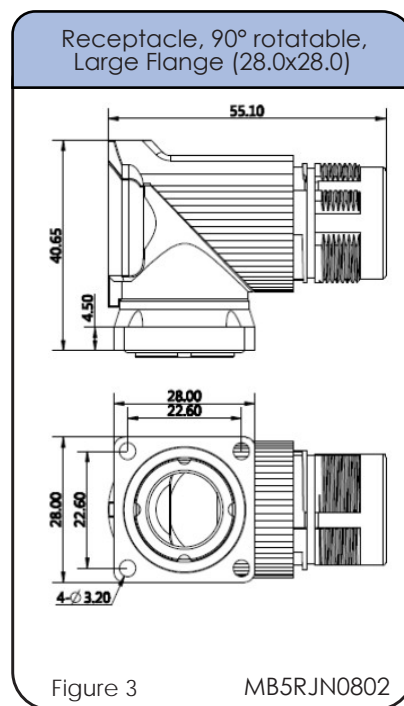
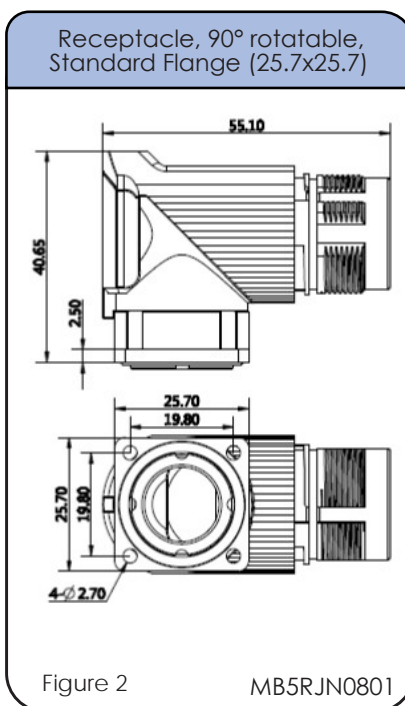
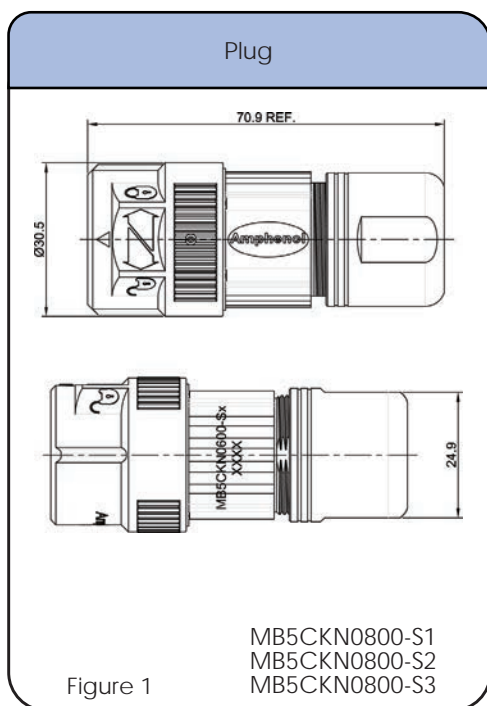
Connector Part Numbers continued

Part Number	Connector Type RECEPTACLES	Contact Type male = pin female = socket	Figure Drawings
MB2LLN0800*	Receptacle, straight, flange mount, <b>Checkmate™</b>	Pin	5
MB2LLN0800-KIT*	Receptacle Kit, straight, <b>Checkmate™</b> Kit includes contacts	Pin	7
MB2LKN0800*	Receptacle, straight, M25, <b>Checkmate™</b>	Pin	6
↑ Contacts supplied separately see Chart 3 page 120			

## Dimensions

See Chart 1 for contacts options

See Chart 2 for contacts options for 90° Rotatable Receptacles







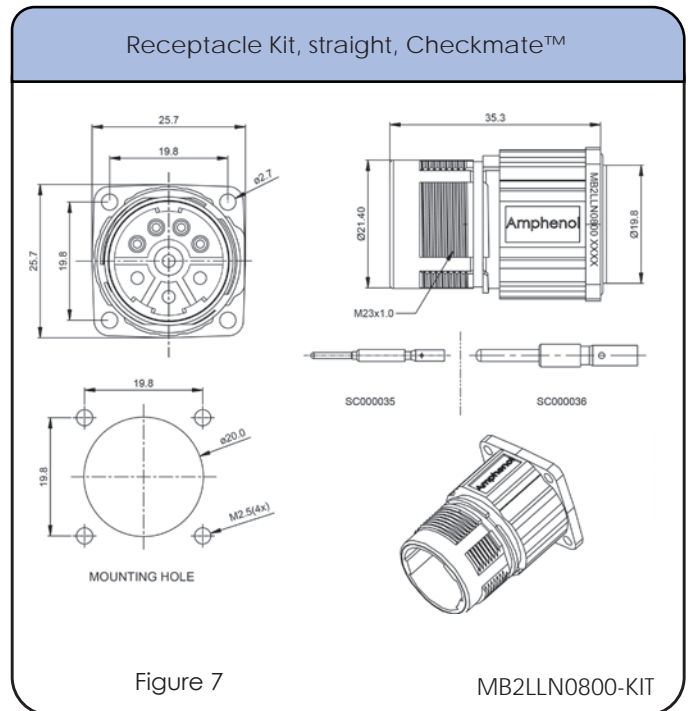
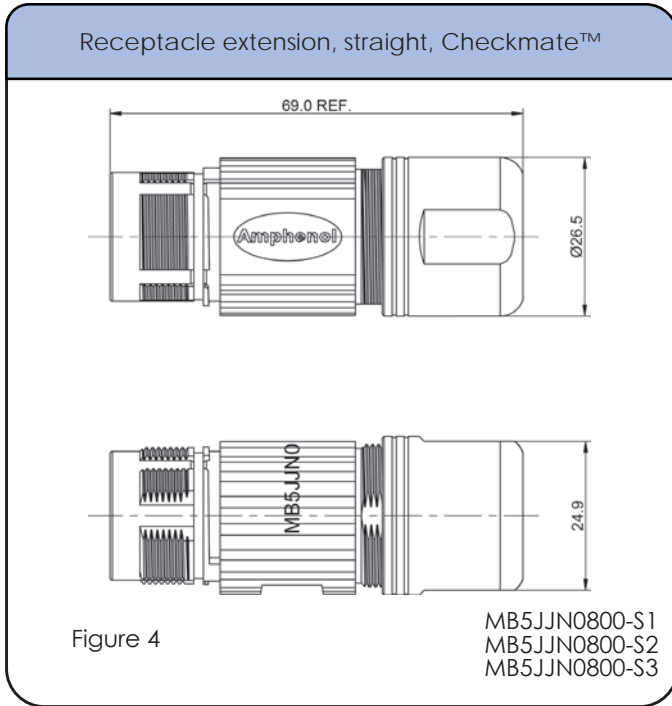
**8 (4+4) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/250V**  
**Checkmate™**

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75-0.37) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

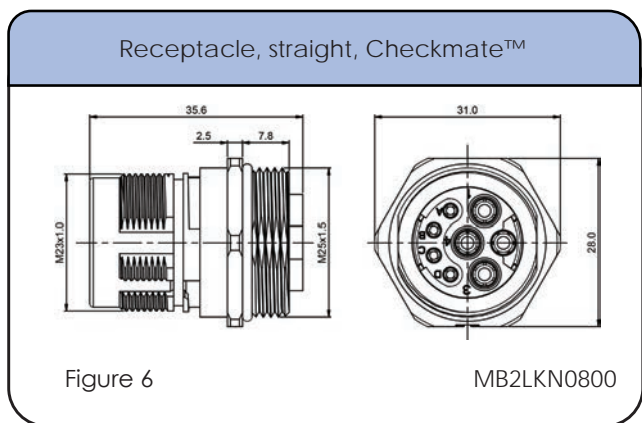
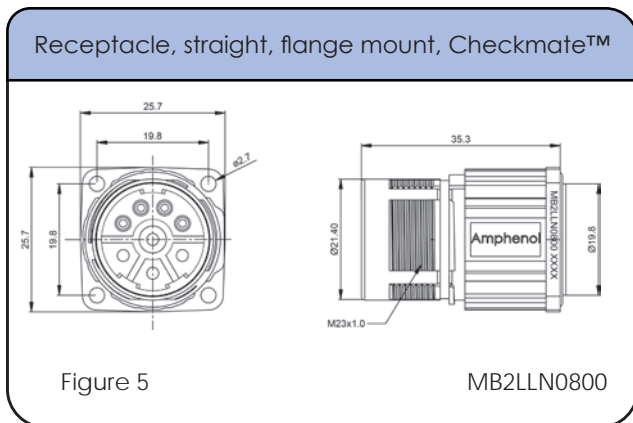
## Dimensions

See Chart 2 for contacts options

See Chart 3 for contacts options



See Chart 3 for contacts options for all straight receptacles



**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75-0.37) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

## Contacts



### CHART 1 Crimp Contacts, Machined

For parts: MB5CKN0800-S1, MB5CKN0800-S2, MB5CKN0800-S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000259	1.0mm	Socket	22-18	0.37 - 0.75	Gold
SC000385	1.0mm	Socket	28-24	0.10 - 0.25	Gold
SC000260	2.0mm	Socket	18-14	0.75 - 2.5	Gold

### CHART 2 Crimp Contacts, Machined

For parts: MB5RJN0801, MB5RJN0802, MB5JJN0800-S1,S2,S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000261	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000386	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000262	2.0mm	Pin	18-14	0.75 - 2.5	Gold

### CHART 3 Crimp Contacts, Machined

For Parts: MB2LLN0800, MB2LKN0800, MB2LLN0800-KIT

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000035	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000146	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000036	2.0mm	Pin	18-14	1.5 - 0.75	Gold



**8 (4+4) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/250V**  
**Checkmate™**

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75-0.37) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

## Tools & Accessories

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
Wire Range 20-32AWG



WA22

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*  
Wire Range 12-26AWG



WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire Range 12-26AWG



AF8

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG



UH2-5

Extraction tool. Used for removal of 2.0mm contacts from inserts.




50-54931-2

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
Wire Range 20-32AWG



AFM8

Universal positioner is used with crimp tools AFM8 and WA22.  
Wire range 20-32AWG



SK2-2

Dust Cap for Receptacle



P29687

Dust Cap for Plug, Checkmate™



P31661-08

\* The Extraction tools are required only for part numbers beginning with MB2

\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

## Plugs



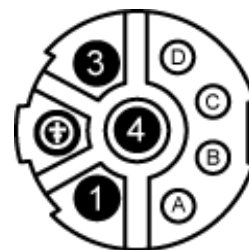
## Plug Kits



## Receptacles



## Receptacle Kits



See page 14 for  
connector configurations

## Receptacle Extension



**BULK CABLE starts  
on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS



**8 (4+4) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**  
**Threaded**

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**

## Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
	PLUGS		
MB7CKN0800-S1	Plug, straight, threaded 7.0-11.0mm cord grip	Socket	1
MB7CKN0800-S1-KIT	Plug kit, straight, threaded 7.0-11.0mm cord grip	Socket	1
MB7CKN0800-S2	Plug, straight, threaded 11.0-14.5mm cord grip	Socket	1
MB7CKN0800-S2-KIT	Plug kit, straight, threaded 11.0-14.5mm cord grip	Socket	1
MB7CKN0800-S3	Plug, straight, threaded 14.5-17.0mm cord grip	Socket	1
MB7CKN0800-S3-KIT	Plug kit, straight, threaded 14.5-17.0mm cord grip	Socket	1

↑ Contacts supplied separately. See Chart 1 on page 126

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
	RECEPTALCES		
MB7RJN0801	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	Pin	2
MB7RJN0801-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	Pin	2
MB7RJN0802	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	Pin	3
MB7RJN0802-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	Pin	3
MB7JJN0800-S1	Receptacle extension, threaded 7.5-11.0mm Cable OD Range	Pin	4
MB7JJN0800-S2	Receptacle extension, threaded 11.0-14.5mm Cable OD Range	Pin	4
MB7JJN0800-S3	Receptacle extension, threaded 14.5-17.0mm Cable OD Range	Pin	4

↑ Contacts supplied separately. See Chart 2 on page 126

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**

Connector Part Numbers continued

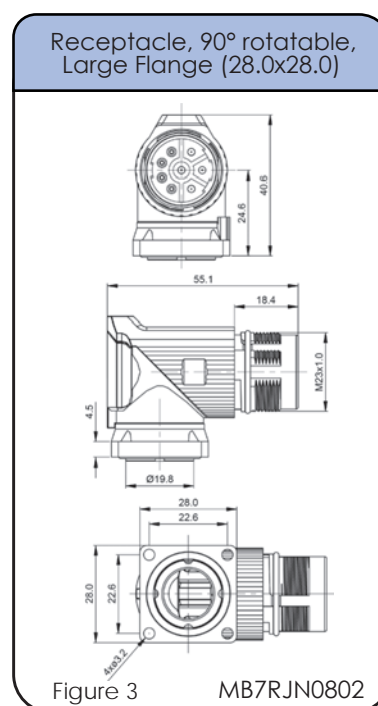
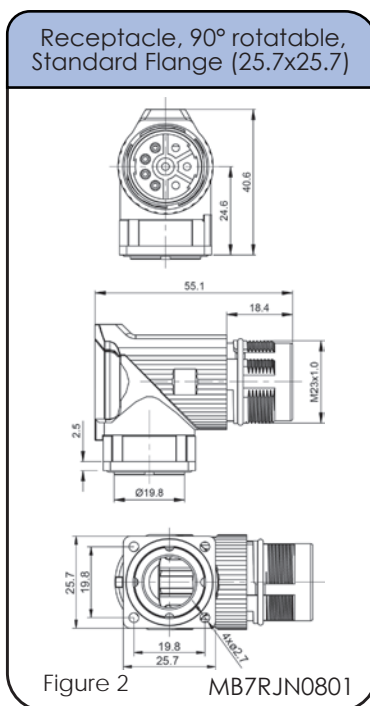
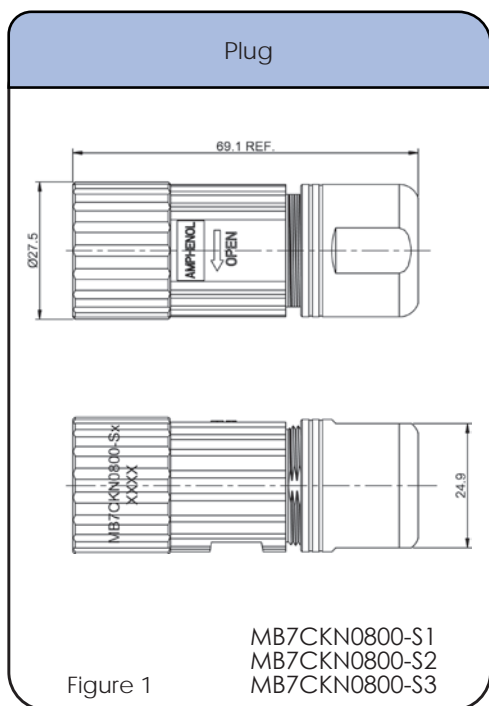
Part Number	Connector Type RECEPTALCES	Contact Type male = pin female = socket	Figure Drawings
MB1LLN0800*	Receptacle, straight, flange mount, threaded	Pin	5
MB1LLN0800-KIT*	Receptacle Kit, straight, threaded Kit includes contacts	Pin	5
MB1LKN0800*	Receptacle, straight, M25, threaded	Pin	6

↑ Contacts supplied separately. See Chart 3 on page 126

## Dimensions

See Chart 1 for contacts options

See Chart 2 for contacts options for 90° Rotatable Receptacles



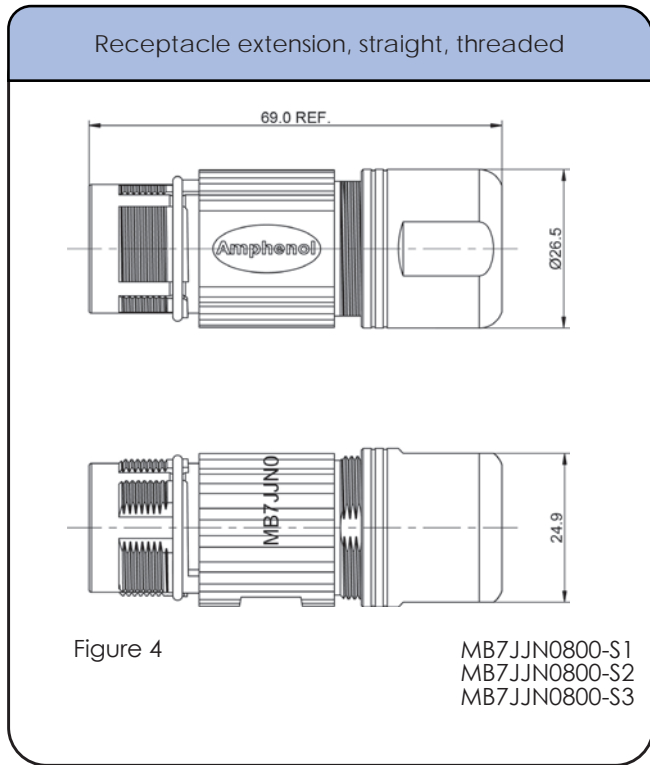


**8 (4+4) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**  
**Threaded**

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**

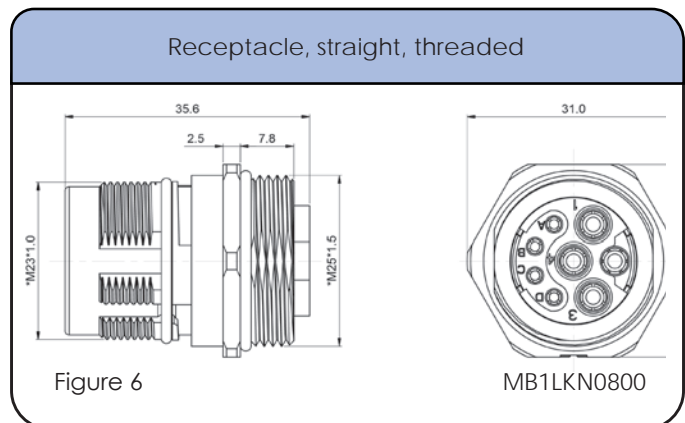
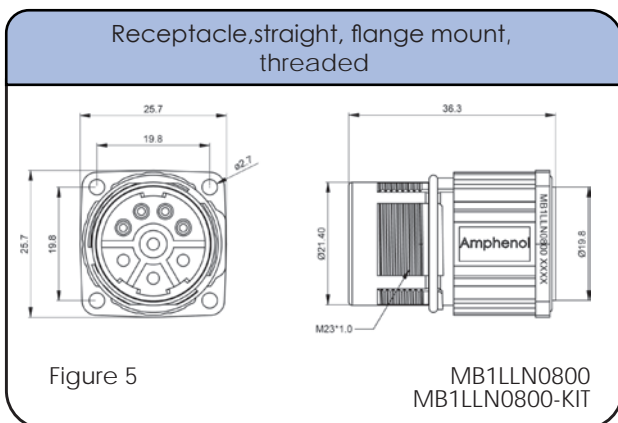
## Dimensions

See Chart 2 for contacts options



See Chart 3 for contacts options for all straight receptacles

See Chart 2 for contacts options



**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**

## Contacts



### CHART 1 Crimp Contacts, Machined

For parts: MB7CKN0800-S1, MB7CKN0800-S2, MB7CKN0800-S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000259	1.0mm	Socket	22-18	0.37 - 0.75	Gold
SC000385	1.0mm	Socket	28-24	0.10 - 0.25	Gold
SC000260	2.0mm	Socket	18-20	2.5 - 0.5	Gold

### CHART 2 Crimp Contacts, Machined

For parts: MB7RJN0801, MB7RJN0802, MB7JJN0800-S1,S2,S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000261	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000386	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000262	2.0mm	Pin	18-14	0.75 - 2.5	Gold

### CHART 3 Crimp Contacts, Machined

For Parts: MB1LLN0800, MB1LKN0800, MB1LLN0800-KIT

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000035	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000146	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000036	2.0mm	Pin	18-14	1.5 - 0.75	Gold





**8 (4+4) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**  
**Threaded**

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**

### Tools & Accessories

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
 Wire Range 20-32AWG



WA22

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*  
 Wire Range 12-26AWG



WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
 Wire Range 12-26AWG



AF8

Universal positioner is used with the universal hand crimp tool (AF8).  
 Wire range 12-26AWG



UH2-5

Extraction tool. Used for removal of 2.0mm contacts from inserts.



50-54931-2

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
 Wire Range 20-32AWG



AFM8

Universal positioner is used with crimp tools AFM8 and WA22.  
 Wire range 20-32AWG



SK2-2

Dust Cap for Receptacle



P29687

Dust Cap for Plug, Threaded



P30663-08

\* The Extraction tools are required only for part numbers beginning with MB1

\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

## Plugs



## Plug Kits



## Receptacles



## Receptacle Kits



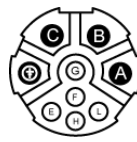
See page 14 for  
connector configurations

## Receptacle Extension



**BULK CABLE starts  
on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS



**9 (4+5) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**  
**Checkmate™**

**Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**



## Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
	PLUGS		
MB5CKN0900-S1	Plug, straight, <b>Checkmate™</b> 7.0-11.0mm cord grip	Socket	1
MB5CKN0900-S1-KIT	Plug kit, straight, <b>Checkmate™</b> 7.0-11.0mm cord grip	Socket	1
MB5CKN0900-S2	Plug, straight, <b>Checkmate™</b> 11.0-14.5mm cord grip	Socket	1
MB5CKN0900-S2-KIT	Plug kit, straight, <b>Checkmate™</b> 11.0-14.5mm cord grip	Socket	1
MB5CKN0900-S3	Plug, straight, <b>Checkmate™</b> 14.5-17.0mm cord grip	Socket	1
MB5CKN0900-S3-KIT	Plug kit, straight, <b>Checkmate™</b> 14.5-17.0mm cord grip	Socket	1

↑ Contacts supplied separately see Chart 1 page 132

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
	RECEPTACLS		
MB5RJN0901	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	Pin	2
MB5RJN0901-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	Pin	2
MB5RJN0902	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	Pin	3
MB5RJN0902-KIT	Receptacle Kit, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	Pin	3
MB5JJN0900-S1	Receptacle extension, <b>Checkmate™</b> 7.5-11.0mm Cable OD Range	Pin	4
MB5JJN0900-S2	Receptacle extension, <b>Checkmate™</b> 11.0-14.5mm Cable OD Range	Pin	4
MB5JJN0900-S3	Receptacle extension, <b>Checkmate™</b> 14.5-17.0mm Cable OD Range	Pin	4

↑ Contacts supplied separately see Chart 2 page 132

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

**Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**

Connector Part Numbers continued

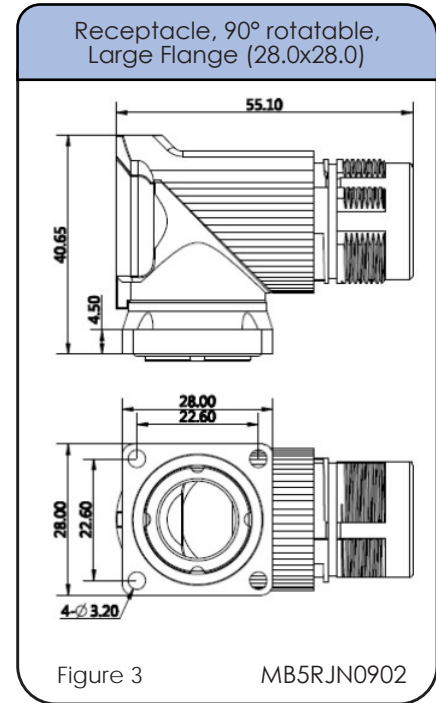
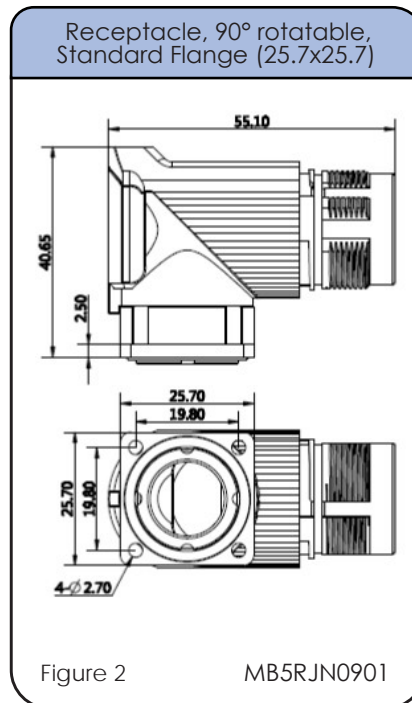
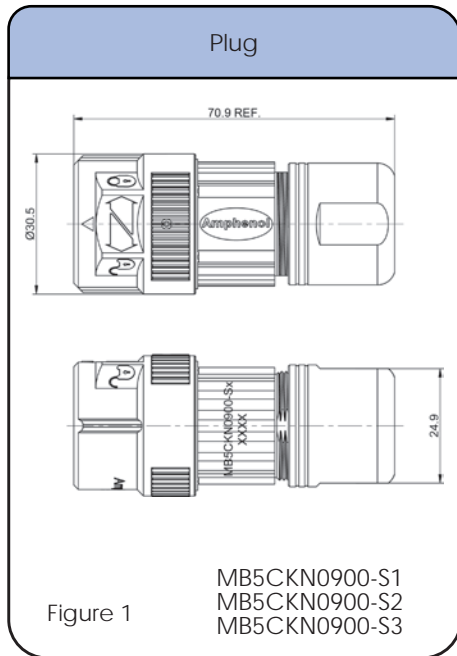
Part Number	Connector Type RECEPTACLS	Contact Type male = pin female = socket	Figure Drawings
MB2LLN0900*	Receptacle, straight, flange mount, Checkmate™	Pin	5
MB2LLN0900-KIT*	Receptacle kit, straight, Checkmate™ Kit includes contacts	Pin	7
MB2LKN0900*	Receptacle, straight, M25, Checkmate™	Pin	6

↑ Contacts supplied separately see Chart 3 page 132

## Dimensions

See Chart 1 for contacts options

See Chart 2 for contacts options for 90° Rotatable Receptacles





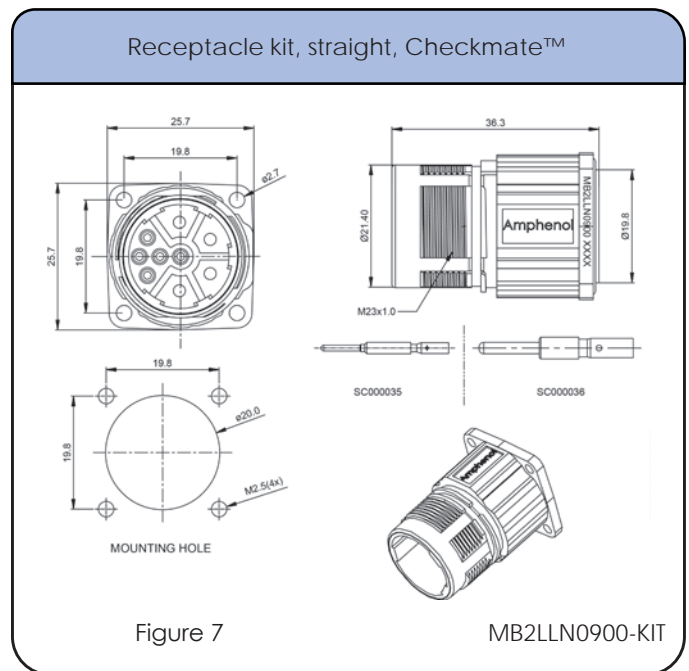
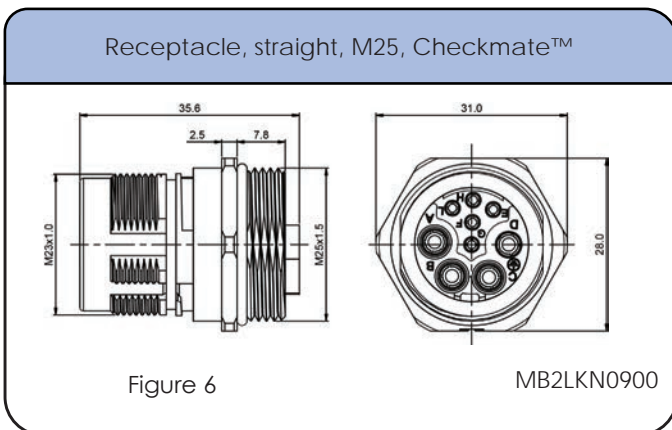
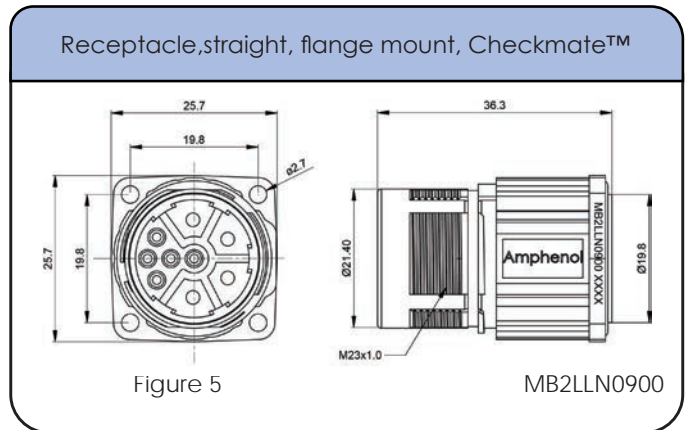
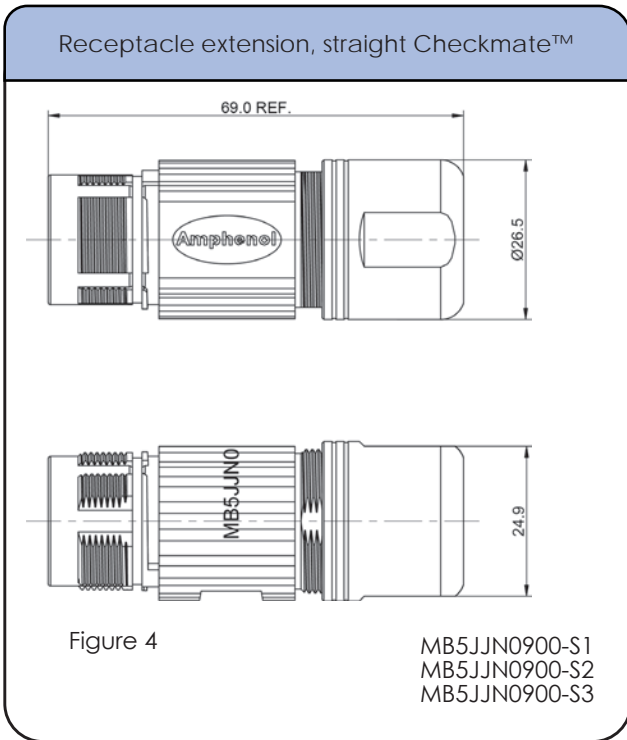
**9 (4+5) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/250V**  
**Checkmate™**

**Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**

## Dimensions

See Chart 2 for contacts options

See Chart 3 for contacts options



Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)

## Contacts



### CHART 1 Crimp Contacts, Machined

For parts: MB5CKN0900-S1, MB5CKN0900-S2, MB5CKN0900-S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000259	1.0mm	Socket	22-18	0.37 - 0.75	Gold
SC000385	1.0mm	Socket	28-24	0.10 - 0.25	Gold
SC000260	2.0mm	Socket	20-14	2.5 - 0.5	Gold

### CHART 2 Crimp Contacts, Machined

For parts: MB5RJN0901, MB5RJN0902, MB5JJN0900-S1,S2,S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000261	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000386	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000262	2.0mm	Pin	18-14	0.75 - 2.5	Gold

### CHART 3 Crimp Contacts, Machined

For Parts: MB2LLN0900, MB2LKN0900, MB2LLN0900-KIT

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000035	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000146	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000036	2.0mm	Pin	18-14	1.5 - 0.75	Gold



9 (4+5) POSITIONS  
 Power 30A/ 630V  
 Signal 10A/250V  
 Checkmate™

Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)

CONNECTOR SOLUTIONS

## Tools & Accessories

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
 Wire Range 20-32AWG

WA22

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*  
 Wire Range 12-26AWG

WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.

50-54931-1

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
 Wire Range 12-26AWG

AF8

Universal positioner is used with the universal hand crimp tool (AF8).  
 Wire range 12-26AWG

UH2-5

Extraction tool. Used for removal of 2.0mm contacts from inserts.

50-54931-2

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
 Wire Range 20-32AWG

AFM8

Universal positioner is used with crimp tools AFM8 and WA22.  
 Wire range 20-32AWG

SK2-2

Dust Cap for Receptacle

P29687

Dust Cap for Plug, Checkmate™

P31661-09

\* The Extraction tools are required only for part numbers beginning with MB2

\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Elite Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

## Plugs



## Receptacles



See page 14 for  
connector configurations

## Plugs Kits



## Receptacle Extension



## Receptacle Kits



**BULK CABLE starts  
on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS





**9 (4+5) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**  
**Threaded**

**Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**

## Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
	PLUGS		
MB7CKN0900-S1	Plug, straight, threaded 7.0-11.0mm cord grip	Socket	1
MB7CKN0900-S1-KIT	Plug kit, straight, threaded 7.0-11.0mm cord grip	Socket	1
MB7CKN0900-S2	Plug, straight, threaded 11.0-14.5mm cord grip	Socket	1
MB7CKN0900-S2-KIT	Plug kit, straight, threaded 11.0-14.5mm cord grip	Socket	1
MB7CKN0900-S3	Plug, straight, threaded 14.5-17.0mm cord grip	Socket	1
MB7CKN0900-S3-KIT	Plug, straight, threaded 14.5-17.0mm cord grip	Socket	1
↑ Contacts supplied separately see Chart 1 page 138			

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
	RECEPTACLES		
MB7RJN0901	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	Pin	2
MB7RJN0901-KIT	Receptacle Kit, 90° rotatable, threaded Standard Flange (25.7x25.7)	Pin	
MB7RJN0902	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	Pin	3
MB7RJN0902-KIT	Receptacle Kit, 90° rotatable, threaded Large Flange (28.0x28.0)	Pin	
MB7JJN0900-S1	Receptacle extension, threaded 7.5-11.0mm Cable OD Range	Pin	4
MB7JJN0900-S2	Receptacle extension, threaded 11.0-14.5mm Cable OD Range	Pin	4
MB7JJN0900-S3	Receptacle extension, threaded 14.5-17.0mm Cable OD Range	Pin	4
↑ Contacts supplied separately see Chart 2 page 138			

\*Standard Series receptacles are offered here as additional options for mating with Elite Series plugs.  
 See Assembly Instructions starting on page 266

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)

Connector Part Numbers continued

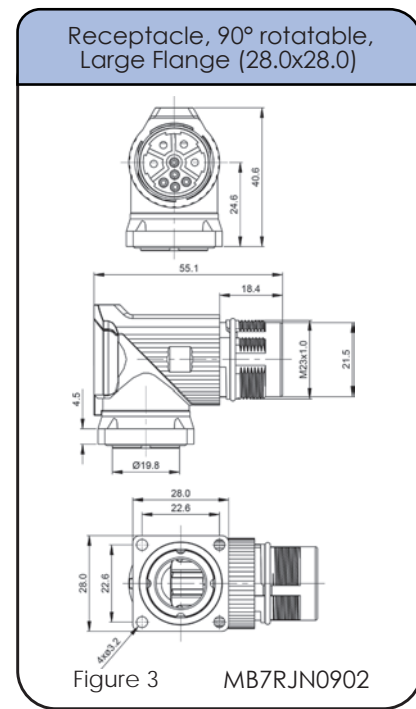
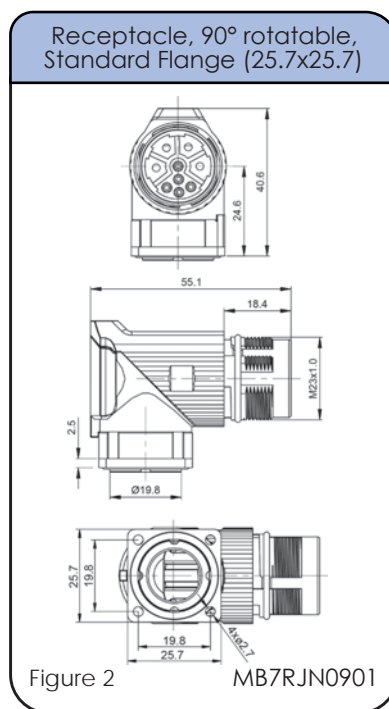
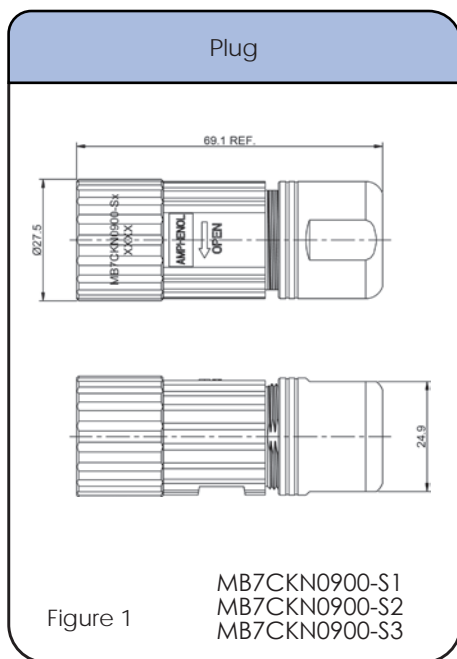
Part Number	Connector Type	Contact Type	Figure Drawings
	RECEPTACLES	male = pin female = socket	
MB1LLN0900*	Receptacle, straight, flange mount, threaded	Pin	4
MB1LLN0900-KIT*	Receptacle kit, straight, threaded Kit includes contacts	Pin	4
MB1LKN0900*	Receptacle, straight, M25, threaded	Pin	5

↑ Contacts supplied separately see Chart 3 page 138

## Dimensions

See Chart 1 for contacts options

See Chart 2 for contacts options for 90° Rotatable Receptacles





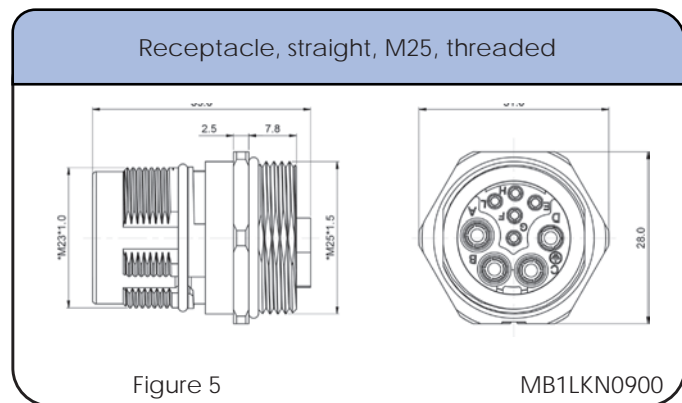
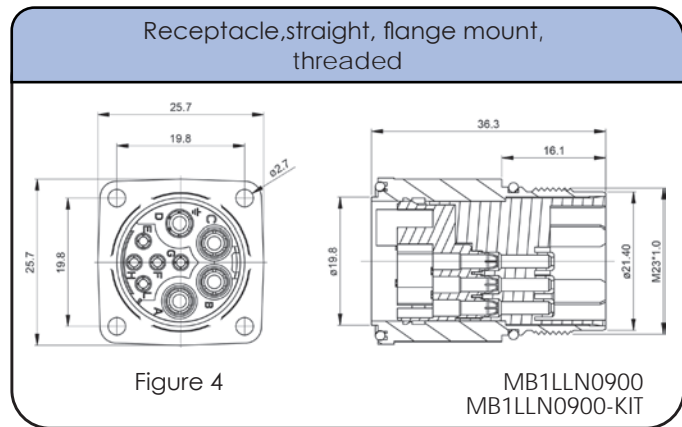
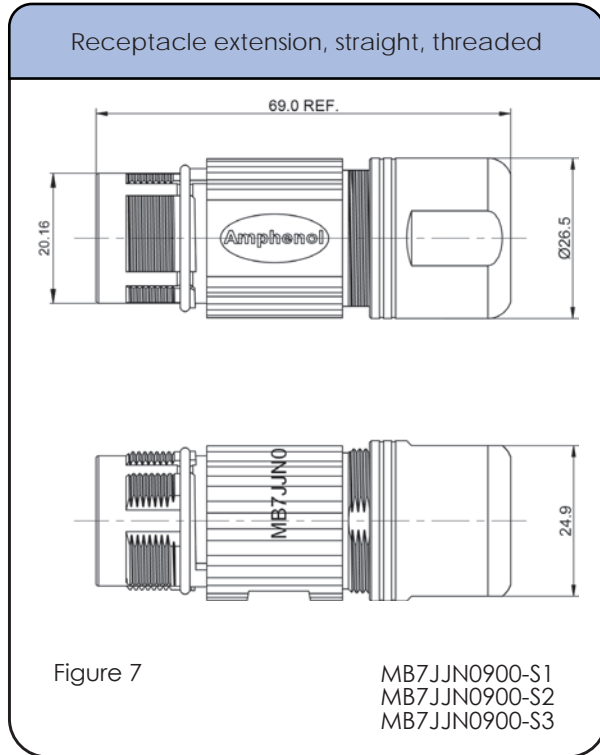
**9 (4+5) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**  
**Threaded**

**Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**

## Dimensions

See Chart 2 for contacts options

See Chart 3 for contacts options for all straight receptacles



Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)

## Contacts



### CHART 1 Crimp Contacts, Machined

For parts: MB7CKN0900-S1, MB7CKN0900-S2, MB7CKN0900-S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000259	1.0mm	Socket	22-18	0.37 - 0.75	Gold
SC000385	1.0mm	Socket	28-24	0.10 - 0.25	Gold
SC000260	2.0mm	Socket	20-14	2.5 - 0.5	Gold

### CHART 2 Crimp Contacts, Machined

For parts: MB7RJN0901, MB7RJN0902, MB7JJN0900-S1,S2,S3

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000261	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000386	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000262	2.0mm	Pin	18-14	0.75 - 2.5	Gold

### CHART 3 Crimp Contacts, Machined

For Parts: MB1LLN0900, MB1LKN0900, MB1LLN0900-KIT

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000035	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000146	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000036	2.0mm	Pin	18-14	1.5 - 0.75	Gold



**9 (4+5) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**  
**Threaded**

**Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37) / 24-28 (0.25-0.10)**

### Tools & Accessories

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
Wire Range 20-32AWG



WA22

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*  
Wire Range 12-26AWG



WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire Range 12-26AWG



AF8

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG



UH2-5

Extraction tool. Used for removal of 2.0mm contacts from inserts.



50-54931-2

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
Wire Range 20-32AWG



AFM8

Universal positioner is used with crimp tools AFM8 and WA22.  
Wire range 20-32AWG



SK2-2

Dust Cap for Receptacle



P29687

Dust Cap for Plug, Threaded



P30663-09

\* The Extraction tools are required only for part numbers beginning with MB1

\* The universal positioner is not included with the crimp tools and must be ordered separately.

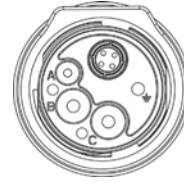
# M23 Hybrid Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle



Plugs



Receptacles



MB1WSN8H00



MB1YSN8H00



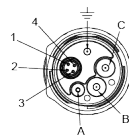
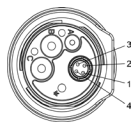
MB3XSN8HS1  
MB3XSN8HS2  
MB3XSN8HS3



MB3ZSN8HS1  
MB3ZSN8HS2  
MB3ZSN8HS3

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 107



**8 POSITIONS 18A PE/1A  
Signal/0.5A Quadrax / 850V  
PE & Signal/ 30V Quadrax**

**Number of Contacts: 8 Sealing: IP66/67**

**Contact Size: 2 Power + PE (2.0mm) + 1 Signal (1.0mm), 4 Quadrax Ethernet Element (.7mm)**

**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75-- 0.37 mm<sup>2</sup>) / 22-28 (0.37 - 0.10 mm<sup>2</sup>)**

### Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Cable Diameter	Amps /Volts	Figure Drawings
MB1WSN8H00	Plug, hybrid, straight, panel mount, threaded	Socket		1A signal, 18A power, 0.5A Quadrax 850V PE & Signal 30V Quadrax	1
MB3XSN8HS1	Plug, hybrid, straight, threaded	Socket	7.5-11.0mm		2
MB3XSN8HS2	Plug, hybrid, straight, threaded	Socket	11.0-14.0mm		2
MB3XSN8HS3	Plug, hybrid, straight, threaded	Socket	14.5-17.0mm		2
MB1YSN8H00	Receptacle, hybrid, straight, panel mount, threaded	Pin		1A signal, 18A power, 0.5A Quadrax 850V PE & Signal 30V Quadrax	3
MB3ZSN8HS1	Receptacle extension, hybrid, threaded	Pin	7.5-11.0mm		4
MB3ZSN8HS2	Receptacle extension, hybrid, threaded	Pin	11.0-14.0mm		4
MB3ZSN8HS3	Receptacle extension, hybrid, threaded	Pin	14.5-17.0mm		4

Contacts supplied separately see page 143

**BULK CABLE starts on page 23**

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Style: Pin Number of Contacts: 8 Sealing: IP66/67

Contact Size: 2 Power + PE (2.0mm) + 1 Signal (1.0mm), 4 Quadrax Ethernet Element (.7mm)

AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75-- 0.37 mm<sup>2</sup>) / 22--28 (0.37 - 0.10 mm<sup>2</sup>)

## Dimensional Drawings Plugs & Receptacles

Plug, hybrid, straight, panel mount, threaded

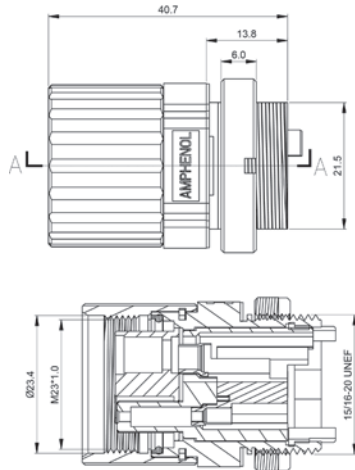


Figure 1

MB1WSN8H00

Plug, hybrid, straight, threaded

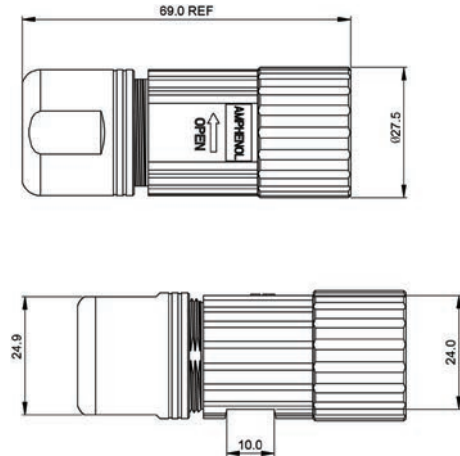


Figure 2

MB3XSN8HS1  
MB3XSN8HS2  
MB3XSN8HS3

Receptacle, hybrid, straight, panel mount, threaded

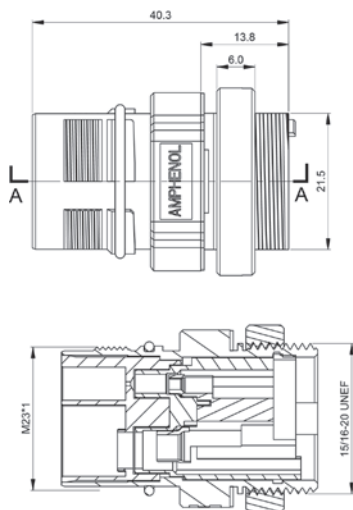


Figure 3

MB1YSN8H00

Receptacle extension, hybrid, threaded

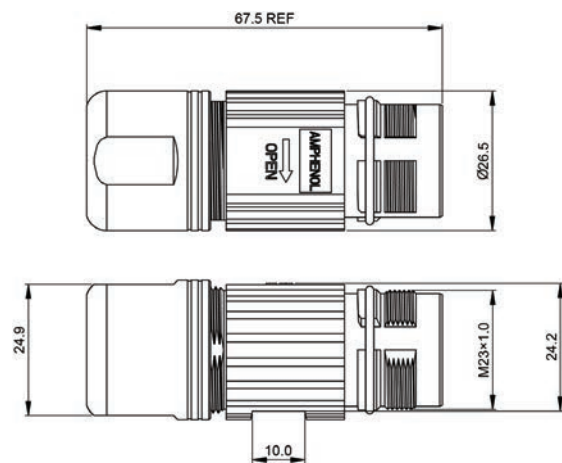
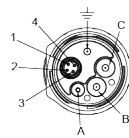
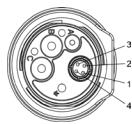


Figure 1

MB3ZSN8HS1  
MB3ZSN8HS2  
MB3ZSN8HS3





**8 POSITIONS 18A PE/1A**  
**Signal/0.5A Quadrax / 850V**  
**PE & Signal/ 30V Quadrax**

**Style: Pin Number of Contacts: 8 Sealing: IP66/67**

**Contact Size: 2 Power + PE (2.0mm) + 1 Signal (1.0mm), 4 Quadrax Ethernet Element (.7mm)**

**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75-- 0.37 mm<sup>2</sup>) / 22-28 (0.37 - 0.10 mm<sup>2</sup>)**

## Contacts



## Hybrid Contacts

Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Size	Plating
SC000259	Socket	18-22	0.75 - 0.37	1.0mm	Gold
SC000260	Socket	14-20	2.5 - 0.5	2.0mm	Gold
SC000264	Socket	22-28	0.37 - 0.10	0.7mm	Gold
SC000261	Pin	18-22	0.75 - 0.37	1.0mm	Gold
SC000262	Pin	14-18	2.5 - 0.75	2.0mm	Gold
SC000263	Pin	22-28	0.37 - 0.10	0.7mm	Gold

## Tools

Universal hand crimp tool. Uses universal positioner part no. UH2-5. Wire crimp range 12-26AWG



AF8

Universal hand crimp tool. Uses universal positioner part no. SK2-2. Wire range 20-32AWG



AFM8

Pneumatic crimp tool. Uses universal positioner part no. SK2-2. Wire range 20-32AWG



WA22

Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG



UH2-5

Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG



SK2-2

Pneumatic crimp tool. Uses universal positioner part no. WA23-101DA and MFX-3966.



WA23

Die Assembly, Size 10, is used with the Pneumatic crimp tool. WA23



WA23-101DA

# M23 Hybrid Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle



Plugs



MB5CKN15H00-S1  
MB5CKN15H00-S2  
MB5CKN15H00-S3



Receptacles



MB5RJN15H01

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 107



**15 POSITIONS  
EARTHNET & SIGNAL 1.2A  
/30V POWER 30A/30V**

**Number of Contacts: 8 Sealing: IP66/67**

**Contact Size: 0.6mm, 1.0mm, 2.0mm**

**AWG: 14-26**



### Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Cable Diameter	Amps /Volts	Figure Drawings
MB5CKN15H00-S1	Female plug, 15 positions, (5+6+4), straight, CheckMate™	Socket	7.5-11.0mm	30V Earthnet, 30V Signal, 630V Power	1
MB5CKN15H00-S2	Female plug, 15 positions, (5+6+4), straight, CheckMate™	Socket	11.0-14.0mm	30V Earthnet, 30V Signal, 630V Power	1
MB5CKN15H00-S3	Female plug, 15 positions, (5+6+4), straight, 14.5-17.0mm cord grip, CheckMate™	Socket	14.5-17.0mm	30V Earthnet, 30V Signal, 630V Power	1
MB5RJN15H01	Male receptacle, 90 deg, 15 pos (5+6+4), flange mount, CheckMate™	Male		30V Earthnet, 30V Signal, 630V Power	2

Contacts supplied separately see page 147

**BULK CABLE starts on page 23**

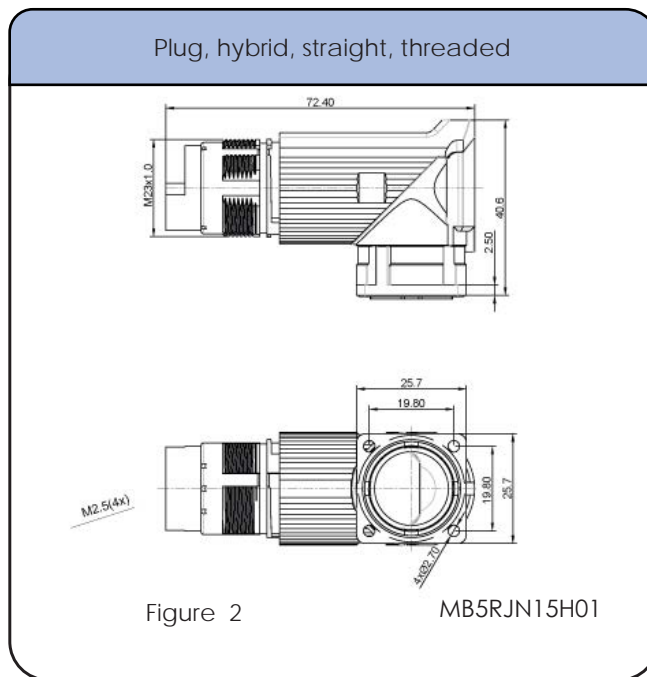
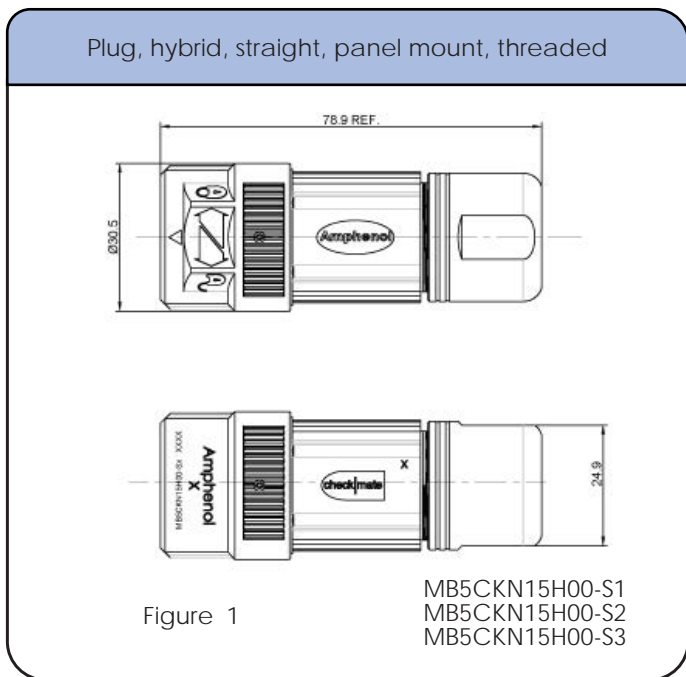
Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Number of Contacts: 8 Sealing: IP66/67

Contact Size: 0.6mm, 1.0mm, 2.0mm

AWG: 14-26

### Dimensional Drawings Plugs & Receptacles





15 POSITIONS  
EARTHNET & SIGNAL 1.2A  
/30V POWER 30A/30V

Number of Contacts: 8 Sealing: IP66/67

Contact Size: 0.6mm, 1.0mm, 2.0mm

AWG: 14-26

## Contacts



### Hybrid Contacts

Part Number	Pin/Socket	AWG	Size	Plating
SC000459	Pin	22-26	0.6mm	Gold
SC000460	Socket	22-26	0.6mm	Gold
SC000462	Socket	22-26	2.0mm	Gold
SC000463	Pin	14-18	2.0mm	Gold
SC000465	Pin	18-22	1.0mm	Gold
SC000466	Socket	18-22	1.0mm	Gold

# Connector Solutions M23 Standard Series

STEP 1  
Choose Plug

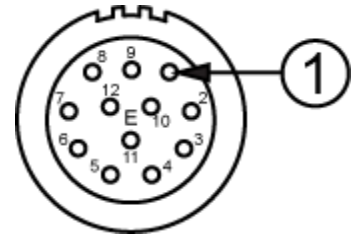


Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 16 for connector configurations

STEP 2  
Choose Receptacle



STEP 3  
Choose Backshell/Cord Grip



## Plugs



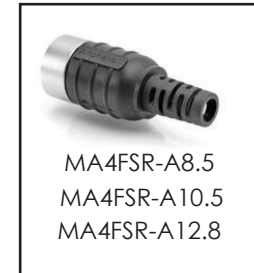
## Receptacles



## Cord Grips



## FlexGrip™ Backshell System



more about FlexGrip™ on page 282

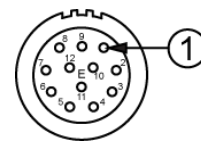
**BULK CABLE starts on page 23**

## Receptacle Kits



SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 150



**12 POSITIONS**  
**10A / 160V**  
**E type**

**Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)**



Quick Locking Connectors

### Checkmate™ Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA2CAE1200	Plug, straight, <b>Checkmate™</b>	E	Pin	Socket	1
MA2LAP1200	Receptacle, straight, flange mount, <b>Checkmate™</b>	P	Socket	Pin	2
MA2LAP1200-KIT	Receptacle Kit, straight, flange mount, <b>Checkmate™</b> . Kit includes contacts.	P		Pin	2
MA2LAP1200S-KIT	Receptacle Kit, straight, flange mount, <b>Checkmate™</b> . Kit includes contacts.	P	Socket		2
MA2JAP1200	Receptacle extension, <b>Checkmate™</b>	P	Socket	Pin	3
MA5RAP1201*	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P	Socket	Pin	4
MA5RAP1202*	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P	Socket	Pin	5
↑ Contacts supplied separately see Chart 1 page 150					

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA1CAE1200	Plug, straight, threaded	E	Pin	Socket	6
MA1EAE1200	Plug, 90° rotatable, threaded	E	Pin	Socket	7
MA1LAP1200	Receptacle, straight, flange mount, threaded	P		Pin	8
MA1LAP1200-KIT	Receptacle kit, straight, threaded, flange mount Kit includes contacts	P		Pin	8
MA1LAP1200S-KIT	Receptacle kit, straight, threaded, flange mount. Kit includes contacts	P	Socket		8
MA3TNP1200-S1	Receptacle, bulkhead, threaded	P	Socket	Pin	9
MA3TNP1200-S2	Receptacle, bulkhead, threaded	P	Socket	Pin	10
MA3TNP1200-S3	Receptacle, bulkhead, threaded	P	Socket	Pin	11
MA1JAP1200	Receptacle extension, threaded	P	Socket	Pin	12
MA7RAP1201*	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	P	Socket	Pin	13
MA7RAP1202*	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	P	Socket	Pin	14
↑ Contacts supplied separately see Chart 1 page 150					

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266

Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

### Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	15
MA6CG-S2	Cord grip	7.5-11.0mm	15
MA6CG-S3	Cord grip	11.0-15.0mm	15
MA4FSR-A8.5*	Flex Grip™ backshell	7.5-8.5mm	16
MA4FSR-A10.5*	Flex Grip™ backshell	9.5-10.5mm	16
MA4FSR-A12.8*	Flex Grip™ backshell	11.5-12.8mm	16

\*Must be potted to achieve IP67 ratings.

### Contacts



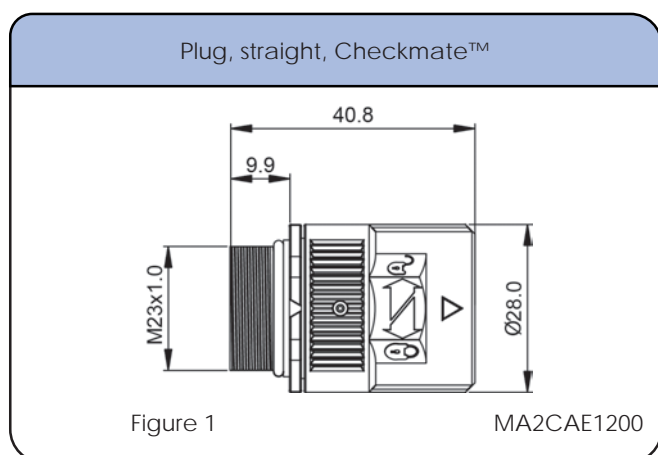
#### CHART 1

#### Crimp Contacts, Machined

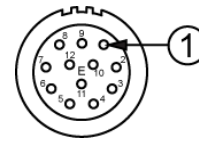
Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold

### Checkmate™ Dimensions Straight Plugs

See Chart 1 for contacts options





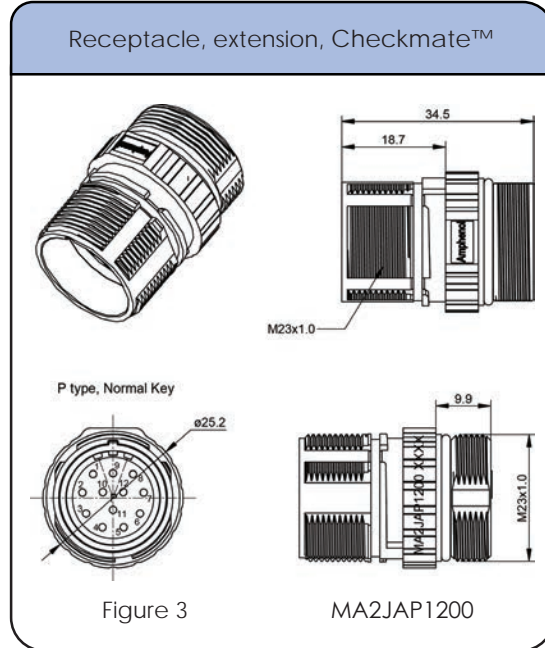
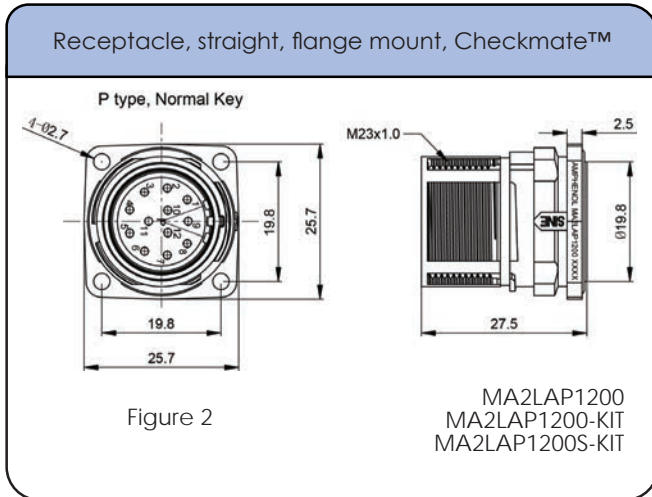


12 POSITIONS  
10A / 160V  
E type

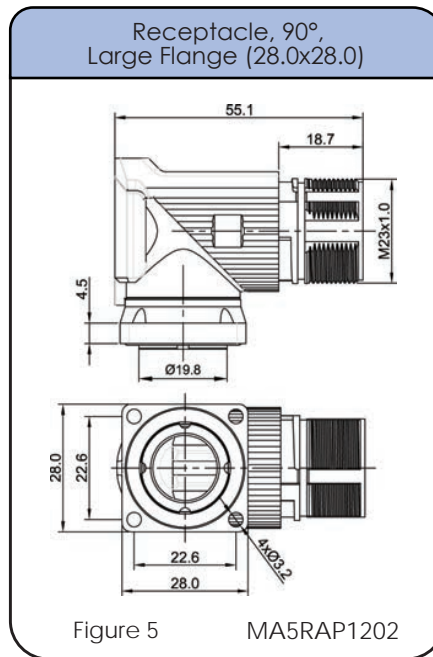
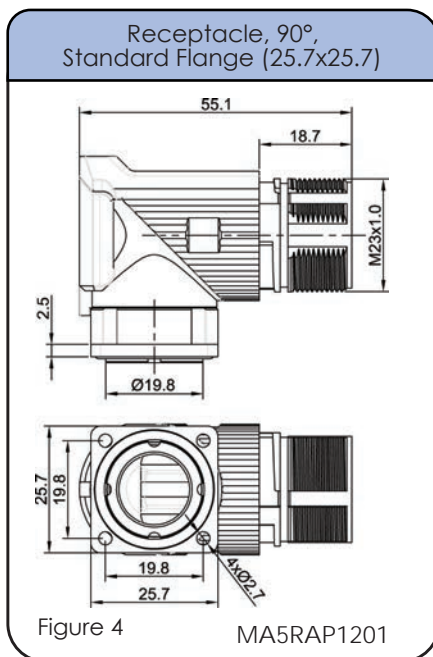
Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Checkmate™ Dimensions Receptacles

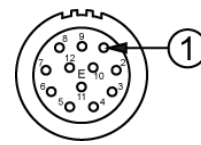
See Chart 1 for contacts options



See Chart 1 for contacts options



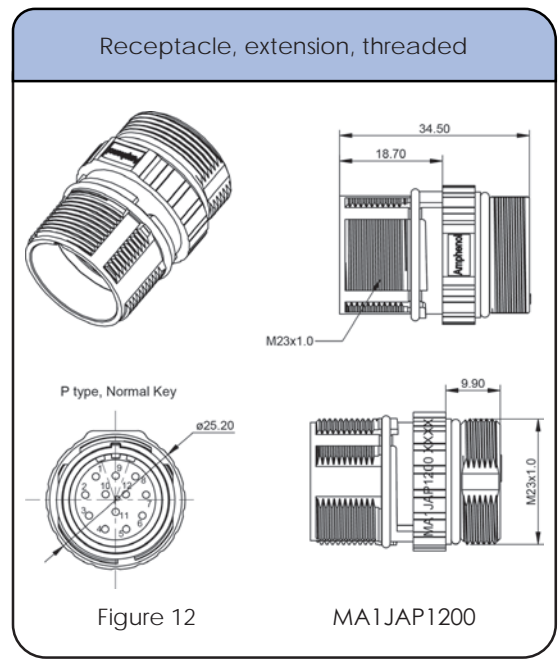
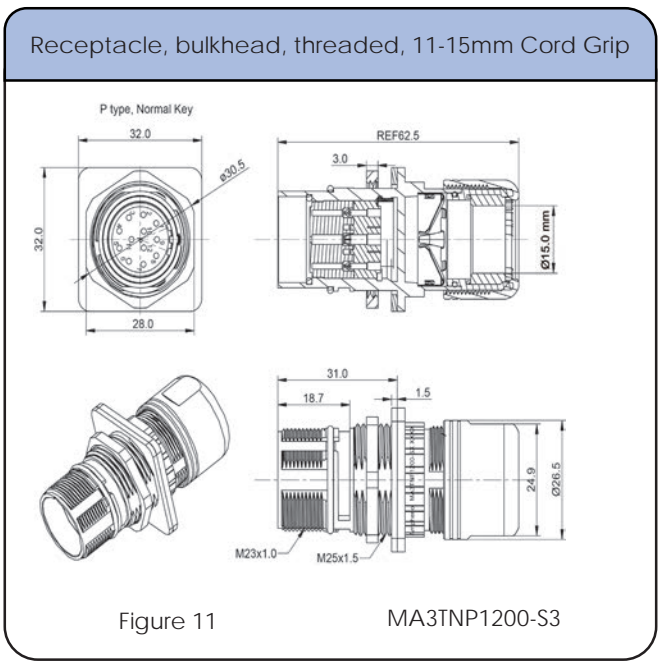
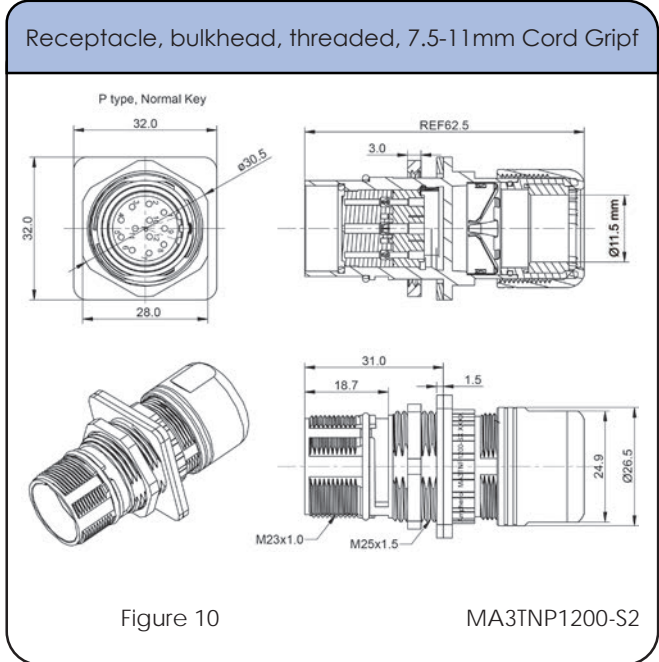
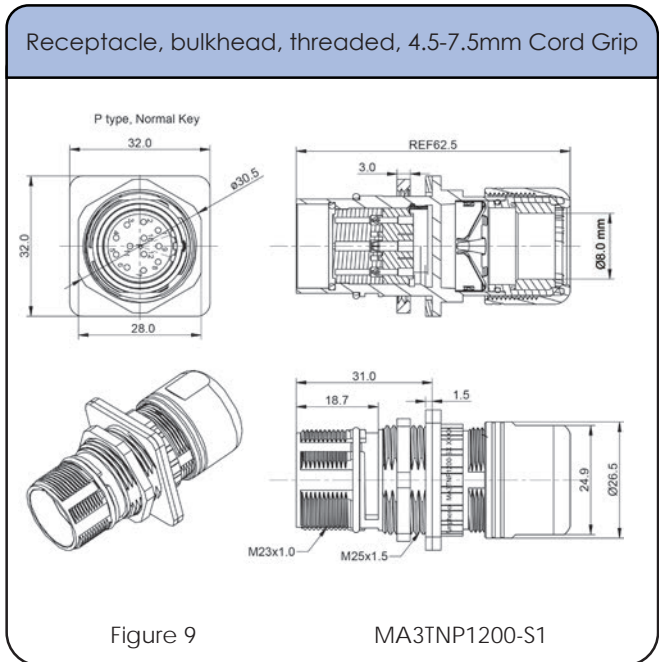




12 POSITIONS  
10A / 160V  
E type

Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

Threaded Dimensions Bulkhead Receptacles / Receptacle Extension  
See Chart 1 for contacts options

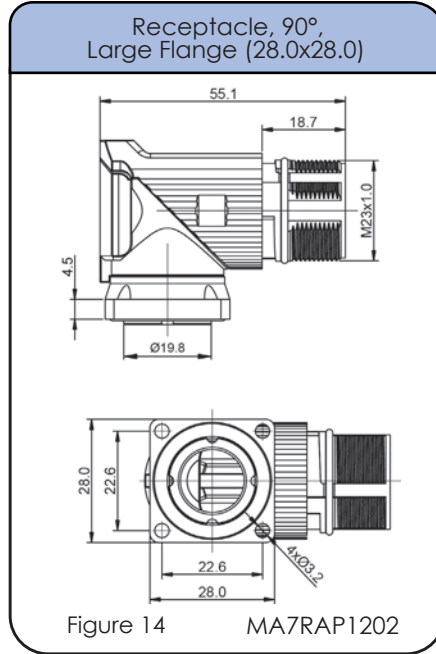
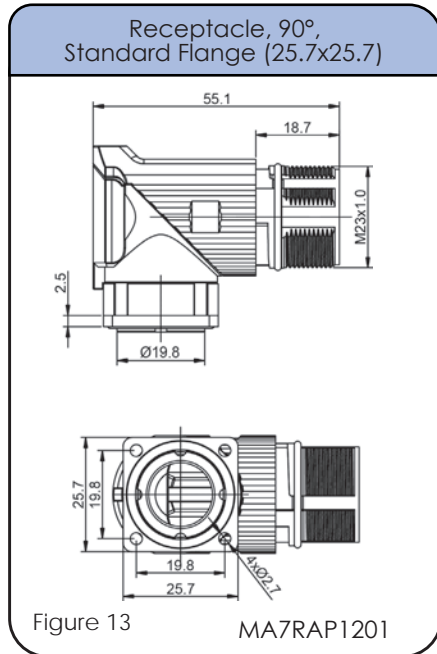


Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

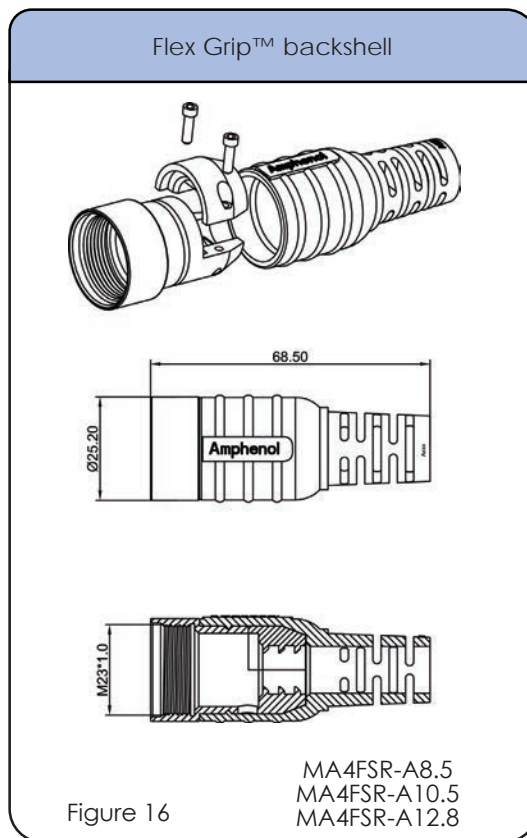
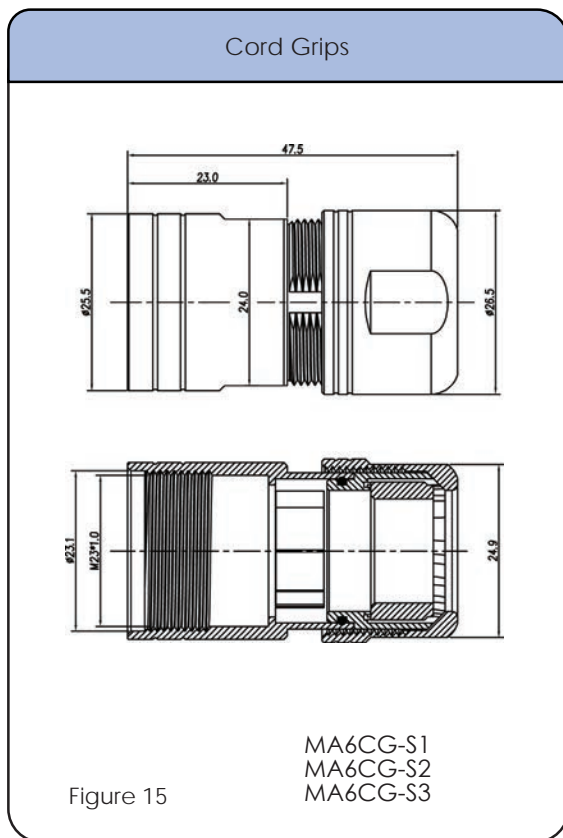
Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
 Sealing: IP66/67    22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

### Threaded Dimensions 90° Rotatable Receptacles

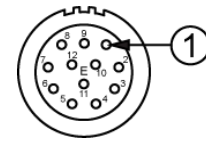
See Chart 1 for contacts options



### Dimensions Cord Grips / Backshells



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



12 POSITIONS  
10A / 160V  
E type

Style: E type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

CONNECTOR SOLUTIONS

### Tools & Accessories

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



AFM8

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire range 12-26AWG



AF8

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



WA22

Universal positioner is used with crimp tools AFM8 and WA22.  
Wire range 20-32AWG



SK2-2

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG



UH2-5

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*.  
Wire range 12-26AWG



WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Dust Cap for Receptacle




P29687

Dust Cap for Plug, threaded



P31660

Dust Cap for Plug, Checkmate™



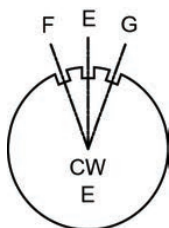
P31660

\* The universal positioner is not included with the crimp tools and must be ordered separately.

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

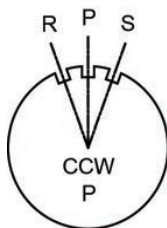
# Connector Solutions M23 Standard Series

STEP 1  
Choose Plug

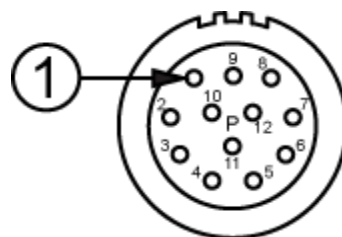


Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.* Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 16 for connector configurations

STEP 2  
Choose Receptacle



STEP 3  
Choose Backshell/Cord Grip



## Plugs



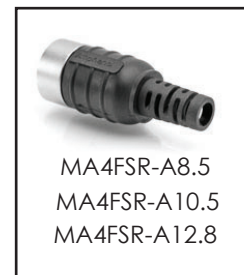
## Receptacles



## Cord Grips



## FlexGrip™ Backshell System



more about FlexGrip™ on page 282

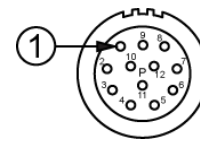
**BULK CABLE starts on page 23**

## Receptacle Kits



SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 158



**12 POSITIONS**  
**10A / 160V**  
**P type**

**Style: P type Plug**    **Number of Contacts: 12**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)**



### Checkmate™ Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA2CAP1200	Plug, straight, <b>Checkmate™</b>	P	Pin	Socket	1
MA2LAE1200	Receptacle, straight, flange mount, <b>Checkmate™</b>	E	Socket	Pin	2
MA2LAE1200-KIT	Receptacle kit, straight, flange mount, <b>Checkmate™</b> Kit includes contacts	E		Pin	2
MA2LAE1200S-KIT	Receptacle kit, straight, flange mount, <b>Checkmate™</b> Kit includes contacts	E	Socket		2
MA2JAE1200	Receptacle extension, <b>Checkmate™</b>	E	Socket	Pin	3
MA5RAE1201*	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E	Socket	Pin	4
MA5RAE1202*	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E	Socket	Pin	5
↑ Contacts supplied separately see Chart 1 page 158					

CONNECTOR SOLUTIONS

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA1CAP1200	Plug, straight, threaded	P	Pin	Socket	6
MA1EAP1200	Plug, 90° rotatable, threaded	P	Pin	Socket	7
MA1LAE1200	Receptacle, straight, flange mount, threaded	E	Socket	Pin	8
MA1LAE1200-KIT	Receptacle kit, straight, threaded. Contacts included	E		Pin	8
MA1LAE1200S-KIT	Receptacle kit, straight, threaded. Contacts included	E	Socket		8
MA3TNE1200-S1	Receptacle, bulkhead, threaded, 4.5-7.5mm	E	Socket	Pin	9
MA3TNE1200-S2	Receptacle, bulkhead, threaded, 7.5-11mm	E	Socket	Pin	10
MA3TNE1200-S3	Receptacle, bulkhead, threaded, 11.0-15mm	E	Socket	Pin	11
MA1JAE1200	Receptacle extension, threaded	E	Socket	Pin	12
MA7RAE1201*	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	E	Socket	Pin	13
MA7RAE1202*	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	E	Socket	Pin	14
↑ Contacts supplied separately see Chart 1 page 158					

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266

part numbers continued on next page

Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	15
MA6CG-S2	Cord grip	7.5-11.0mm	15
MA6CG-S3	Cord grip	11.0-15.0mm	15
MA4FSR-A8.5*	Flex Grip™ backshell	7.5-8.5mm	16
MA4FSR-A10.5*	Flex Grip™ backshell	9.5-10.5mm	16
MA4FSR-A12.8*	Flex Grip™ backshell	11.5-12.8mm	16

\*Must be potted to achieve IP67 ratings.

## Contacts



### CHART 1

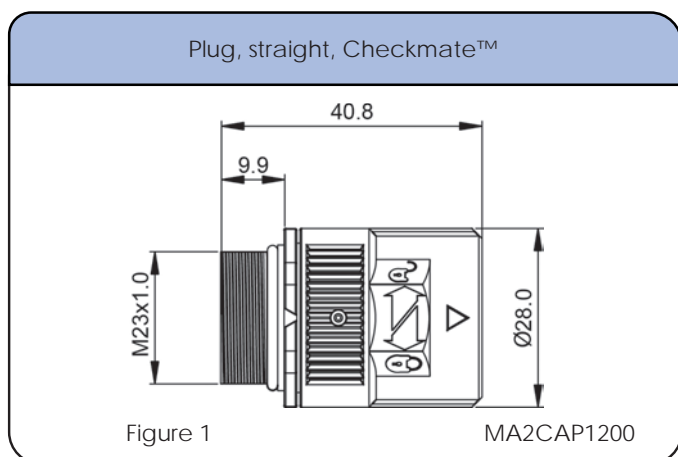
### Crimp Contacts, Machined

Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold

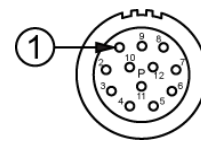
Machined Contacts

## Checkmate™ Dimensions Straight Plugs

See Chart 1 for contacts options





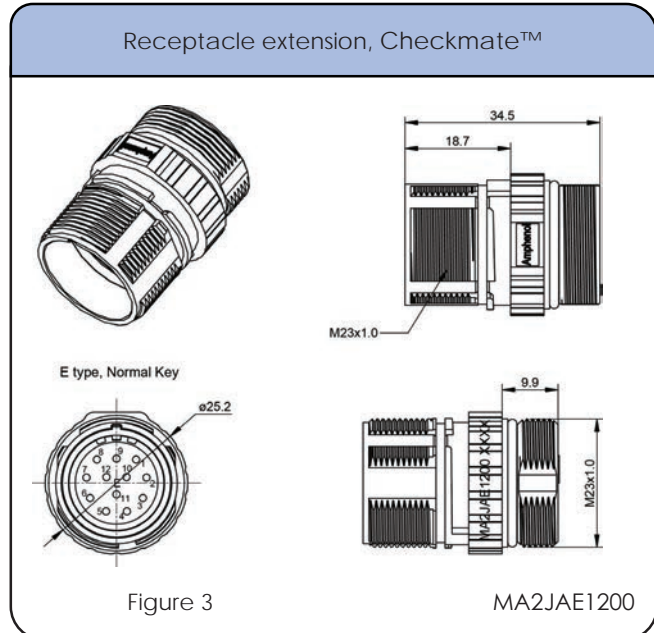
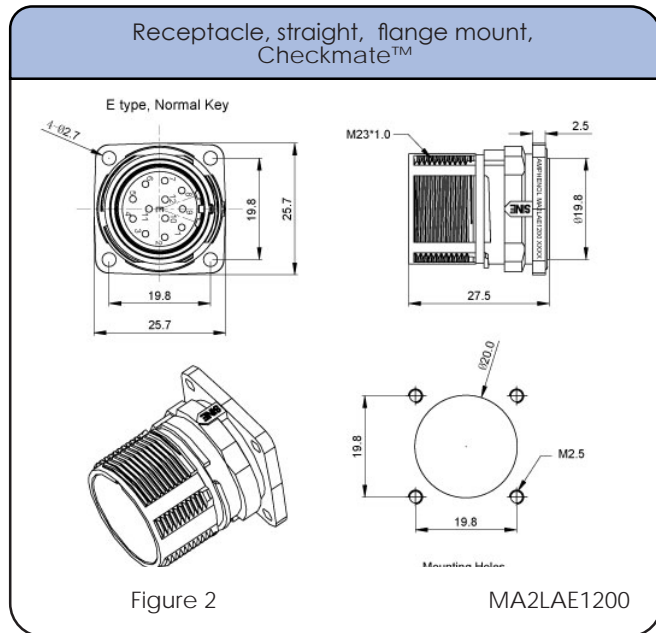


12 POSITIONS  
10A / 160V  
P type

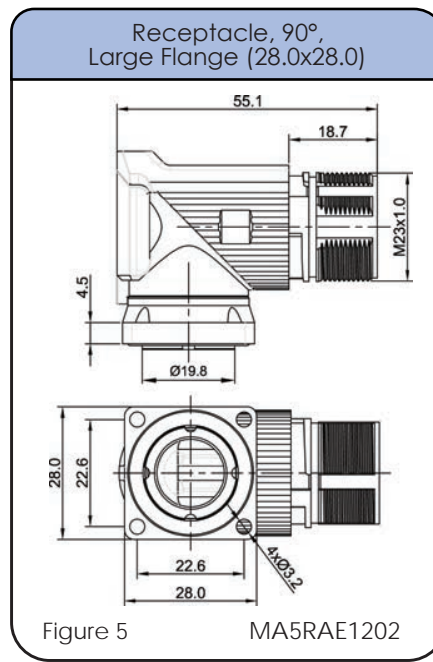
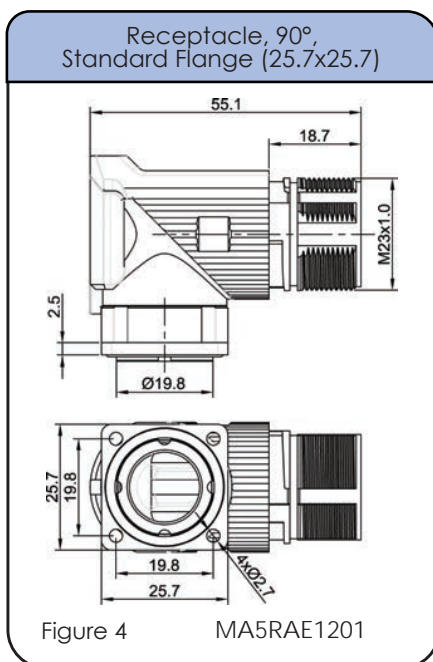
Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Checkmate™ Dimensions Receptacles

See Chart 1 for contacts options



See Chart 1 for contacts options

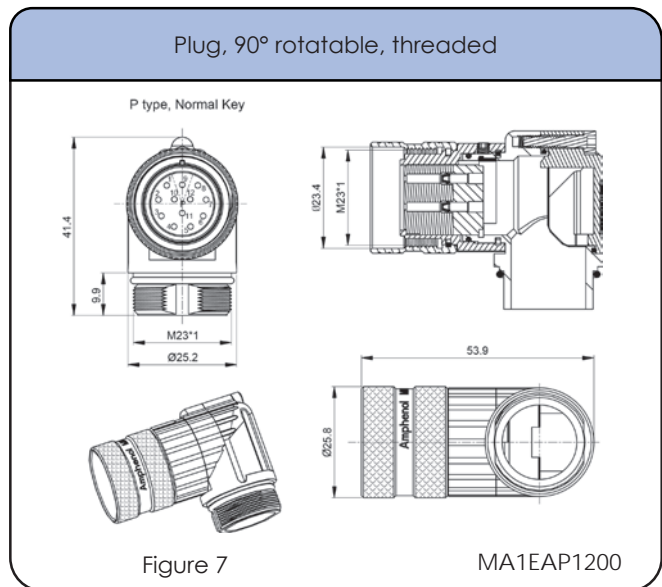
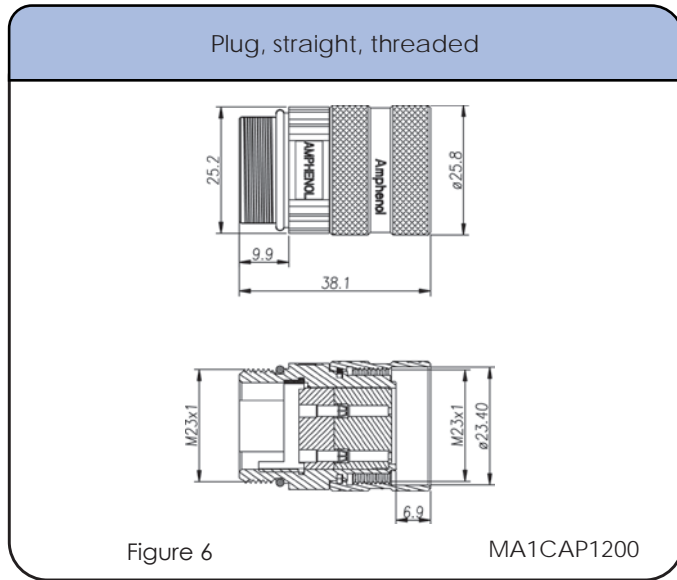


Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

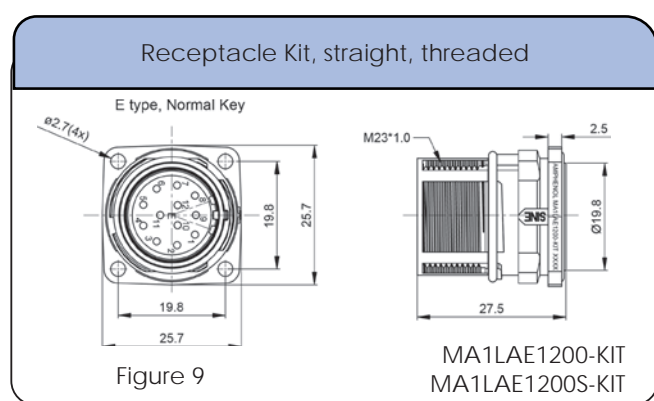
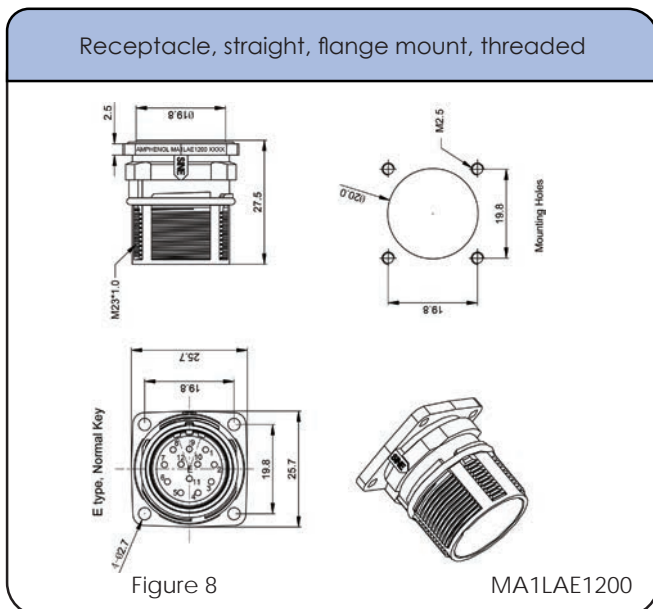
## Threaded Dimensions Plugs

See Chart 1 for contacts options

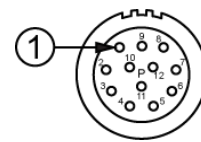


## Threaded Dimensions Straight Receptacles

See Chart 1 for contacts options



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



12 POSITIONS  
10A / 160V  
P type

Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Threaded Bulkhead Receptacles

See Chart 1 for contacts options

Receptacle, bulkhead, threaded, 4.5-7.5mm Cord Grip

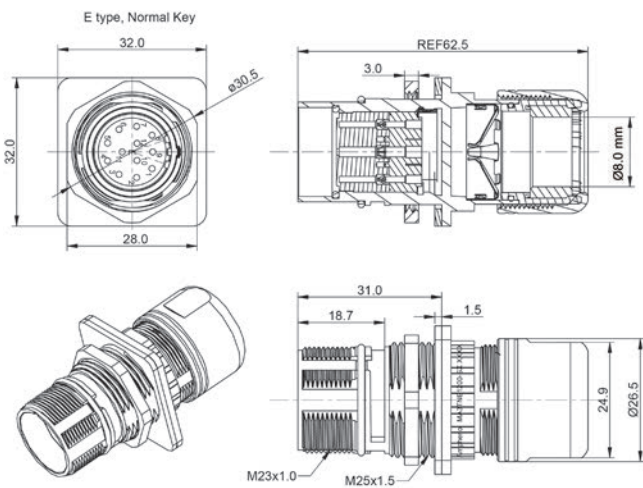


Figure 10

MA3TNE1200-S1

Receptacle, bulkhead, threaded, 7.5-11mm Cord Grip

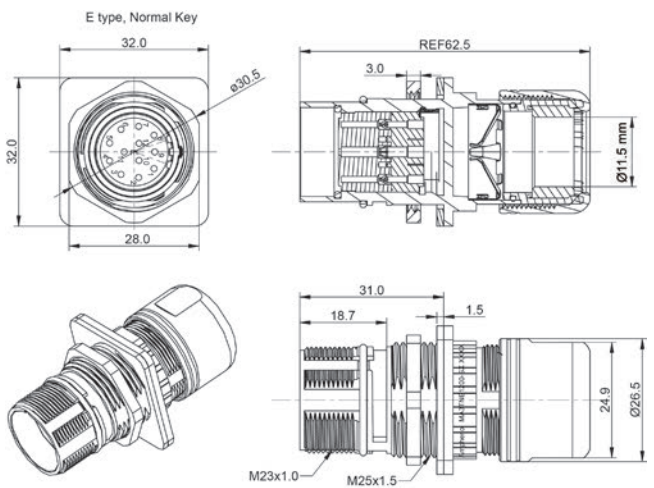


Figure 11

MA3TNE1200-S2

Receptacle, bulkhead, threaded, 11-15mm Cord Grip

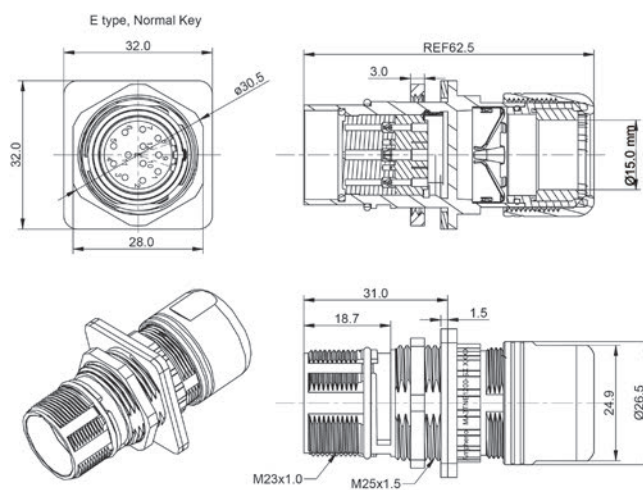


Figure 12

MA3TNE1200-S3

Receptacle extension, threaded

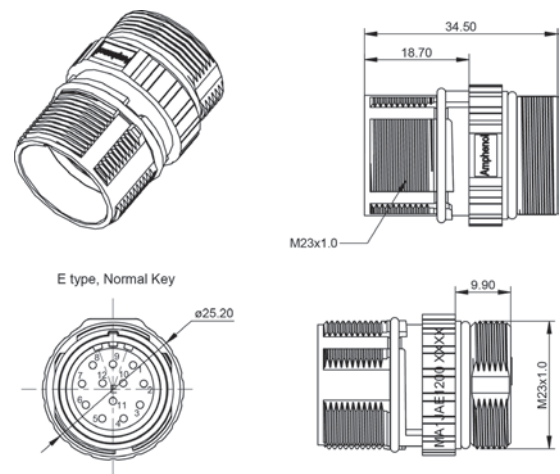


Figure 13

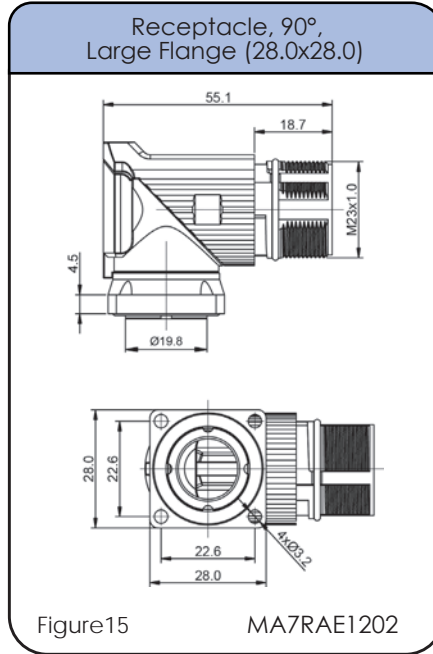
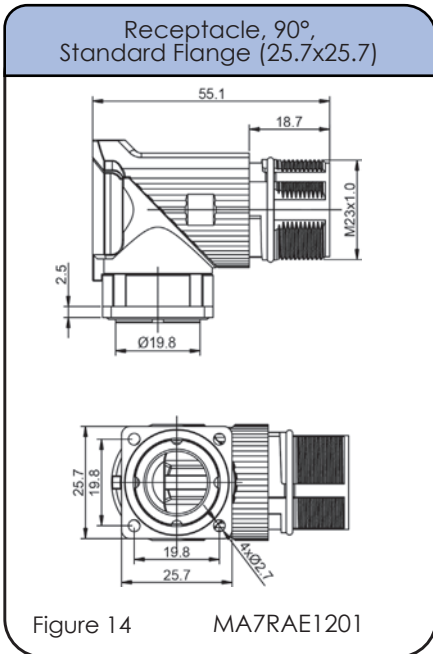
MA1JAE1200

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com) Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

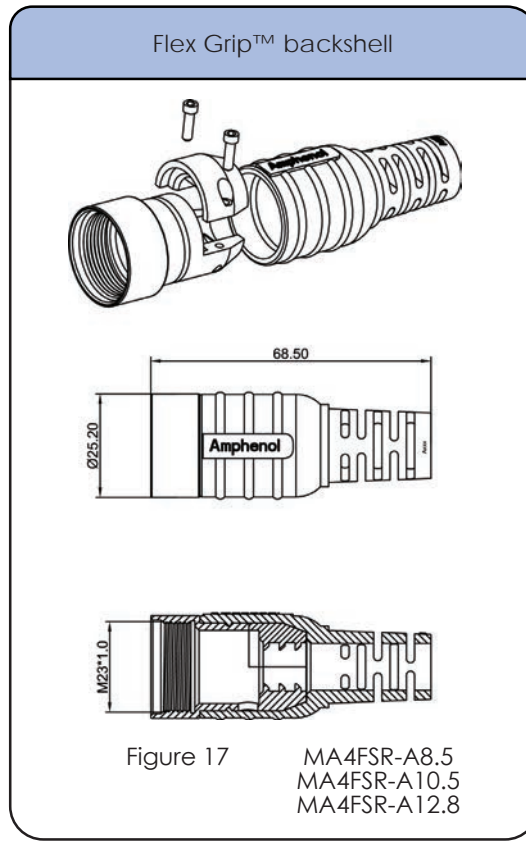
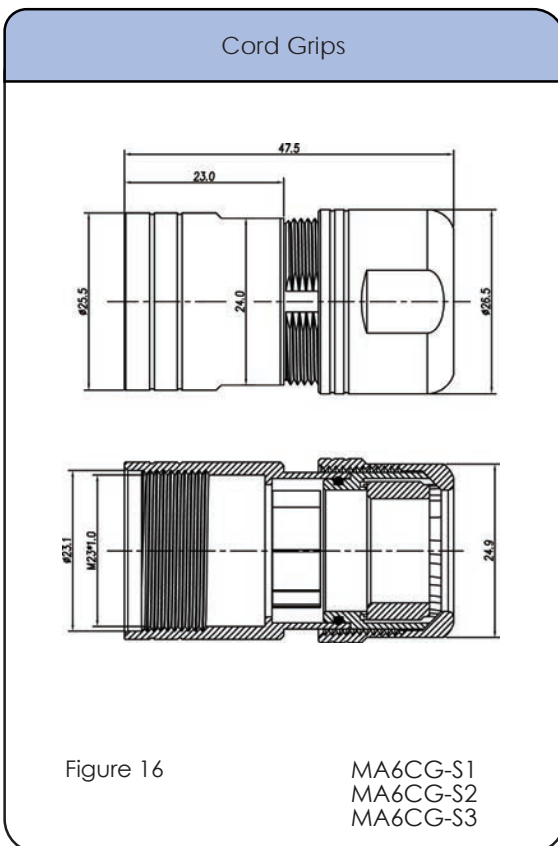
Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Threaded Dimensions 90° Rotatable Receptacles

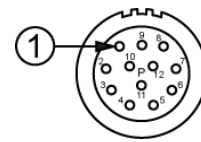
See Chart 1 for contacts options



## Cord Grips / Backshells



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



12 POSITIONS  
10A / 160V  
P type

Style: P type Plug    Number of Contacts: 12    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with the crimp tools WA22 and AFM8. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>	<p>Dust Cap for Receptacle</p>  <p>P29687</p>	<p>Dust Cap for Plug, Threaded</p>  <p>P31660</p>
<p>Dust Cap for Plug, Checkmate™</p>  <p>P31662</p>		

\* The universal positioner is not included with the crimp tools and must be ordered separately.

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

# Connector Solutions M23 Standard Series

STEP 1  
Choose Plug

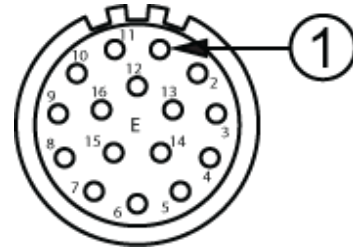


Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.* Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 16 for connector configurations

STEP 2  
Choose Receptacle



STEP 3  
Choose Backshell/Cord Grip



## Plugs



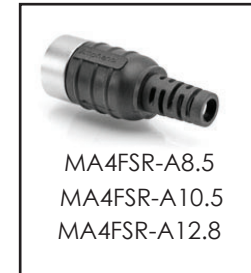
## Receptacles



## Cord Grips



## FlexGrip™ Backshell System



more about FlexGrip™ on page 281

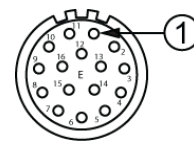
**BULK CABLE starts on page 23**

## Receptacle Kits



SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 166



**16 POSITIONS**  
**9A / 125V**  
**E type**

**Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)**

### Checkmate™ Connector Part Numbers



Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA2CAE1600	Plug, straight, <b>Checkmate™</b>	E	Pin	Socket	1
MA2LAP1600	Receptacle, straight, flange mount, <b>Checkmate™</b>	P	Socket	Pin	2
MA2LAP1600-KIT	Receptacle Kit, straight, flange mount, <b>Checkmate™</b>	P	Pin		2
MA2LAP1600S-KT	Receptacle Kit, straight, flange mount, <b>Checkmate™</b>	P	Socket		2
MA2JAP1600	Receptacle extension, <b>Checkmate™</b>	P	Socket	Pin	3
MA5RAP1601*	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P	Socket	Pin	4
MA5RAP1602*	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P	Socket	Pin	5
↑ Contacts supplied separately see Chart 1 page 166					

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA1CAE1600	Plug, straight, threaded	E	Pin	Socket	6
MA1EAE1600	Plug, 90° rotatable, threaded	E	Socket	Pin	7
MA1LAP1600	Receptacle, straight, flange mount, threaded	P	Socket	Pin	8
MA1LAP1600-KIT	Receptacle kit, threaded. Kit includes contacts	P		Pin	8
MA1LAP1600S-KIT	Receptacle kit, threaded. Kit includes contacts	P	Socket		8
MA3TNP1600-S1	Receptacle, bulkhead, threaded, 4.5-7.5mm	P	Socket	Pin	9
MA3TNP1600-S2	Receptacle, bulkhead, threaded, 7.5-11mm	P	Socket	Pin	10
MA3TNP1600-S3	Receptacle, bulkhead, threaded, 11-15mm	P	Socket	Pin	11
MA1JAP1600	Receptacle extension, threaded	P	Socket	Pin	12
MA7RAP1601*	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	P	Socket	Pin	13
MA7RAP1602*	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	P	Socket	Pin	14
↑ Contacts supplied separately see Chart 1 page 166					

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266

Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	15
MA6CG-S2	Cord grip	7.5-11.0mm	15
MA6CG-S3	Cord grip	11.0-15.0mm	15
MA4FSR-A8.5*	Flex Grip™ backshell	7.5-8.5mm	16
MA4FSR-A10.5*	Flex Grip™ backshell	9.5-10.5mm	16
MA4FSR-A12.8*	Flex Grip™ backshell	11.5-12.8mm	16

\*Must be potted to achieve IP67 ratings.

## Contacts

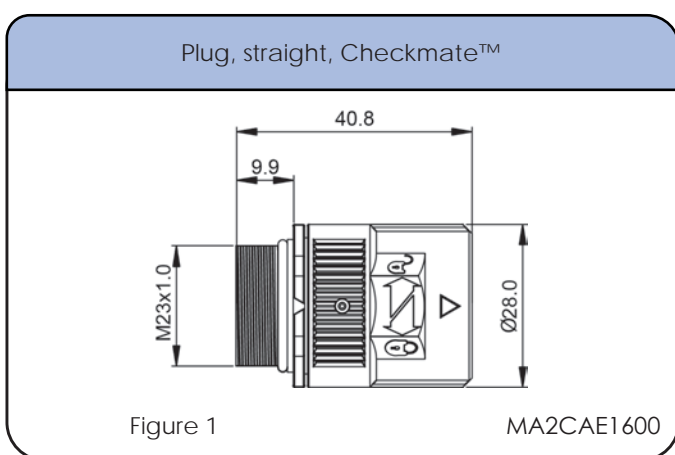


### CHART 1 Crimp Contacts, Machined

Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold

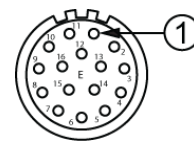
## Checkmate™ Dimensions Straight Plug

See Chart 1 for contacts options



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



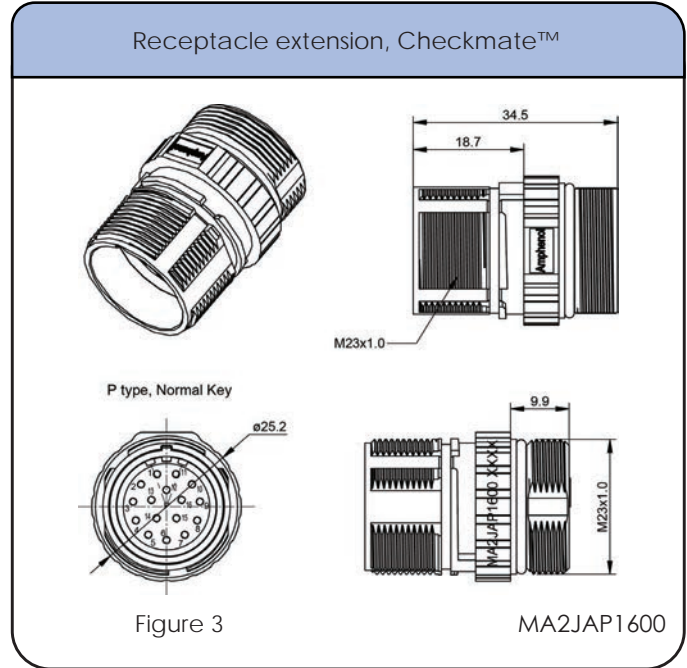
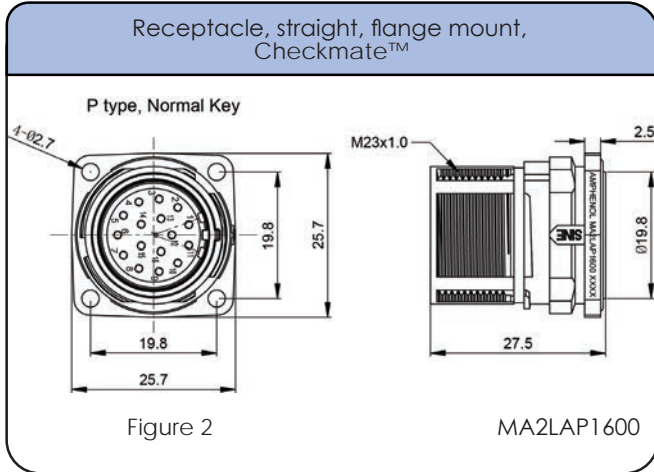


16 POSITIONS  
9A / 125V  
E type

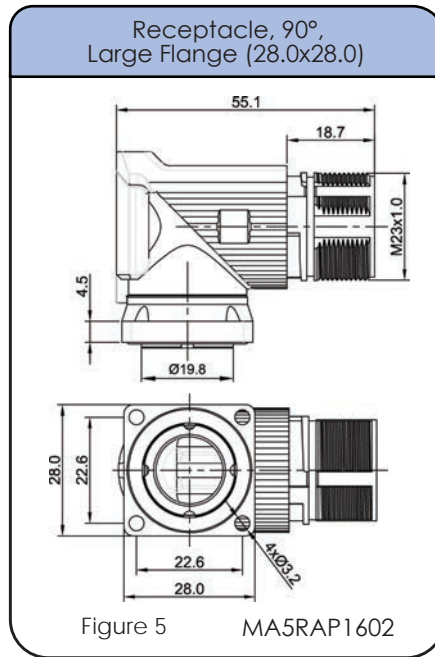
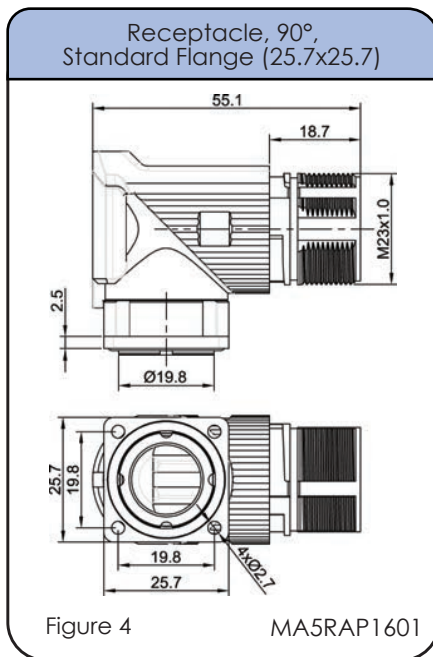
Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Checkmate™ Dimensions Receptacles

See Chart 1 for contacts options

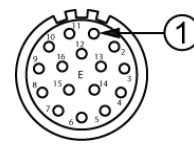


See Chart 1 for contacts options



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

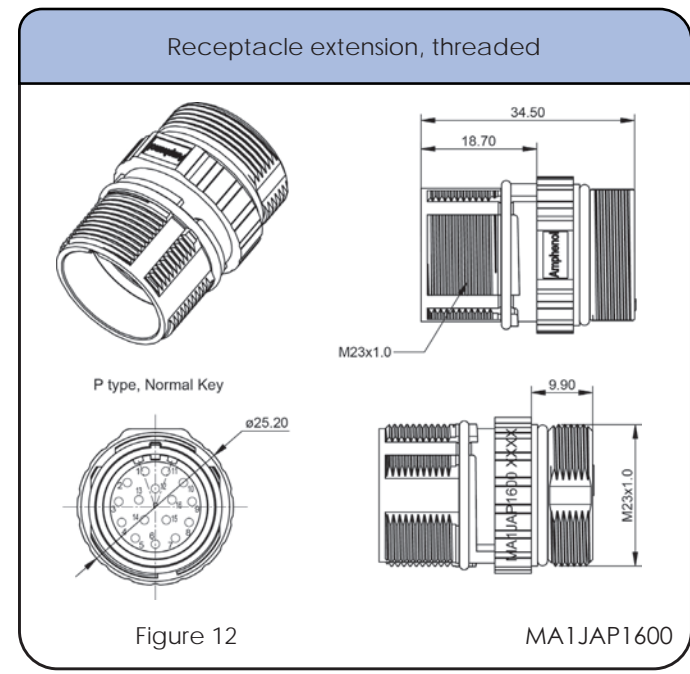
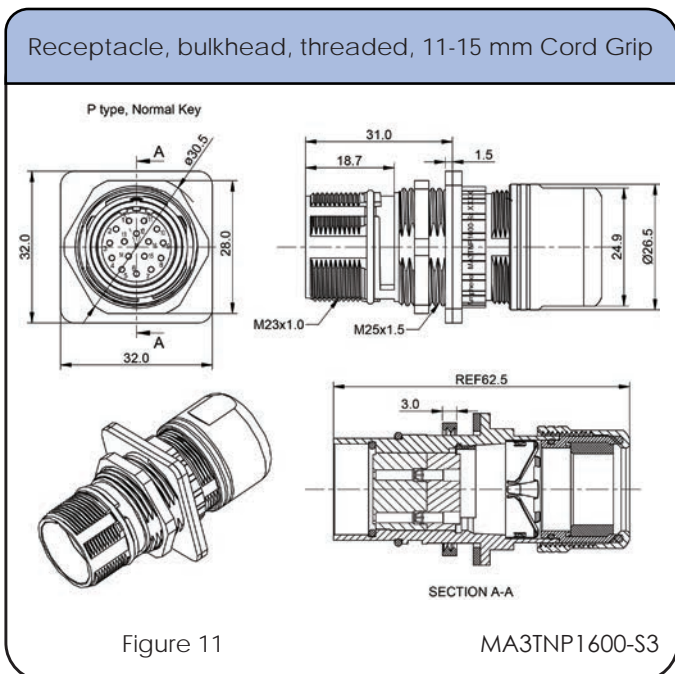
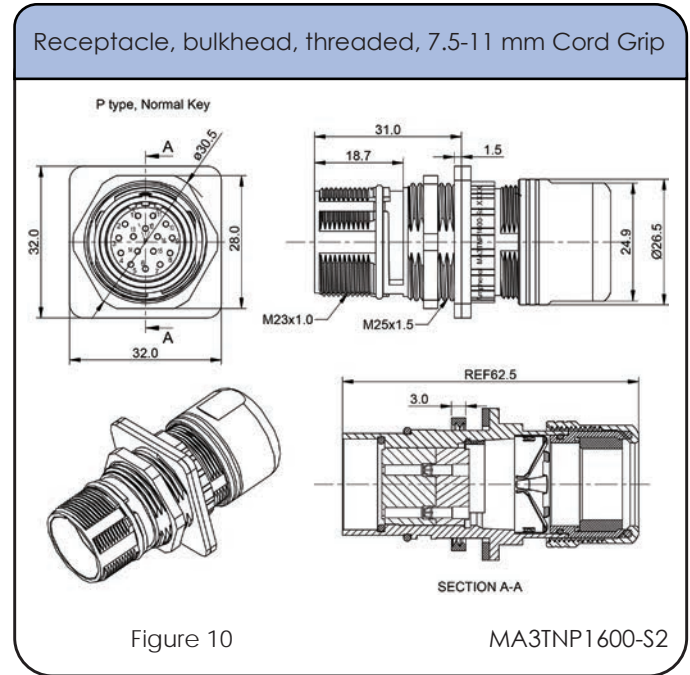
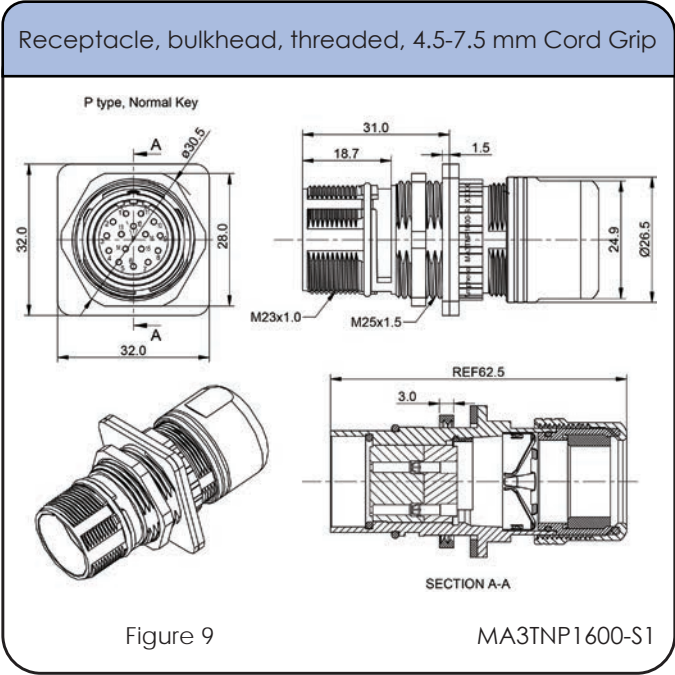




16 POSITIONS  
9A / 125V  
E type

Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

Threaded Dimensions / Bulkhead Receptacles / Receptacle Extension  
See Chart 1 for contacts options

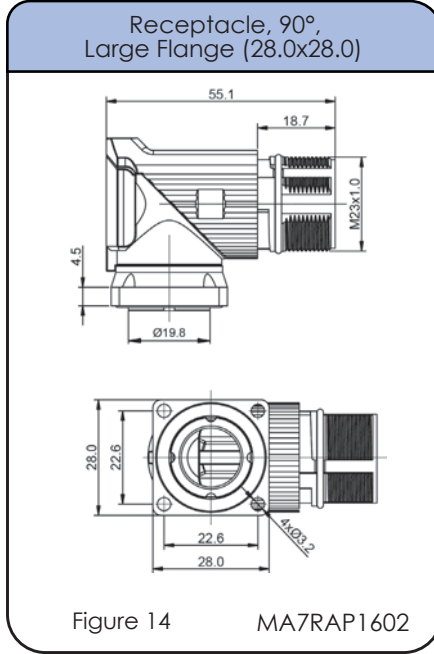
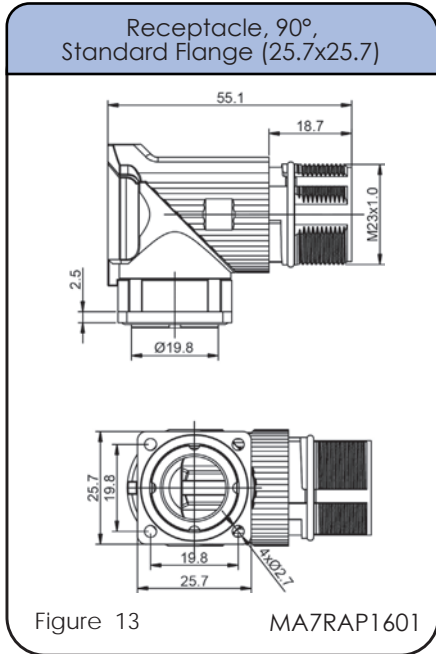


Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

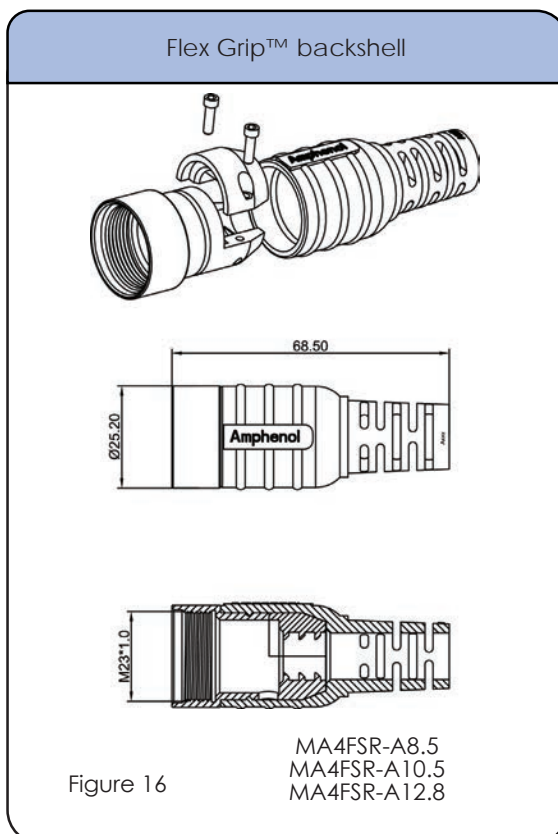
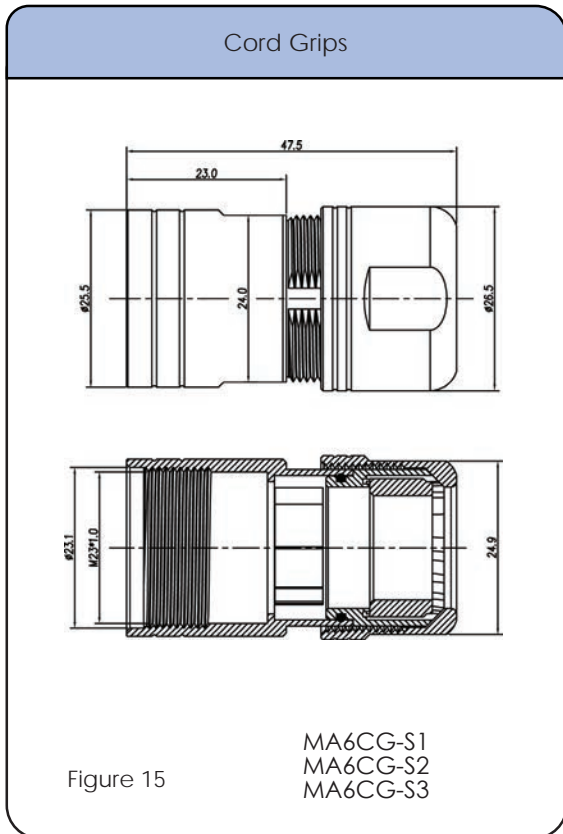
Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

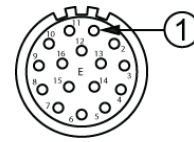
### Threaded Dimensions 90° Rotatable Receptacles

See Chart 1 for contacts options



### Dimensions Cord Grips / Backshells





16 POSITIONS  
9A / 125V  
E type

Style: E type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

### Tools & Accessories

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



AFM8

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire range 12-26AWG



AF8

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



WA22

Universal positioner is used with crimp tools AFM8 and WA22.  
Wire range 20-32AWG



SK2-2

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG



UH2-5

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*.  
Wire range 12-26AWG



WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Dust Cap for Receptacle



P29687

Dust Cap for Plug, threaded



P31660

Dust Cap for Plug, Checkmate™



P31662

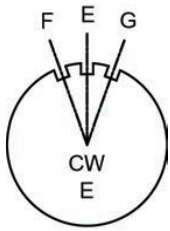
\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Standard Series

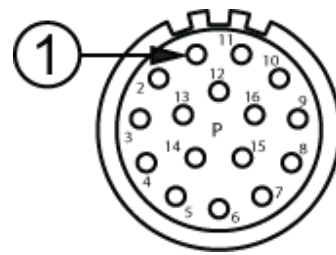
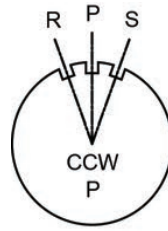
STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

STEP 3  
Choose Backshell/Cord Grip



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.* Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 16 for connector configurations



## Plugs



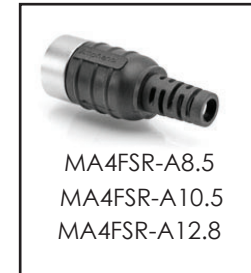
## Receptacles



## Cord Grips



## FlexGrip™ Backshell System



more about FlexGrip™ on page 282

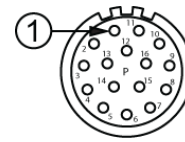
**BULK CABLE starts on page 23**

## Receptacle Kits



SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 174



**16 POSITIONS**  
**9A / 125V**  
**P type**

**Style: P type Plug**    **Number of Contacts: 16**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)**



### Checkmate™ Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA2CAP1600	Plug, straight <b>Checkmate™</b>	P	Pin	Socket	1
MA2LAE1600	Receptacle, straight, flange mount, <b>Checkmate™</b>	E	Socket	Pin	2
MA2LAE1600-KIT	Receptacle Kit, straight, flange mount, <b>Checkmate™</b>	E	Pin		2
MA2LAE1600S-KIT	Receptacle Kit, straight, flange mount, <b>Checkmate™</b>	E		Socket	2
MA2JAE1600	Receptacle extension, <b>Checkmate™</b>	E	Socket	Pin	3
MA5RAE1601*	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E	Socket	Pin	4
MA5RAE1602*	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E	Socket	Pin	5

↑ Contacts supplied separately see Chart 1 page 174

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA1CAP1600	Plug, straight, threaded	P	Pin	Socket	6
MA1EAP1600	Plug, 90° rotatable, threaded	P	Pin	Socket	7
MA1LAE1600	Receptacle, straight, flange mount, threaded	E	Socket	Pin	8
MA1LAE1600-KIT	Receptacle kit, straight, threaded. Contacts Included	E		Pin	8
MA1LAE1600S-KIT	Receptacle kit, straight, threaded. Contacts included	E	Socket		8
MA3TNE1600-S1	Receptacle, bulkhead, threaded, 4.5-7.5mm	E	Socket	Pin	9
MA3TNE1600-S2	Receptacle, bulkhead, threaded, 7.5-11.0mm	E	Socket	Pin	10
MA3TNE1600-S3	Receptacle, bulkhead, threaded, 11.0-15.0mm	E	Socket	Pin	11
MA7RAE1601*	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	E	Socket	Pin	12
MA7RAE1602*	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	E	Socket	Pin	13
MA1JAE1600	Receptacle extension, threaded	E	Socket	Pin	14

↑ Contacts supplied separately see Chart 1 page 174

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266

Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	15
MA6CG-S2	Cord grip	7.5-11.0mm	15
MA6CG-S3	Cord grip	11.0-15.0mm	15
MA4FSR-A8.5*	Flex Grip™ backshell	7.5-8.5mm	16
MA4FSR-A10.5*	Flex Grip™ backshell	9.5-10.5mm	16
MA4FSR-A12.8*	Flex Grip™ backshell	11.5-12.8mm	16

\*Must be potted to achieve IP67 ratings.

## Contacts

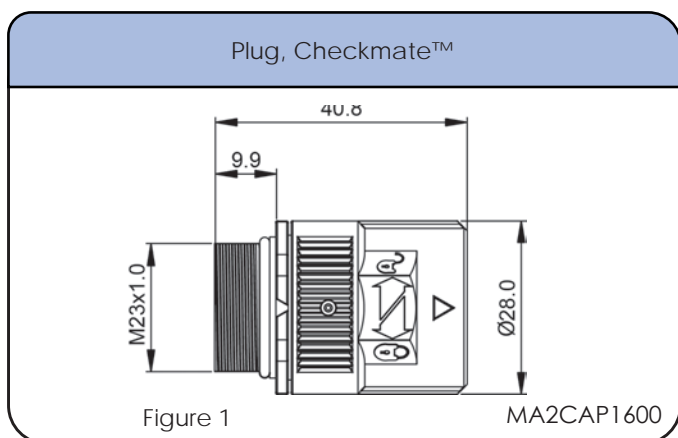


### CHART 1 Crimp Contacts, Machined

Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold

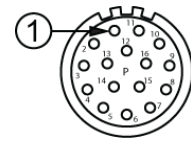
## Checkmate™ Dimensions Straight Plug

See Chart 1 for contacts options



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



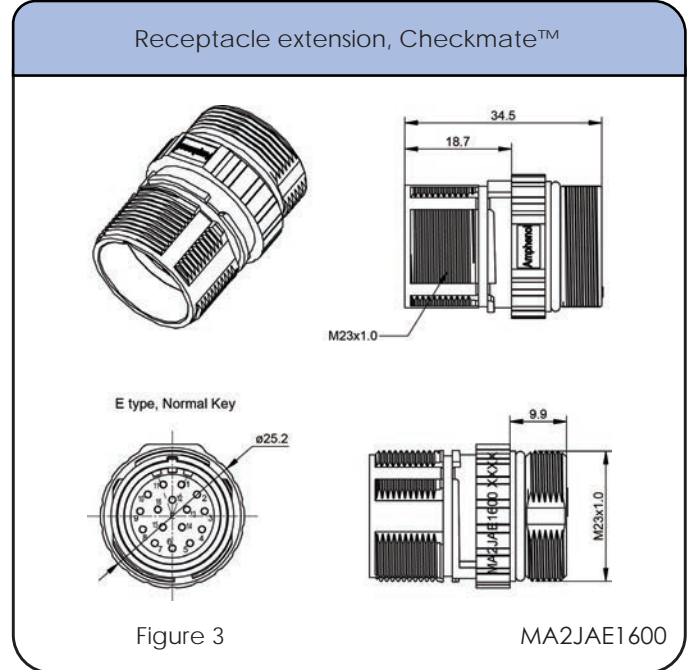
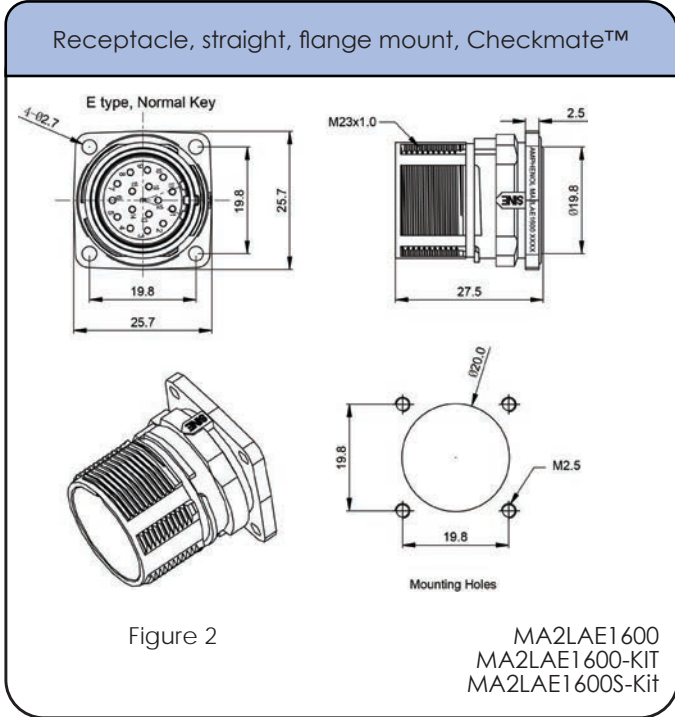


16 POSITIONS  
9A / 125V  
P type

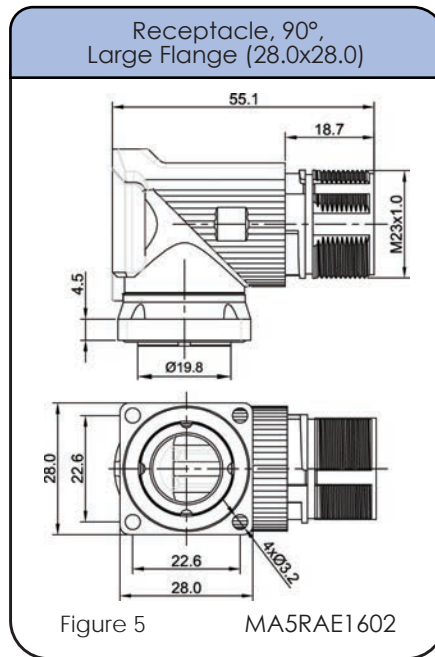
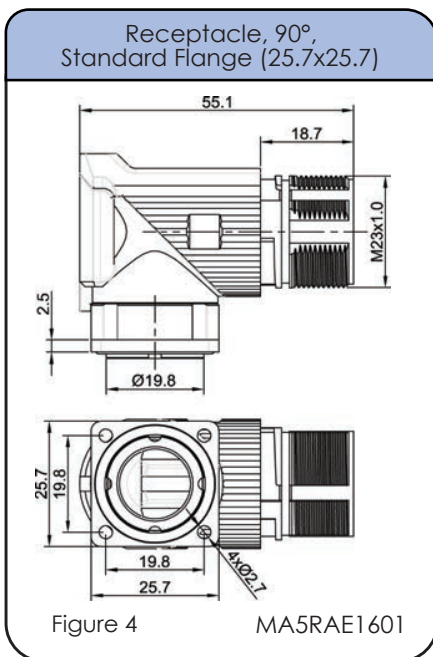
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Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Checkmate™ Dimensions Receptacles

See Chart 1 for contacts options

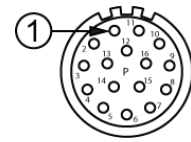


See Chart 1 for contacts options



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

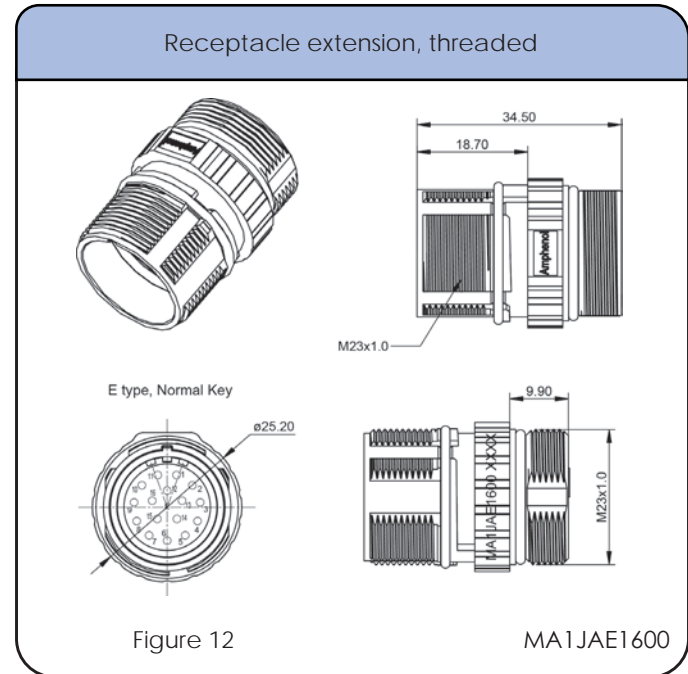
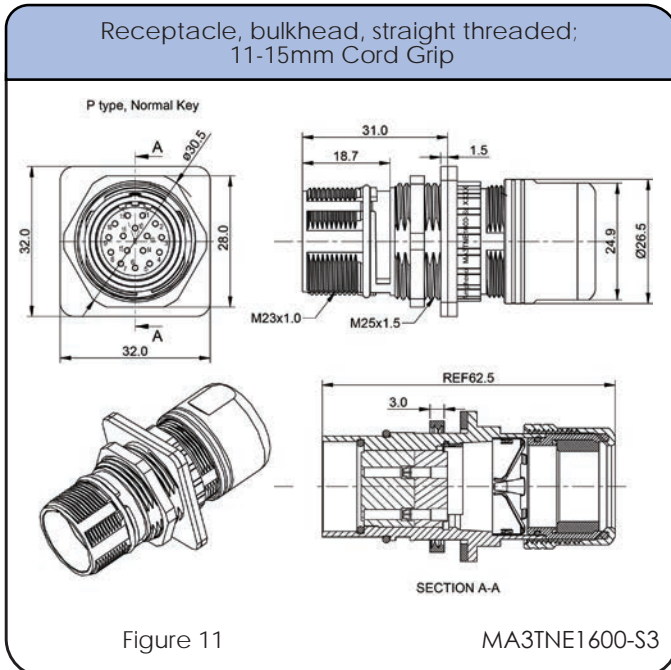
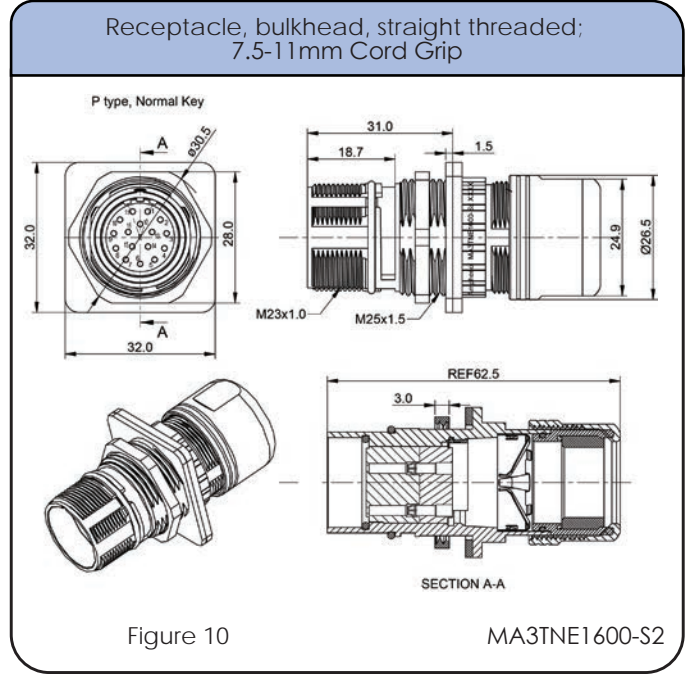
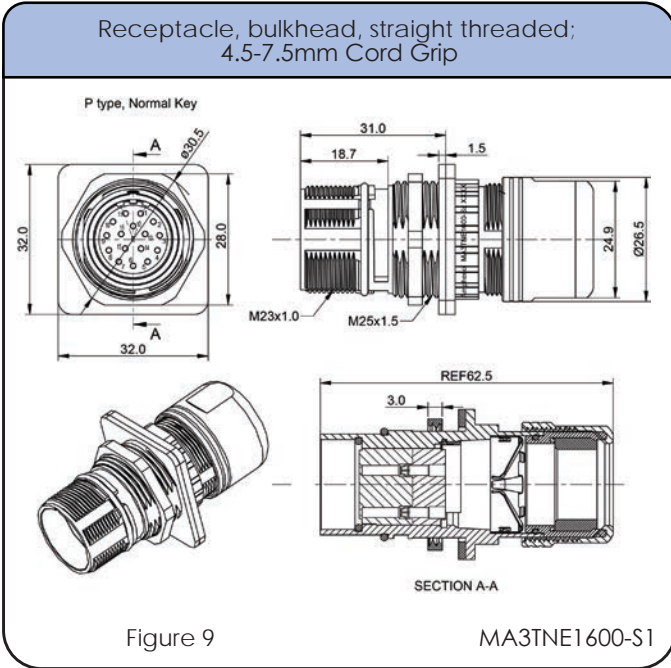




16 POSITIONS  
9A / 125V  
P type

Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

Threaded Dimensions Receptacles  
See Chart 1 for contacts options

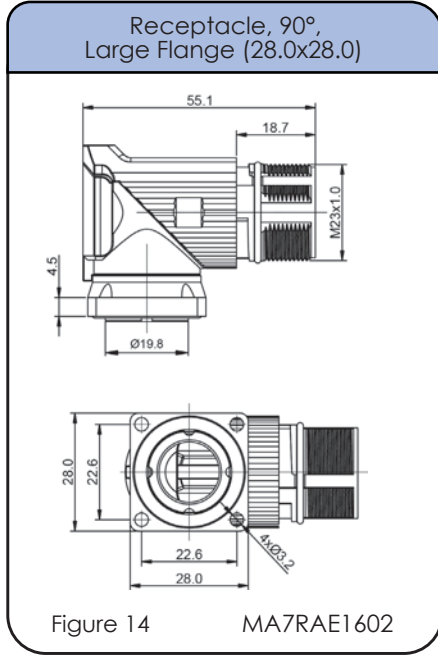
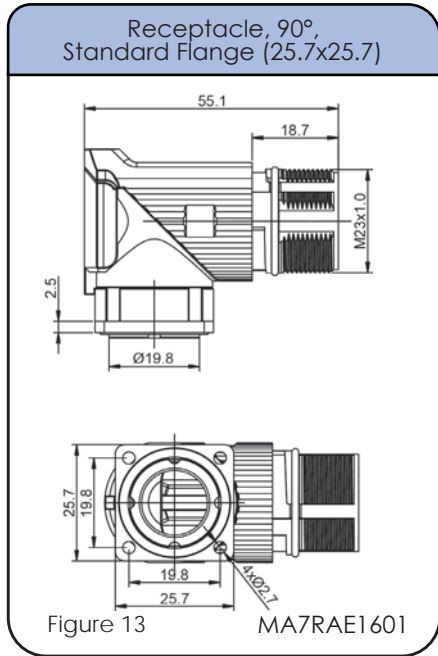


Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

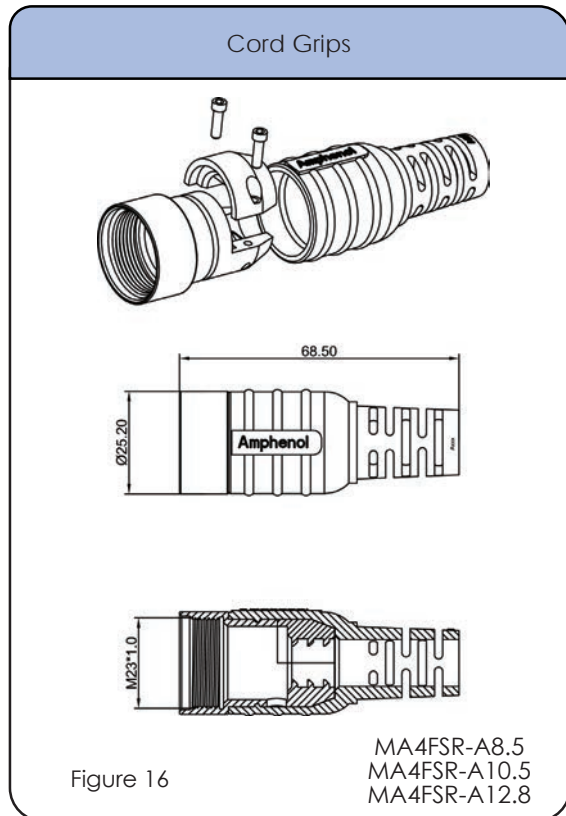
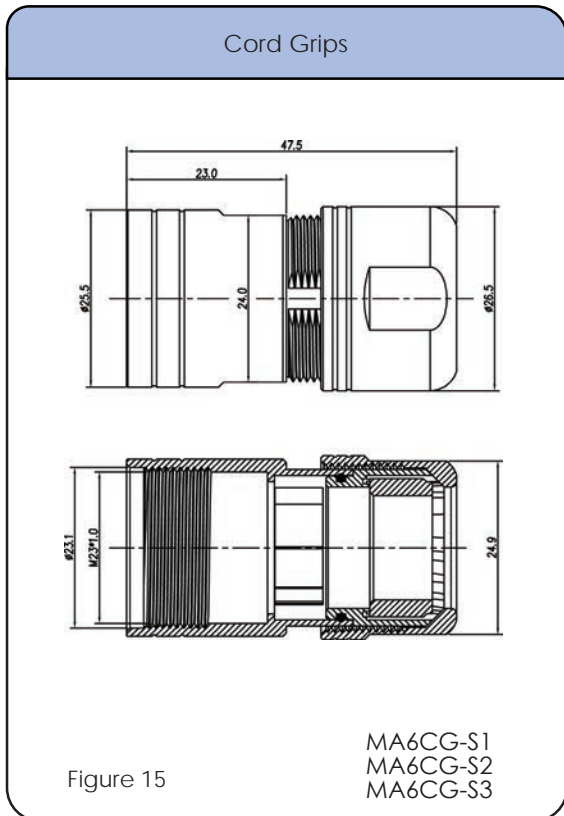
Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

### Threaded Dimensions 90° Rotatable Receptacles

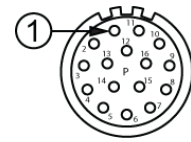
See Chart 1 for contacts options



### Dimensions Cord Grips / Backshells



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



**16 POSITIONS**  
**9A / 125V**  
**P type Plug**

**Style: P type Plug    Number of Contacts: 16    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)**

CONNECTOR SOLUTIONS

**Tools & Accessories**

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
 Wire range 20-32AWG



AFM8

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
 Wire range 12-26AWG



AF8

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
 Wire range 20-32AWG



WA22

Universal positioner is used with crimp tools AFM8 and WA22.  
 Wire range 20-32AWG



SK2-2

Universal positioner is used with the universal hand crimp tool (AF8).  
 Wire range 12-26AWG



UH2-5

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*.  
 Wire range 12-26AWG




WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Dust Cap for Receptacle



P29687

Dust Cap for Plug, threaded



P31660

Dust Cap for Plug, Checkmate™



P31662

\* The universal positioner is not included with the crimp tools and must be ordered separately.

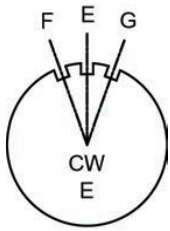
Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

# Connector Solutions M23 Standard Series

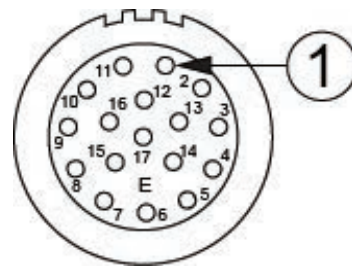
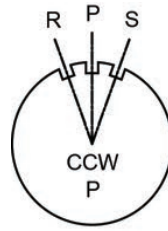
STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

STEP 3  
Choose Backshell/Cord Grip



Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 16 for connector configurations



## Plugs



MA1CAE1700



MA1EAE1700



MA2CAE1700

## Receptacles



MA1LAP1700



MA7RAP1701  
MA7RAP1702



MA1JAP1700



MA3TNP1700-S1  
MA3TNP1700-S2  
MA3TNP1700-S3



MA2LAP1700



MA5RAP1701  
MA5RAP1702



MA2JAP1700

## Cord Grips



MA6CG-S1  
MA6CG-S2  
MA6CG-S3

## FlexGrip™ Backshell System



MA4FSR-A8.5  
MA4FSR-A10.5  
MA4FSR-A12.8

more about FlexGrip™ on page 282

**BULK CABLE**  
starts on  
page 23

## Receptacle Kits

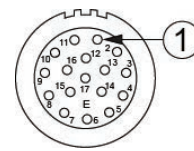


MA1LAP1700-KIT  
MA1LAP1700S-KIT

MA2LAP1700-KIT  
MA2LAP1700S-KIT

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 182



**17 POSITIONS**  
**9A / 125V**  
**E type**

**Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)**



### Checkmate™ Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA2CAE1700	Plug, straight, <b>Checkmate™</b>	E	Pin	Socket	1
MA2LAP1700	Receptacle, straight, flange mount <b>Checkmate™</b>	P	Socket	Pin	2
MA2LAP1700-KIT	Receptacle kit, straight, flange mount <b>Checkmate™</b>	P		Pin	2
MA2LAP1700S-KIT	Receptacle kit, straight, flange mount <b>Checkmate™</b>	P	Socket		2
MA2JAP1700	Receptacle extension, <b>Checkmate™</b>	P	Socket	Pin	3
MA5RAP1701*	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	P	Socket	Pin	4
MA5RAP1702*	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	P	Socket	Pin	5

↑ Contacts supplied separately see Chart 1 page 182

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA1CAE1700	Plug, straight, threaded	E	Pin	Socket	6
MA1EAE1700	Plug, 90° rotatable, threaded	E	Pin	Socket	7
MA1LAP1700	Receptacle, straight, flange mount, threaded	P	Socket	Pin	8
MA1LAP1700-KIT	Receptacle kit, straight, threaded. Contacts included	P		Pin	8
MA1LAP1700S-KIT	Receptacle kit, straight, threaded. Contacts included	P	Socket		8
MA3TNP1700-S1	Receptacle, bulkead, threaded, 4.5-7.5mm	P	Socket	Pin	9
MA3TNP1700-S2	Receptacle, bulkead, threaded, 7.5-11.0mm	P	Socket	Pin	10
MA3TNP1700-S3	Receptacle, bulkead, threaded, 11.0-15.0mm	P	Socket	Pin	11
MA1JAP1700	Receptacle extension, threaded	P	Socket	Pin	12
MA7RAP1701*	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	P	Socket	Pin	13
MA7RAP1702*	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	P	Socket	Pin	14

↑ Contacts supplied separately see Chart 1 page 182

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266

Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

### Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	15
MA6CG-S2	Cord grip	7.5-11.0mm	15
MA6CG-S3	Cord grip	11.0-15.0mm	15
MA4FSR-A8.5*	Flex Grip™ backshell	7.5-8.5mm	16
MA4FSR-A10.5*	Flex Grip™ backshell	9.5-10.5mm	16
MA4FSR-A12.8*	Flex Grip™ backshell	11.5-12.8mm	16

\*Must be potted to achieve IP67 ratings.



### CHART 1

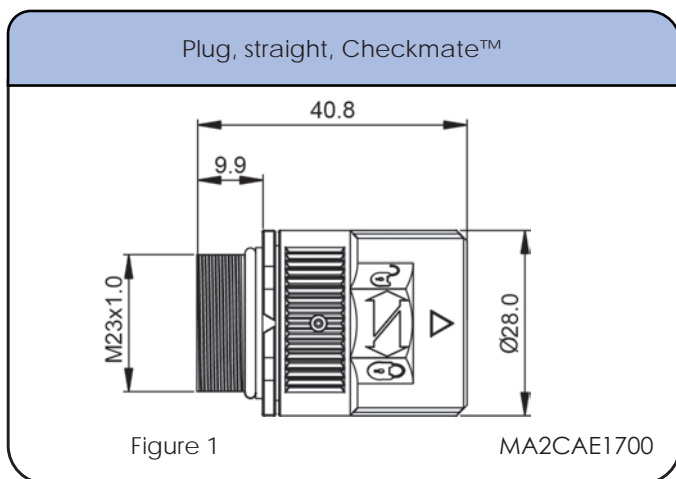
### Crimp Contacts, Machined

Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold

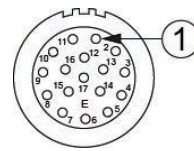
Machined Contacts

### Checkmate™ Dimensions Straight Plug/ Plug Kits

See Chart 1 for contacts options





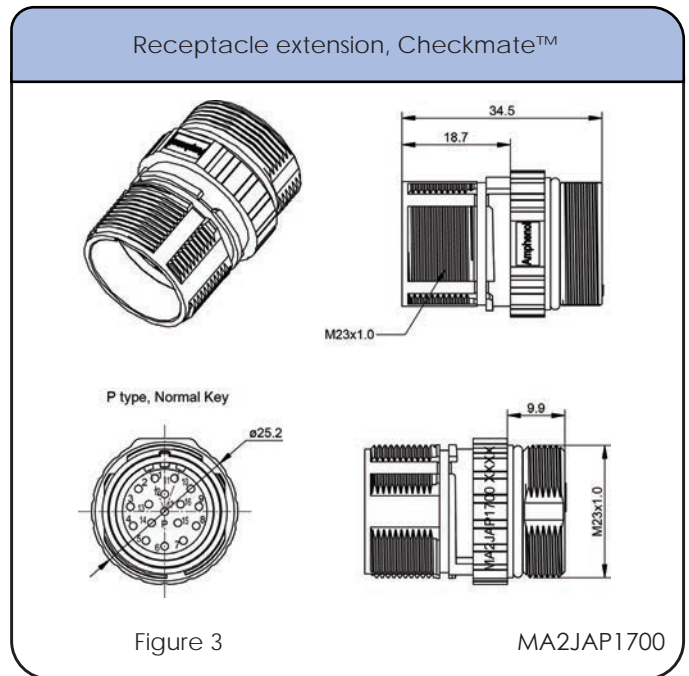
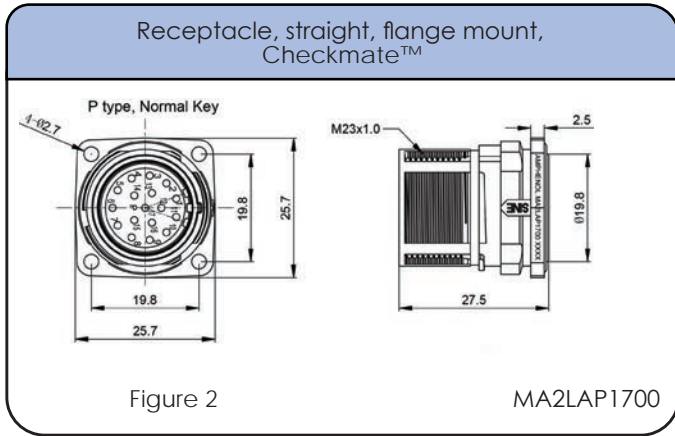


17 POSITIONS  
9A / 125V  
E type

Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

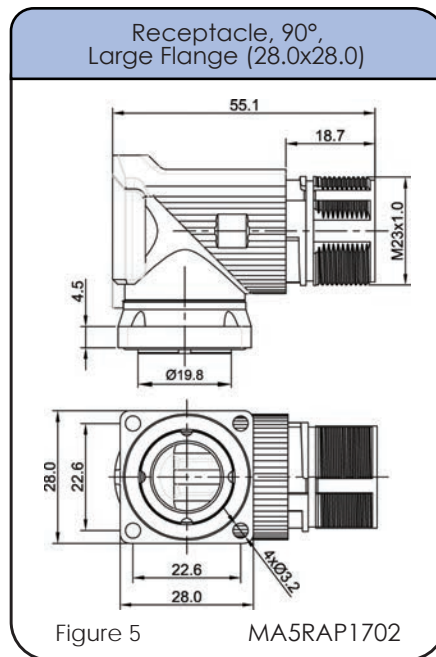
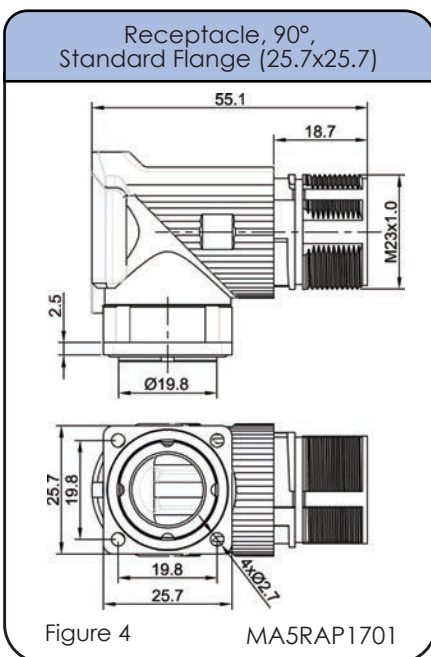
## Checkmate™ Dimensions Receptacles

See Chart 1 for contacts options



## Checkmate™ Dimensions 90° Receptacles

See Chart 1 for contacts options



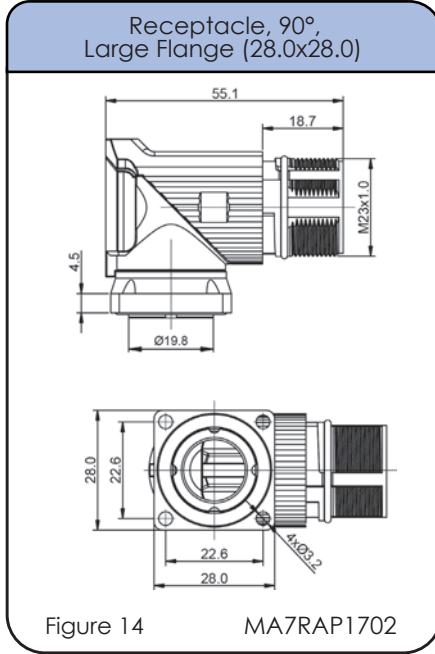
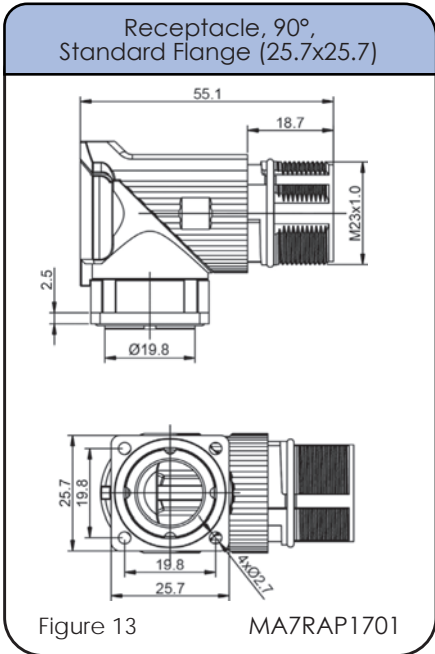
Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



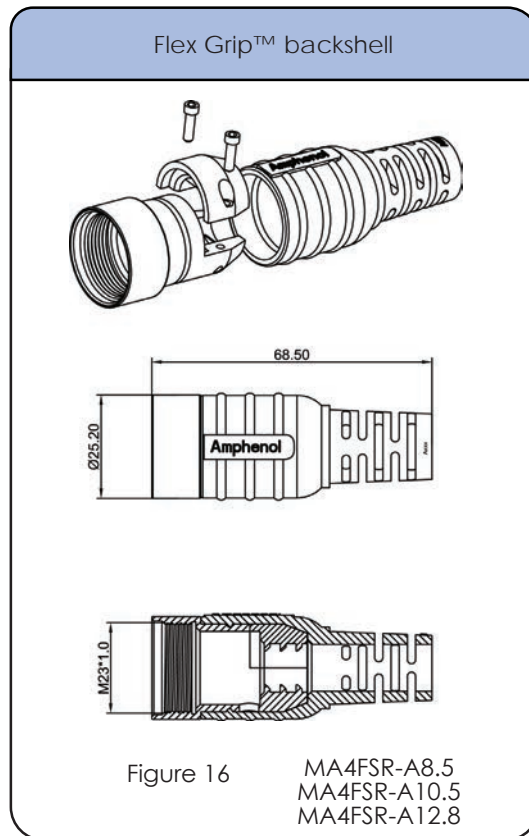
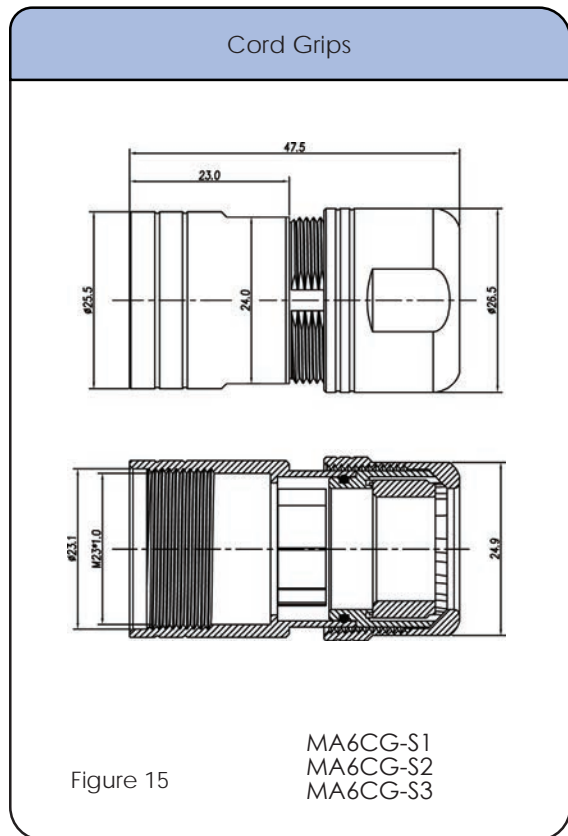


Style: E type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

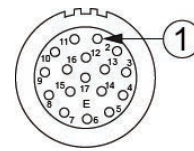
Threaded Dimensions 90° Rotatable Receptacles  
 See Chart 1 for contacts options



Dimensions Cord Grips / Backshells



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



**17 POSITIONS**  
**9A / 125V**  
**E type**

**Style: E type Plug**    **Number of Contacts: 17**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)**

### Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>	<p>Dust Cap</p>  <p>P29687</p>	<p>Dust Cap for Plug, Checkmate™</p>  <p>P31662</p>
<p>Dust Cap for Plug, Threaded</p>  <p>P31660</p>	<p>* The universal positioner is not included with the crimp tools and must be ordered separately.</p>	

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

# Connector Solutions M23 Standard Series

STEP 1  
Choose Plug

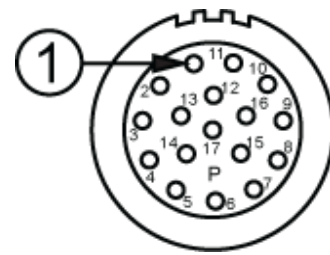


Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.* Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 16 for connector configurations

STEP 2  
Choose Receptacle



STEP 3  
Choose Backshell/Cord Grip



## Plugs



MA1CAP1700



MA1EAP1700



MA2CAP1700

## Receptacles



MA1LAE1700



MA7RAE1701  
MA7RAE1702



MA1JAE1700



MA3TNE1700-S1  
MA3TNE1700-S2  
MA3TNE1700-S3



MA2LAE1700



MA5RAE1701  
MA5RAE1702



MA2JAE1700

## Cord Grips



MA6CG-S1  
MA6CG-S2  
MA6CG-S3

## FlexGrip™ Backshell System



MA4FSR-A8.5  
MA4FSR-A10.5  
MA4FSR-A12.8

more about FlexGrip™ on page 282

**BULK CABLE starts on page 23**

## Receptacle Kits



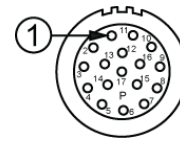
MA1LAE1700-KIT  
MA1LAE1700S-KIT



MA2LAE1700-KIT  
MA2LAE1700S-KIT

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 190



**17 POSITIONS**  
**9A / 125V**  
**P type**

**Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)**



### Checkmate™ Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA2CAP1700	Plug, straight, <b>Checkmate™</b>	P	Pin	Socket	1
MA2LAE1700	Receptacle, straight, flange mount, <b>Checkmate™</b>	E	Socket	Pin	2
MA2LAE1700-KIT	Receptacle kit, straight, flange mount, <b>Checkmate™</b>	E		Pin	2
MA2LAE1700S-KIT	Receptacle kit, straight, flange mount, <b>Checkmate™</b>	E	Socket		2
MA2JAE1700	Receptacle extension, <b>Checkmate™</b>	E	Socket	Pin	3
MA5RAE1701*	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	E	Socket	Pin	4
MA5RAE1702*	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	E	Socket	Pin	5
↑ Contacts supplied separately see Chart 1 page 190					

CONNECTOR SOLUTIONS

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA1CAP1700	Plug, straight, threaded	P	Pin	Socket	6
MA1EAP1700	Plug, 90° rotatable threaded	P	Pin	Socket	7
MA1LAE1700	Receptacle, straight, threaded, flange mount	E	Socket	Pin	8
MA1LAE1700-KIT	Receptacle kit, straight, threaded. Contacts included	E		Pin	8
MA1LAE1700S-KIT	Receptacle kit, straight, threaded. Contacts included	E	Socket		8
MA3TNE1700-S1	Receptacle, bulkhead, threaded, 4.5-7.5mm	E	Socket	Pin	9
MA3TNE1700-S2	Receptacle, bulkhead, threaded, 7.5-11mm	E	Socket	Pin	10
MA3TNE1700-S3	Receptacle, bulkhead, threaded, 11.0-15mm	E	Socket	Pin	11
MA1JAE1700	Receptacle extension, threaded	E	Socket	Pin	12
MA7RAE1701*	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	E	Socket	Pin	13
MA7RAE1702*	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	E	Socket	Pin	14
↑ Contacts supplied separately see Chart 1 page 190					

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266

Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

### Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord grip	4.5-7.5mm	15
MA6CG-S2	Cord grip	7.5-11.0mm	15
MA6CG-S3	Cord grip	11.0-15.0mm	15
MA4FSR-A8.5*	Flex Grip™ backshell	7.5-8.5mm	16
MA4FSR-A10.5*	Flex Grip™ backshell	9.5-10.5mm	16
MA4FSR-A12.8*	Flex Grip™ backshell	11.5-12.8mm	16

\*Must be potted to achieve IP67 ratings.

### Contacts



Machined Contacts

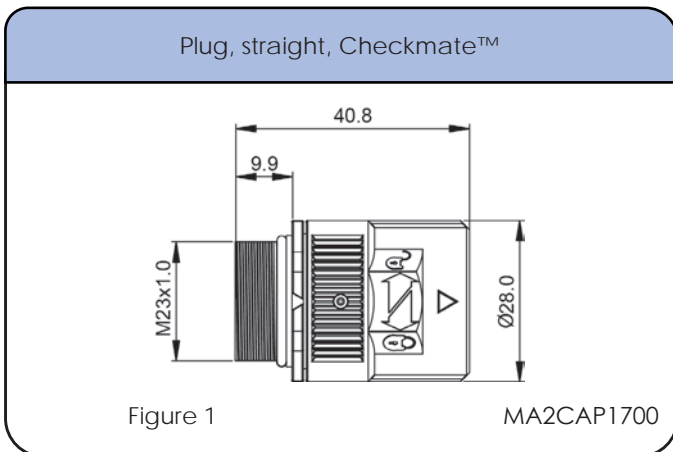
#### CHART 1

#### Crimp Contacts, Machined

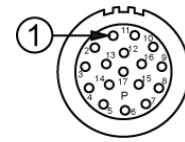
Part Number	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000035	Pin	22-18	0.37 - 0.75	Gold
SC000146	Pin	28-24	0.10 - 0.25	Gold
SC000044	Socket	22-18	0.37 - 0.75	Gold
SC000030	Socket	28-24	0.10 - 0.25	Gold

### Checkmate™ Dimensions Straight Plug/ Plug Kits

See Chart 1 for contacts options





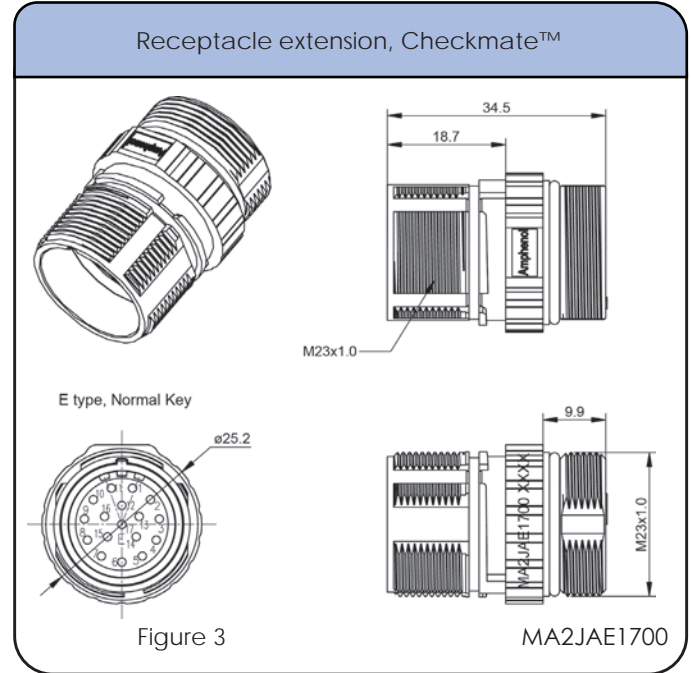
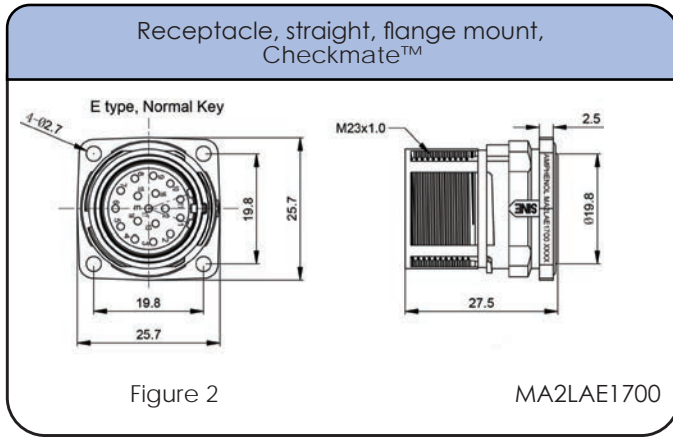


17 POSITIONS  
9A / 125V  
P type

Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

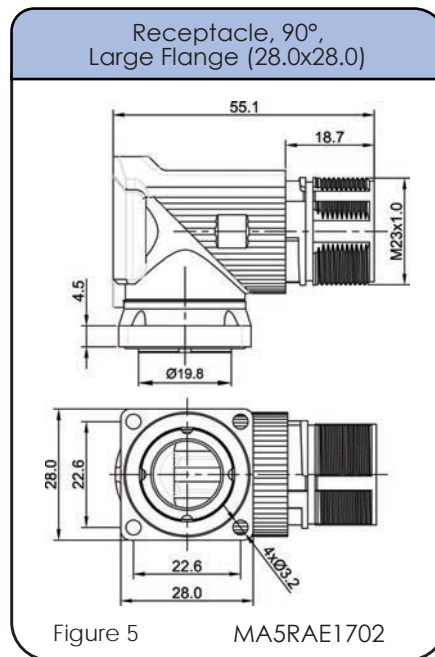
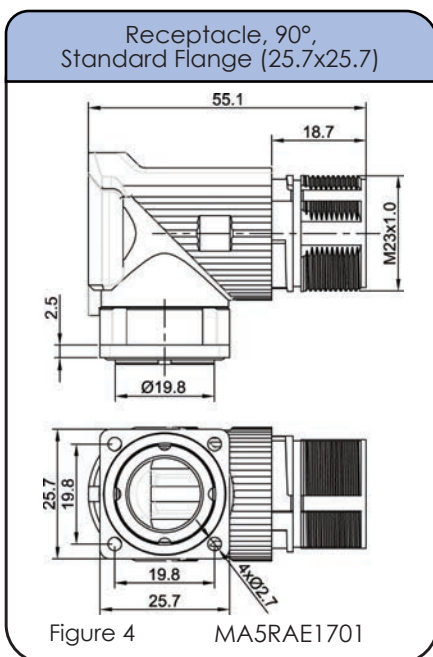
## Checkmate™ Dimensions Receptacles

See Chart 1 for contacts options



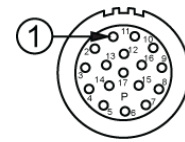
## Checkmate™ Dimensions 90° Receptacles

See Chart 1 for contacts options



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



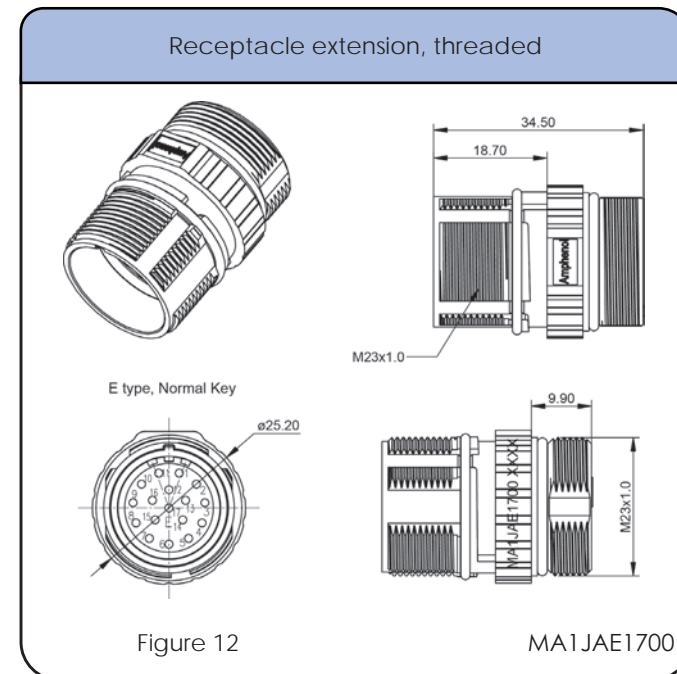
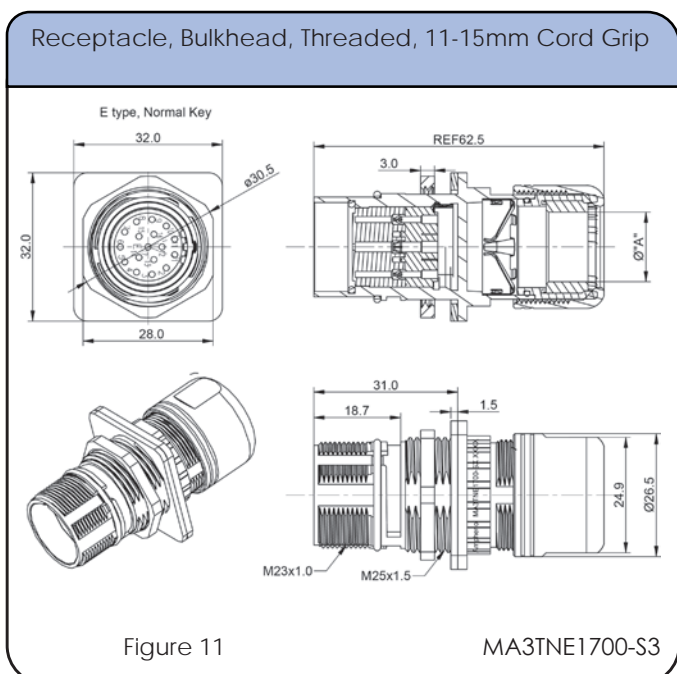
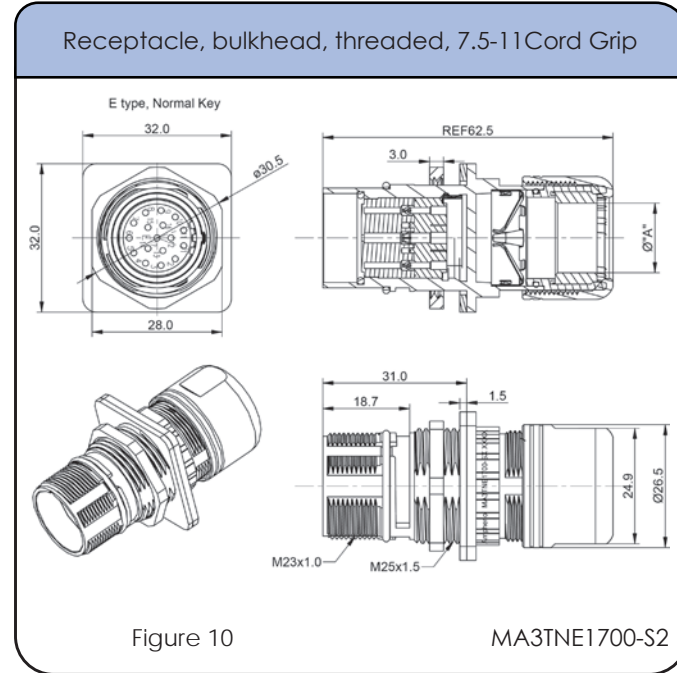
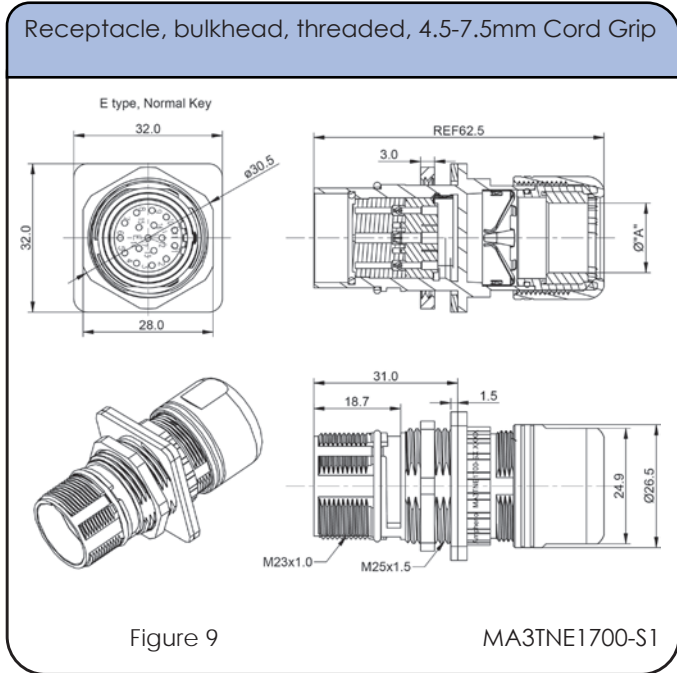


17 POSITIONS  
9A / 125V  
P type

Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

### Threaded Dimensions Bulkhead Receptacles / Receptacle Extension

See Chart 1 for contacts options

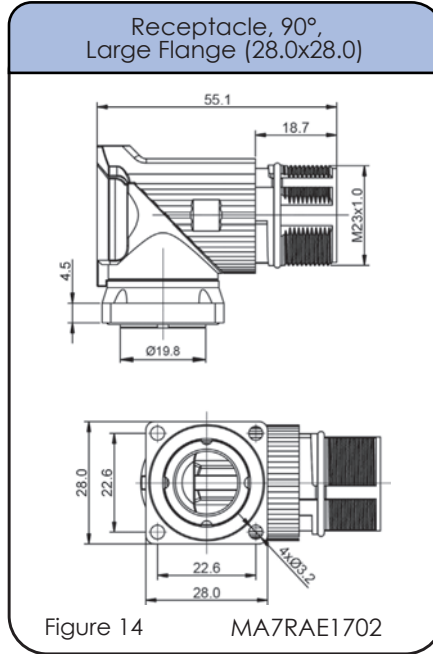
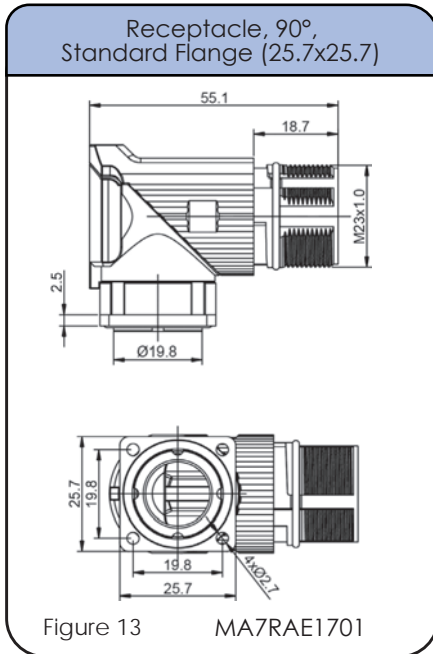


Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

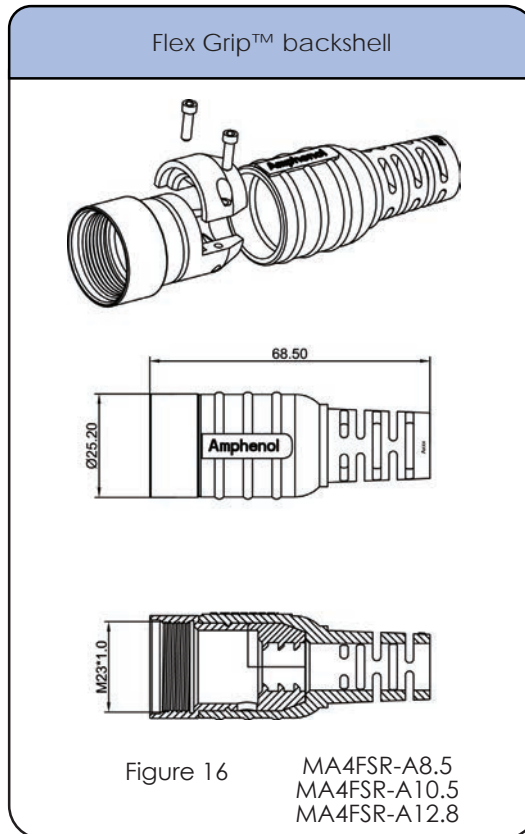
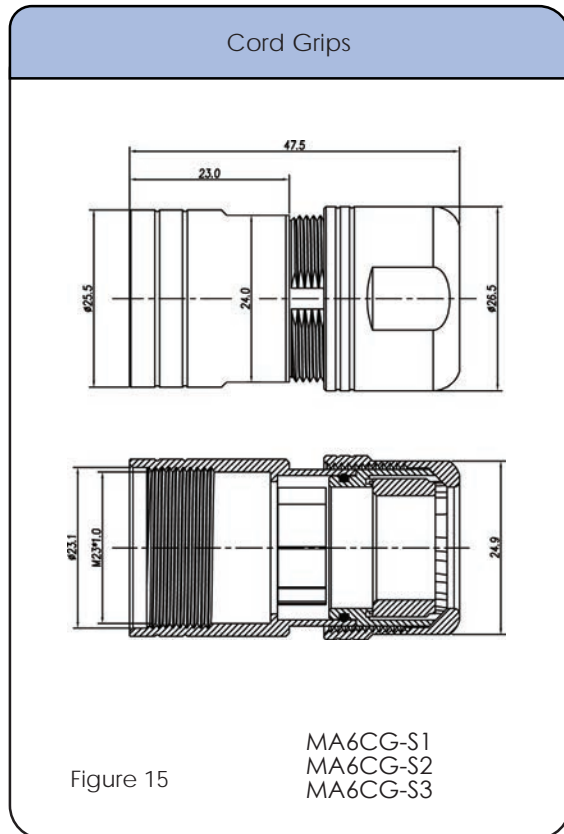
Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

### Threaded Dimensions 90° Rotatable Receptacles

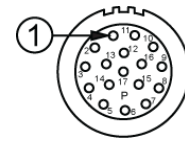
See Chart 1 for contacts options



### Dimensions Cord Grips / Backshells



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



17 POSITIONS  
9A / 125V  
P type

Style: P type Plug    Number of Contacts: 17    Contact Size: 1.0mm  
Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10 mm<sup>2</sup>)

## Tools & Accessories

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



AFM8

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire range 12-26AWG



AF8

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
Wire range 20-32AWG



WA22

Universal positioner is used with crimp tools AFM8 and WA22.  
Wire range 20-32AWG



SK2-2

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG



UH2-5

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*.  
Wire range 12-26AWG



WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Dust Cap for Receptacle



P29687

Dust Cap for Plug, Checkmate™



P31662

Dust Cap for Plug, Threaded



P31660

\* The universal positioner is not included with the crimp tools and must be ordered separately.

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

# Connector Solutions M23 Standard Series

STEP 1  
Choose Plug

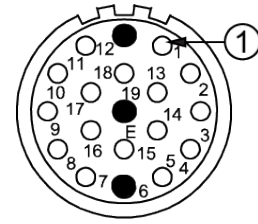


Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.* Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 199 for connector configurations

STEP 2  
Choose Receptacle



STEP 3  
Choose Backshell/Cord Grip



## Plugs



MA1CAE1900



MA1EAE1900



MA2CAE1900

## Receptacles



MA1LAP1900



MA1JAP1900



MA2LAP1900



MA2JAP1900



MA7RAP1901  
MA7RAP1902



MA3TNE1900-S1  
MA3TNE1900-S2  
MA3TNE1900-S3



MA5RAP1901  
MA5RAP1901

## Cord Grips



MA6CG-S1  
MA6CG-S2  
MA6CG-S3

## FlexGrip™ Backshell System



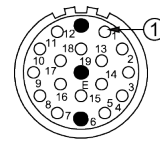
MA4FSR-A8.5  
MA4FSR-A10.5  
MA4FSR-A12.8

more about FlexGrip™ on page 282

**BULK CABLE**  
starts on  
page 23

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 198



**19 POSITIONS**  
**7A / 63V**  
**E type**

**Style: E type Plug    Number of Contacts: 19    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 to 1.0 mm<sup>2</sup>)**



### Checkmate™ Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA2CAE1900	Plug, straight, <b>Checkmate™</b>	E	Pin	Socket	1
MA2LAP1900	Receptacle, straight, flange mount, <b>Checkmate™</b>	P	Socket	Pin	2
MA2JAP1900	Receptacle extension, straight <b>Checkmate™</b>	P	Socket	Pin	3
MA5RAP1901*	Receptacle, 90° rotatable, Checkmate™ Standard Flange (25.7x25.7)	E	Socket	Pin	4
MA5RAP1902*	Receptacle, 90° rotatable, Checkmate™ Large Flange (28.0x28.0)	E	Socket	Pin	5
↑ Contacts supplied separately see Chart 1 page 198					

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA1CAE1900	Plug, straight, threaded	E	Pin	Socket	6
MA1EAE1900	Plug, 90° rotatable, threaded	E	Pin	Socket	7
MA1LAP1900	Receptacle, flange mount, threaded	P	Socket	Pin	8
MA3TNP1900-S1	Receptacle, bulkhead, threaded, 4.5-7.5mm	E	Socket	Pin	9
MA3TNP1900-S2	Receptacle, bulkhead, threaded, 7.5-11.0mm	E	Socket	Pin	10
MA3TNP1900-S3	Receptacle, bulkhead, threaded, 11.0-15.0mm	E	Socket	Pin	11
MA1JAP1900	Receptacle extension, straight, threaded	P	Socket	Pin	12
MA7RAP1901*	Receptacle, 90° rotatable, Threaded Standard Flange (25.7x25.7)	E	Socket	Pin	13
MA7RAP1902*	Receptacle, 90° rotatable, Threaded Large Flange (28.0x28.0)	E	Socket	Pin	14
↑ Contacts supplied separately see Chart 1 page 198					

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266

Style: E type Plug    Number of Contacts: 19    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 to 1.0 mm<sup>2</sup>)

## Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord Grip	4.5-7.5mm	15
MA6CG-S2	Cord Grip	7.5-11.0mm	15
MA6CG-S3	Cord Grip	11.0-15.0mm	15
MA4FSR-A8.5*	Flex Grip™ backshell	7.5-8.5mm	16
MA4FSR-A10.5*	Flex Grip™ backshell	9.5-10.5mm	16
MA4FSR-A12.8*	Flex Grip™ backshell	11.5-12.8mm	16

\*Must be potted to achieve IP67 ratings

## Contacts

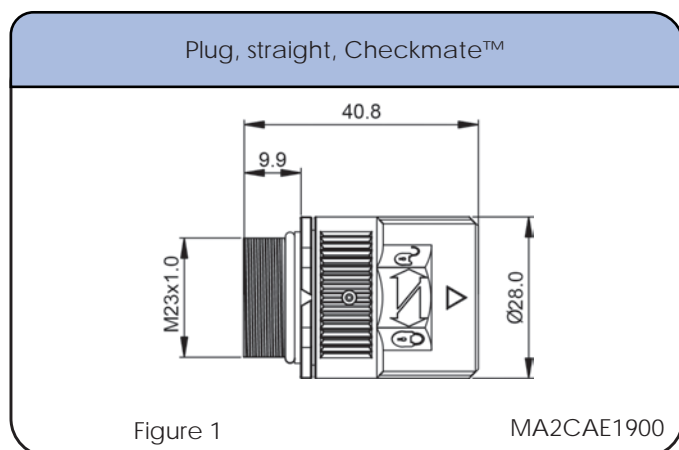


### CHART 1

### Crimp Contacts, Machined

Part Number	Pin/Socket	Size	AWG	mm <sup>2</sup>	Plating
SC000337	Pin	1.5	22-18	0.37 - 0.75 to 1.0	Gold
SC000338	Pin	1.0	22-18	0.37 - 0.75 to 1.0	Gold
SC000325	Socket	1.5	22-18	0.37 - 0.75 to 1.0	Gold
SC000326	Socket	1.0	22-18	0.37 - 0.75 to 1.0	Gold

## Dimensions Checkmate™ Plugs





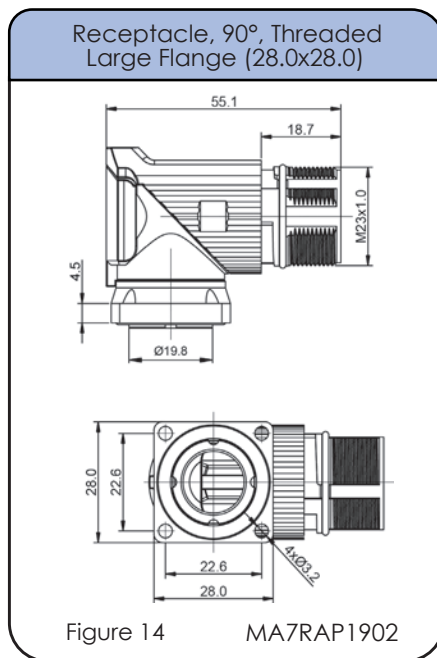
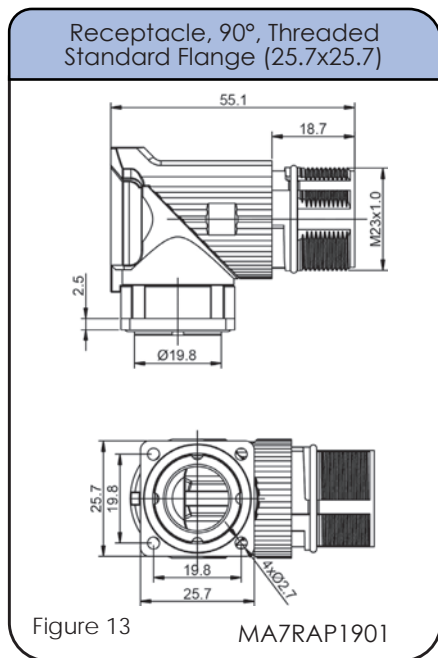




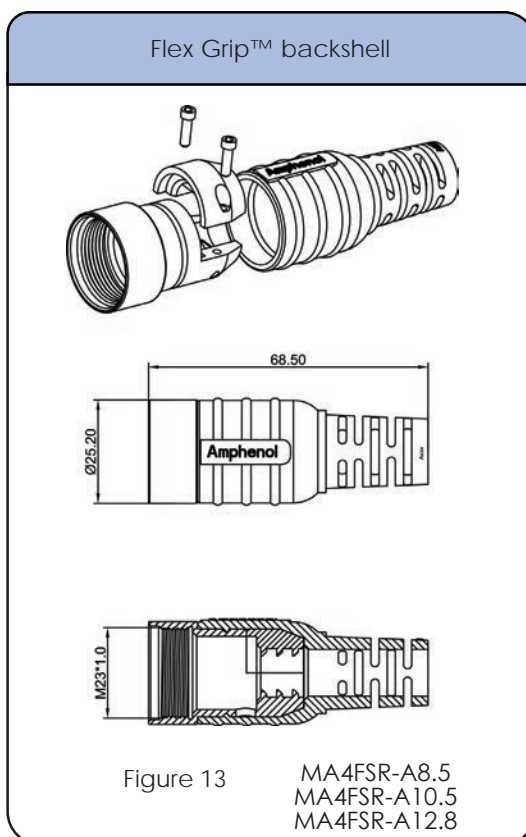
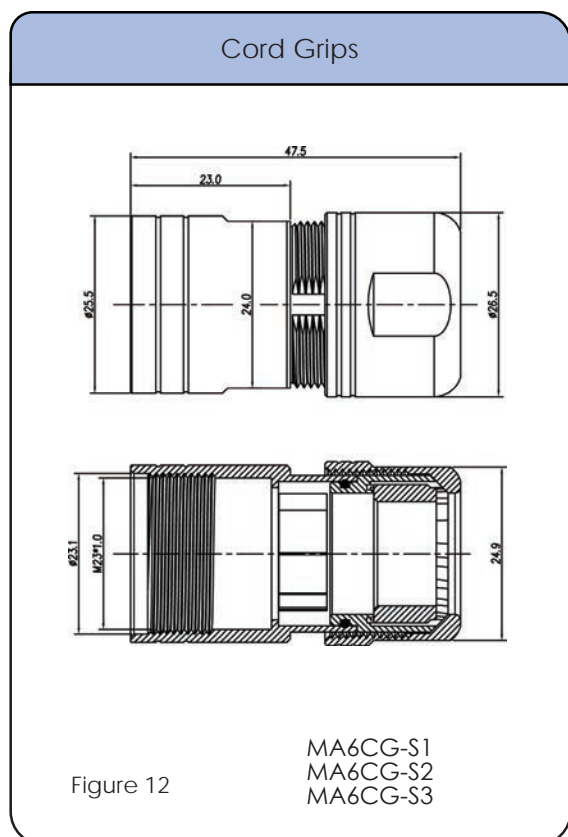


Style: E type Plug    Number of Contacts: 19    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 to 1.0 mm<sup>2</sup>)

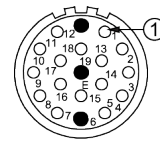
### Dimensions Threaded 90° Rotatable Receptacle



### Dimensions Cord Grips / Backshells












Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



**19 POSITIONS**  
**7A / 63V**  
**E type**

**Style: E type Plug    Number of Contacts: 19    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 to 1.0 mm<sup>2</sup>)**

## Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Dust Cap</p>  <p>P29687</p>	<p>Dust Cap for Plug, Checkmate™</p>  <p>P31662</p>	<p>Dust Cap for Plug, Threaded</p>  <p>P31660</p>

\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Standard Series

STEP 1  
Choose Plug

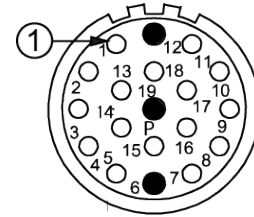


Standard connector parts mate "E" Plugs with "P" Receptacles, Mating parts use opposite contact types. *example: plug with pin contacts mates with a receptacle using socket contacts.*  
Other key code options available not listed here. Please call customer service for assistance when ordering F,G,R,S. See page 16 for connector configurations

STEP 2  
Choose Receptacle



STEP 3  
Choose Backshell/Cord Grip



## Plugs



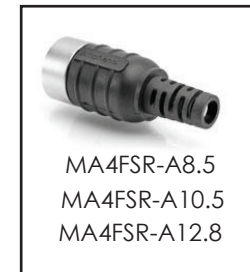
## Receptacles



## Cord Grips



## FlexGrip™ Backshell System



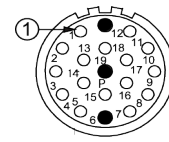
more about FlexGrip™ on page 282

**BULK CABLE starts on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 206

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266



**19 POSITIONS**  
**7A / 63V**  
**P type**

**Style: P type Plug    Number of Contacts: 19    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 to 1.0 mm<sup>2</sup>)**



### Checkmate™ Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA2CAP1900	Plug, straight, <b>Checkmate™</b>	P	Pin	Socket	1
MA2LAE1900	Receptacle, straight, flange mount, <b>Checkmate™</b>	E	Socket	Pin	2
MA2JAE1900	Receptacle extension, straight <b>Checkmate™</b>	P	Socket	Pin	3
MA5RAE1901*	Receptacle, 90° rotatable, Checkmate™ Standard Flange (25.7x25.7)	E	Socket	Pin	4
MA5RAE1902*	Receptacle, 90° rotatable, Checkmate™ Large Flange (28.0x28.0)	E	Socket	Pin	5
↑ Contacts supplied separately see Chart 1 page 206					

CONNECTOR SOLUTIONS

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Style	Contact Type male = pin mates with female = socket ↓Mating Parts↓		Figure Drawings
MA1CAP1900	Plug, straight, threaded	P	Pin	Socket	6
MA1EAP1900	Plug, 90° rotatable, threaded	P	Pin	Socket	7
MA1LAE1900	Receptacle, straight, flange mount, threaded	E	Socket	Pin	8
MA3TNE1900-S1	Receptacle, bulkhead, threaded, 4.5-7.5mm	E	Socket	Pin	9
MA3TNE1900-S2	Receptacle, bulkhead, threaded, 7.5-11.0mm	E	Socket	Pin	10
MA3TNE1900-S3	Receptacle, bulkhead, threaded, 11.0-15.0mm	E	Socket	Pin	11
MA1JAE1900	Receptacle extension, straight, threaded	P	Socket	Pin	9
MA7RAE1901*	Receptacle, 90° rotatable, Threaded Standard Flange (25.7x25.7)	E	Socket	Pin	10
MA7RAE1902*	Receptacle, 90° rotatable, Threaded Large Flange (28.0x28.0)	E	Socket	Pin	11
↑ Contacts supplied separately see Chart 1 page 206					

Style: P type Plug    Number of Contacts: 19    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 to 1.0 mm<sup>2</sup>)

### Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MA6CG-S1	Cord Grip	4.5-7.5mm	15
MA6CG-S2	Cord Grip	7.5-11.0mm	15
MA6CG-S3	Cord Grip	11.0-15.0mm	15
MA4FSR-A8.5*	Flex Grip™ backshell	7.5-8.5mm	16
MA4FSR-A10.5*	Flex Grip™ backshell	9.5-10.5mm	16
MA4FSR-A12.8*	Flex Grip™ backshell	11.5-12.8mm	16

\*Must be reported to achieve IP67 ratings.

### Contacts

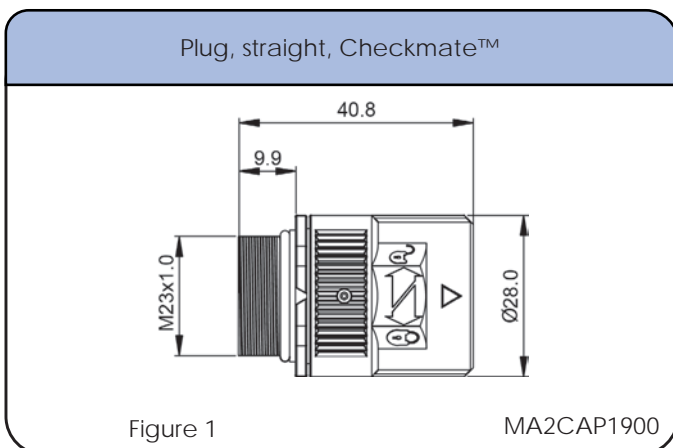


#### CHART 1

#### Crimp Contacts, Machined

Part Number	Pln/Socket	Size	AWG	mm <sup>2</sup>	Plating
SC000337	Pin	1.5	22-18	0.37 - 0.75 to 1.0	Gold
SC000338	Pin	1.0	22-18	0.37 - 0.75 to 1.0	Gold
SC000325	Socket	1.5	22-18	0.37 - 0.75 to 1.0	Gold
SC000326	Socket	1.0	22-18	0.37 - 0.75 to 1.0	Gold

### Dimensions Checkmate™ Plugs

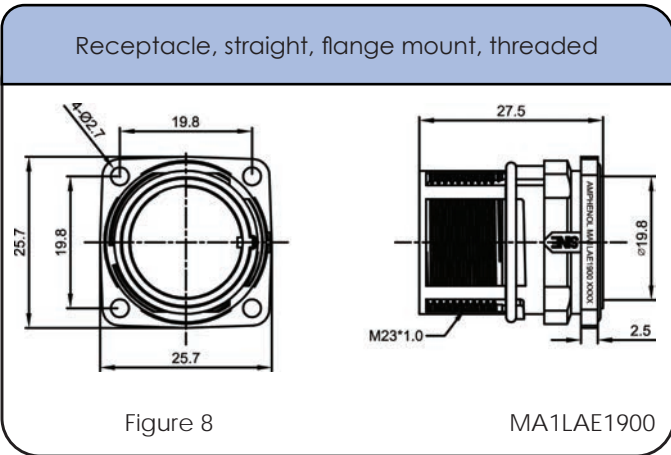
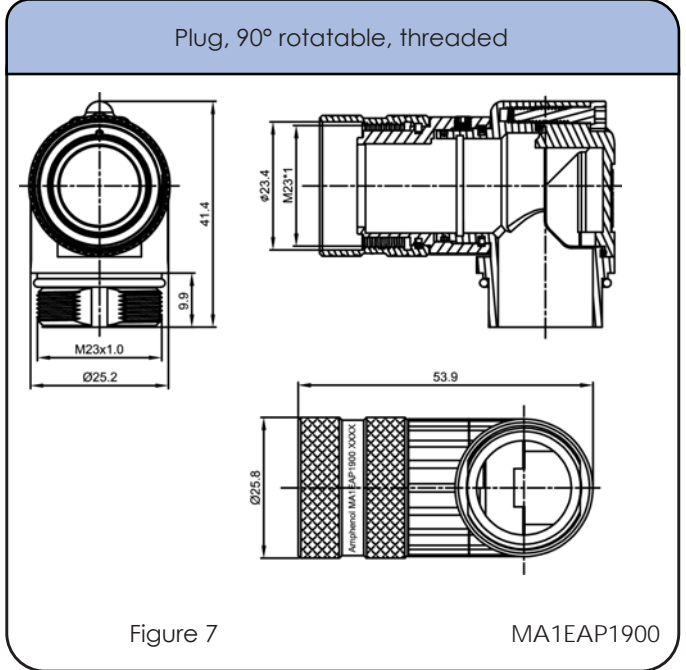
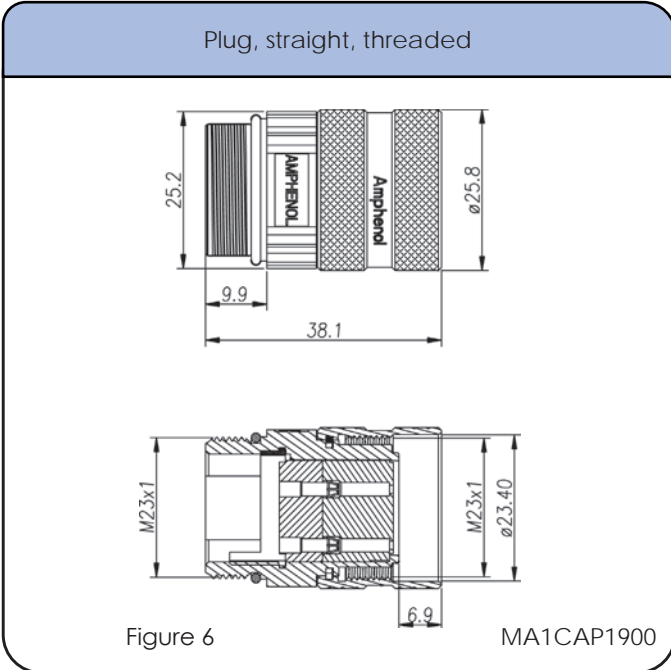




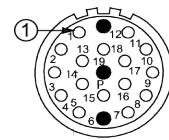


Style: P type Plug    Number of Contacts: 19    Contact Size: 1.0mm Sealing:  
 IP66/67    AWG: 22-18 (0.37 - 0.75 to 1.0 mm<sup>2</sup>)

### Dimensions Threaded Plugs / Receptacles



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

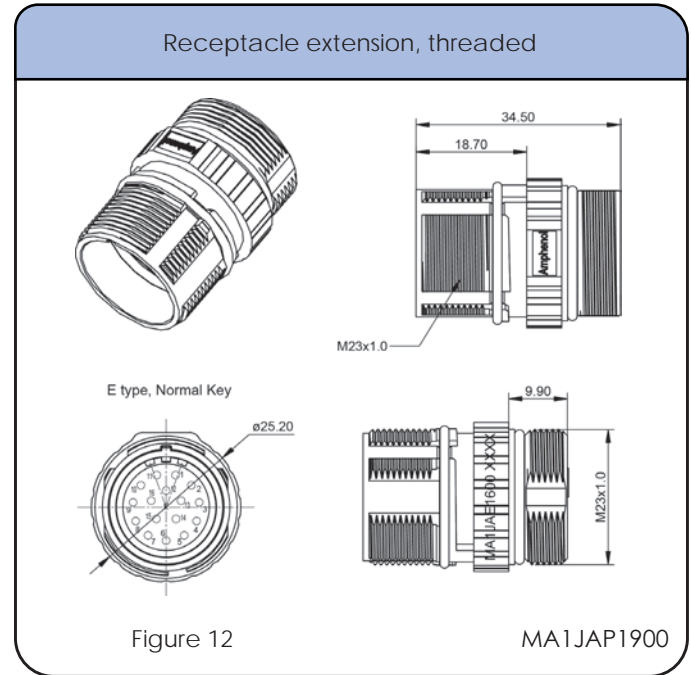
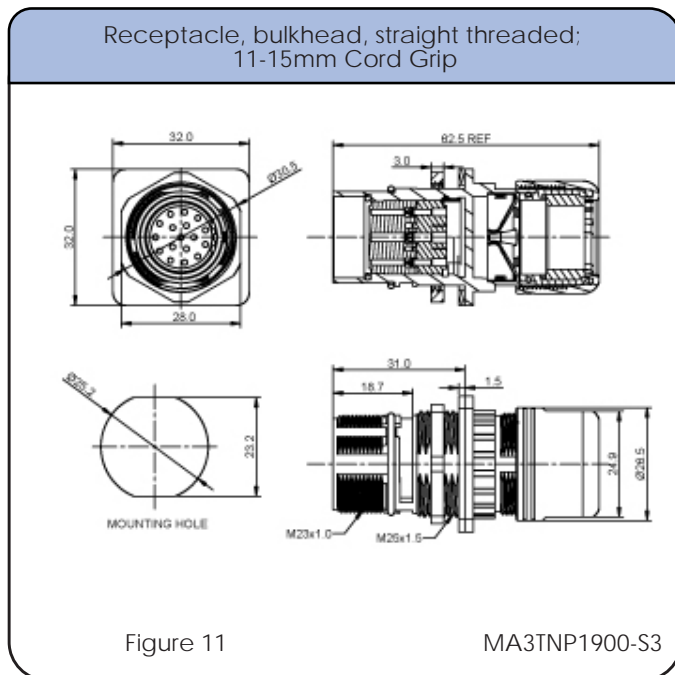
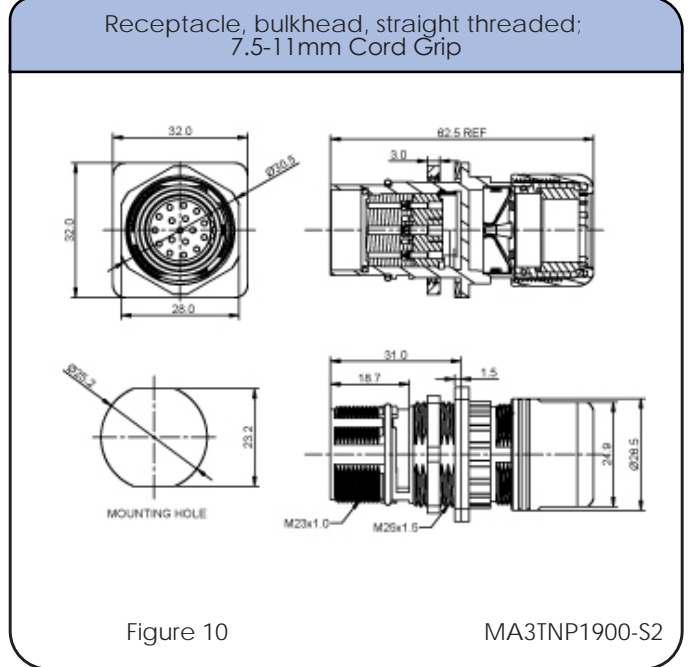
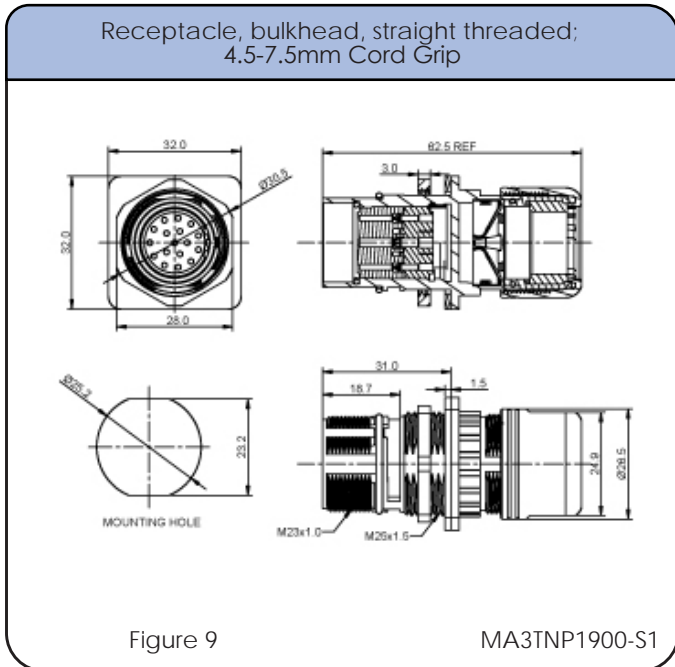


**19 POSITIONS**  
**7A / 63V**  
**P type**

**Style: P type Plug    Number of Contacts: 19    Contact Size: 1.0mm**  
**Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 to 1.0 mm<sup>2</sup>)**

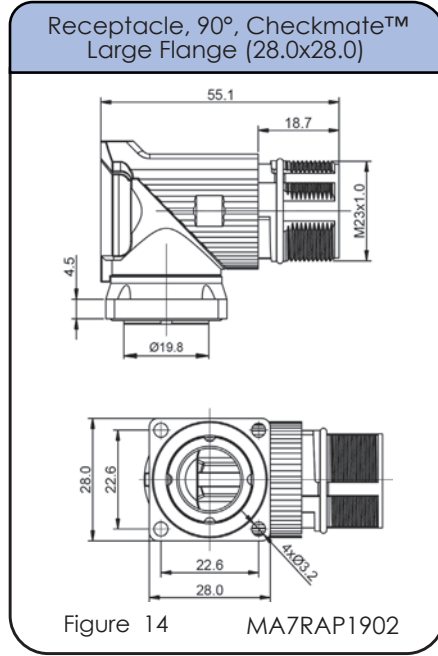
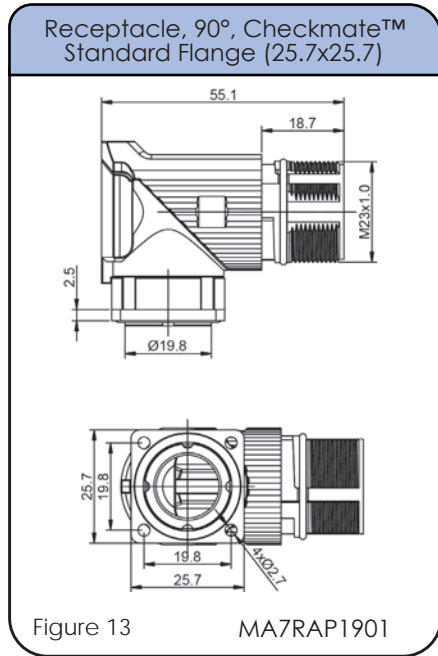
**Threaded Dimensions Bulkhead Receptacles / Receptacle Extension**

CONNECTOR SOLUTIONS

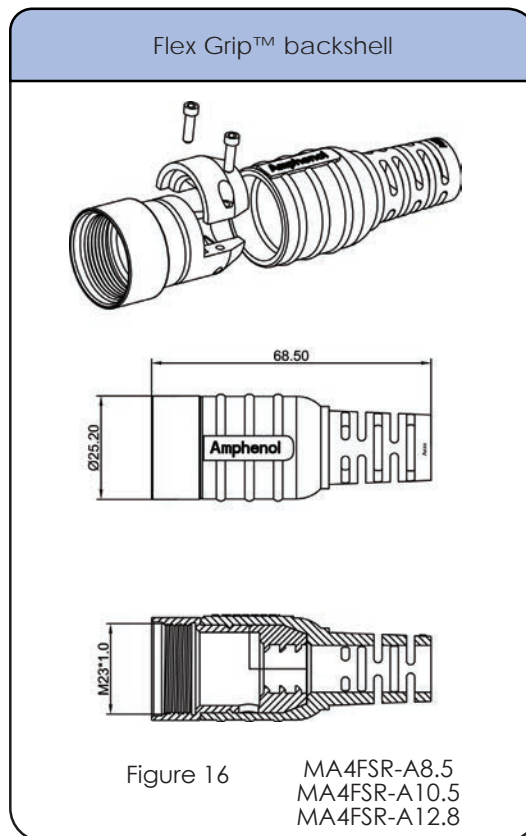
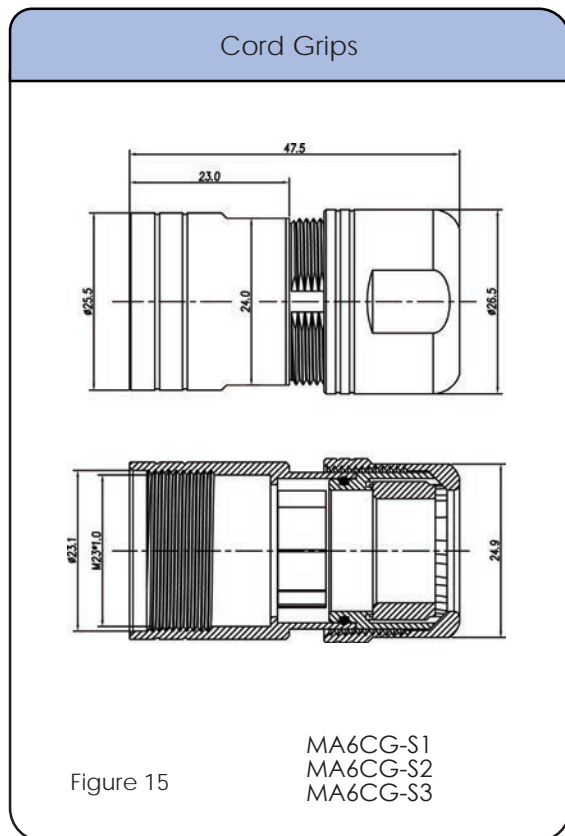


Style: P type Plug    Number of Contacts: 19    Contact Size: 1.0mm  
 Sealing: IP66/67    AWG: 22-18 (0.37 - 0.75 to 1.0 mm<sup>2</sup>)

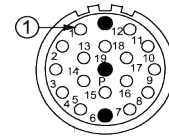
### Dimensions Threaded 90° Receptacles



### Dimensions Cord Grips / Backshells



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)












**19 POSITIONS**  
**7A / 63V**  
**P type**

**Style: P type Plug**    **Number of Contacts: 19**    **Contact Size: 1.0mm**  
**Sealing: IP66/67**    **AWG: 22-18 (0.37 - 0.75 to 1.0 mm<sup>2</sup>)**

CONNECTOR SOLUTIONS

### Tools & Accessories

<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>AFM8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire range 12-26AWG</p>  <p>AF8</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire range 20-32AWG</p>  <p>WA22</p>
<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5*. Wire range 12-26AWG</p>  <p>WA27F</p>
<p>Dust Cap for Receptacles</p>  <p>P29687</p>	<p>Dust Cap for Plug, Threaded</p>  <p>P31660</p>	<p>Dust Cap for Plug, Checkmate™</p>  <p>P31662</p>

\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M23 Standard Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

STEP 3  
Choose Backshell/Cord Grip

See page 18 for connector configurations

## Plugs



MB1CKN0600



MB1EJN0600



MB1GJN0600



MB2CKN0600



MB2GJN0600

## Plug Connector Kits



MB1CKN0600-KIT

## Receptacles



MB1LLN0600



MB7RJN0601  
MB7RJN0602



MB1LKN0600



MB1JJN0600



MB3TNN0600-S1  
MB3TNN0600-S2  
MB3TNN0600-S3



MB2LLN0600



MB5RJN0601  
MB5RJN0602



MB2LKN0600



MB2JJN0600

## Receptacle Kits



MB1LLN0600-KIT



Checkmate™  
MB2LLN0600-KIT



## Cord Grips



MB6CG-S1  
MB6CG-S2  
MB6CG-S3

## FlexGrip™ Backshell System



MB4FSR-B10.3  
MB4FSR-B12.5  
MB4FSR-B14.5  
MB4FSR-B17

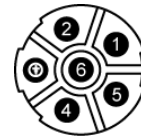
more about  
FlexGrip™  
on page 282

**BULK CABLE**  
starts on  
page 23

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 220

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266



6 POSITIONS  
28A / 630V

Number of Contacts: 6 Contact Size: 2.0mm  
Sealing: IP66/67 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

### Checkmate™ Connector Part Numbers



Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Contact Type male = pin female = socket	Figure Drawings
MB2CKN0600	Plug, straight, <b>Checkmate™</b>	Socket	1
MB2GJN0600	Plug, panel mount, <b>Checkmate™</b>	Socket	2
MB2LLN0600	Receptacle, straight flange mount, <b>Checkmate™</b>	Pin	3
MB2LLN0600-KIT	Receptacle kit, straight, <b>Checkmate™</b> . Contacts included	Pin	3
MB2LKN0600	Receptacle, straight, <b>Checkmate™</b>	Pin	4
MB2JJN0600	Receptacle extension, <b>Checkmate™</b>	Pin	5
↑ Contacts supplied separately see Chart 1 page 220			
MB5RJN0601*	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	Pin	6
MB5RJN0602*	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	Pin	7
↑ Contacts supplied separately see Chart 2 page 220			

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Contact Type male = pin female = socket	Figure Drawings
MB1CKN0600	Plug, straight, threaded coupling	Socket	8
MB1CKN0600-KIT	Plug kit, straight, threaded coupling. Contacts included.	Socket	8
MB1EJN0600	90° rotatable plug	Socket	9
MB1GJN0600	Plug, panel mount, threaded coupling	Socket	10
MB1LLN0600	Receptacle, straight, flange mount, threaded coupling	Pin	11
MB1LLN0600-KIT	Receptacle kit, straight, flange mount, threaded coupling Kit includes contacts	Pin	11
MB1LKN0600	Receptacle, straight, threaded coupling	Pin	12
MB3TNN0600-S1	Receptacle, bulkhead, threaded, 7.0-11.0mm cord grip	Pin	13
MB3TNN0600-S2	Receptacle, bulkhead, threaded, 11.0-14.5mm cord grip	Pin	14
MB3TNN0600-S3	Receptacle, bulkhead, threaded, 14.5-17.0mm cord grip	Pin	15
MB1JJN0600	Receptacle extension, threaded coupling	Pin	16
↑ Contacts supplied separately see Chart 1 page 220			
MB7RJN0601*	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	Pin	17
MB7RJN0602*	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	Pin	18
↑ Contacts supplied separately see Chart 2 page 220			

**Number of Contacts: 6    Contact Size: 2.0mm**  
**Sealing: IP66/67    AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)**

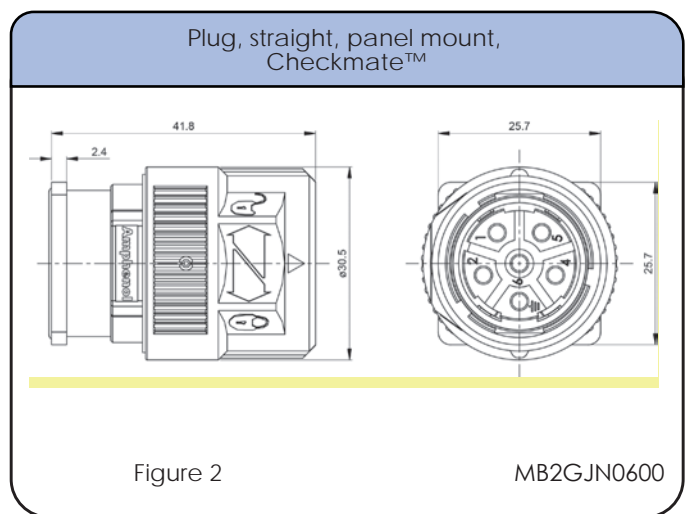
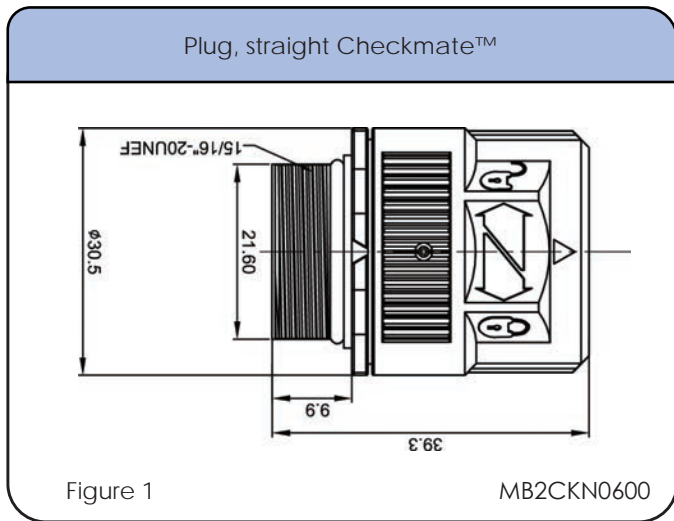
### Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MB6CG-S1	Cord grip	7.5-11mm	19
MB6CG-S2	Cord grip	11.0-14.5mm	19
MB6CG-S3	Cord grip	14.5-17mm	19
MB4FSR-B10.3*	Flex Grip™ backshell	9.5-10.3mm	20
MB4FSR-B12.5*	Flex Grip™ backshell	11.5-12.5mm	20
MB4FSR-B14.5*	Flex Grip™ backshell	13.5-14.5mm	20
MB4FSR-B17*	Flex Grip™ backshell	15.5-17mm	20

\*Must be potted to achieve IP67 ratings.

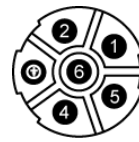
### Checkmate™ Dimensions Straight Plug/ Plug Kits/ Panel Mount

See [Chart 1](#) for contacts options



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



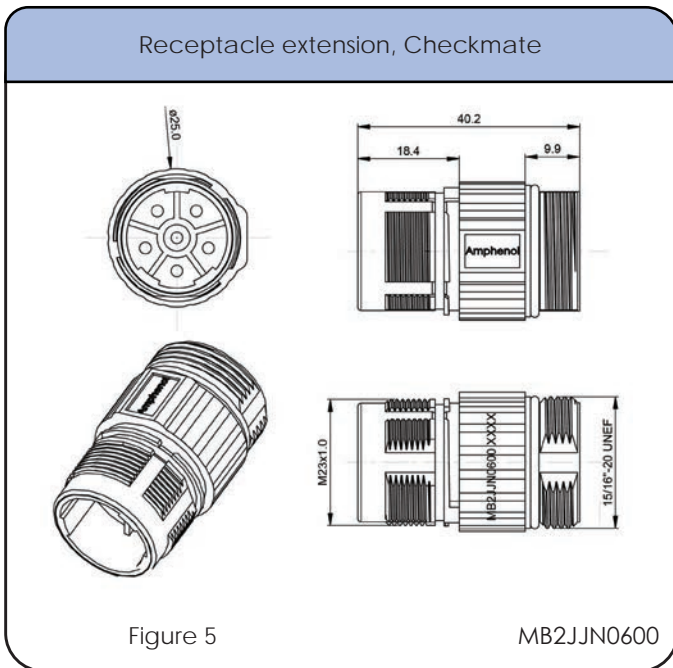
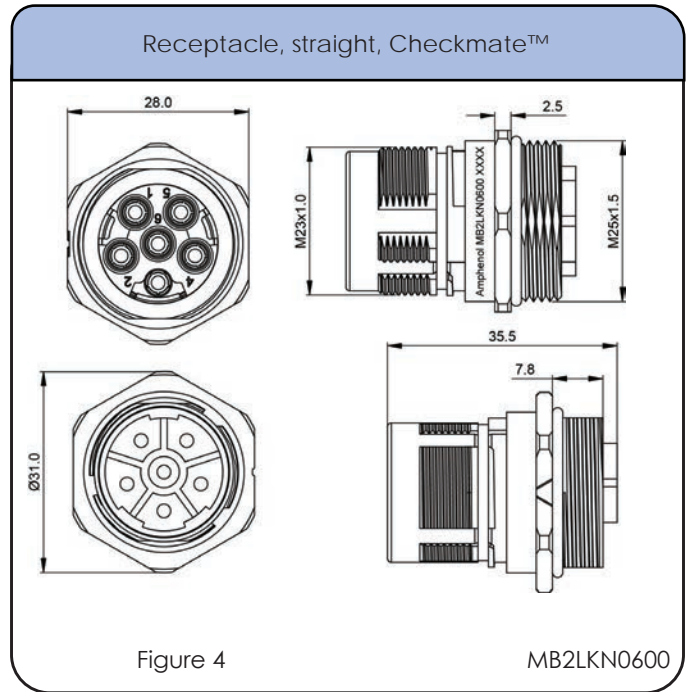
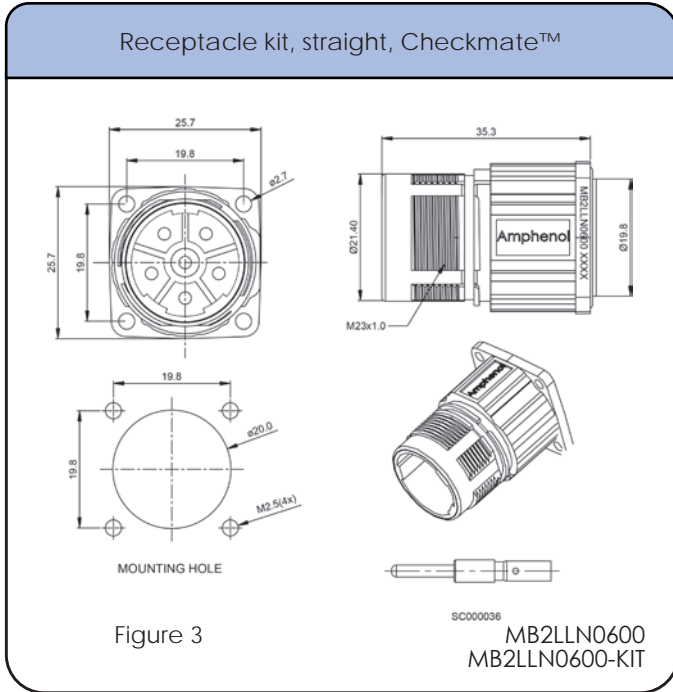


6 POSITIONS  
28A / 630V

Number of Contacts: 6 Contact Size: 2.0mm  
Sealing: IP66/67 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

## Checkmate™ Dimensions Straight Receptacles / Receptacles Extension

See Chart 1 for contacts options

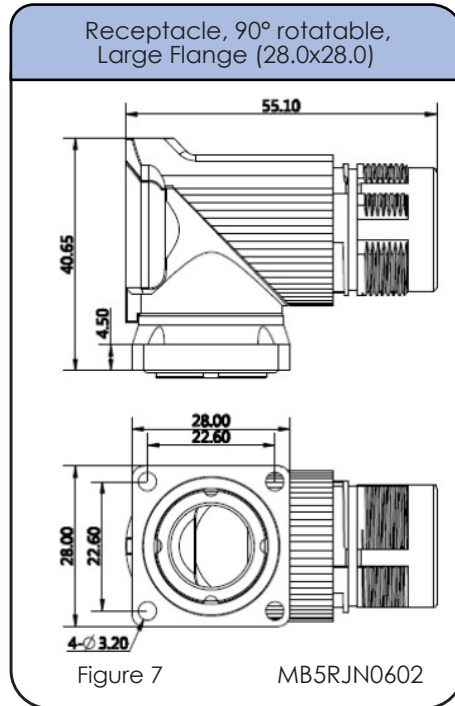
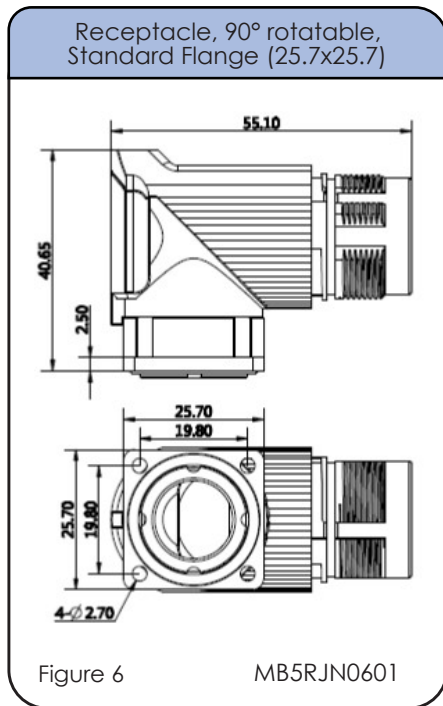


Complete daasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Number of Contacts: 6    Contact Size: 2.0mm  
 Sealing: IP66/67    AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

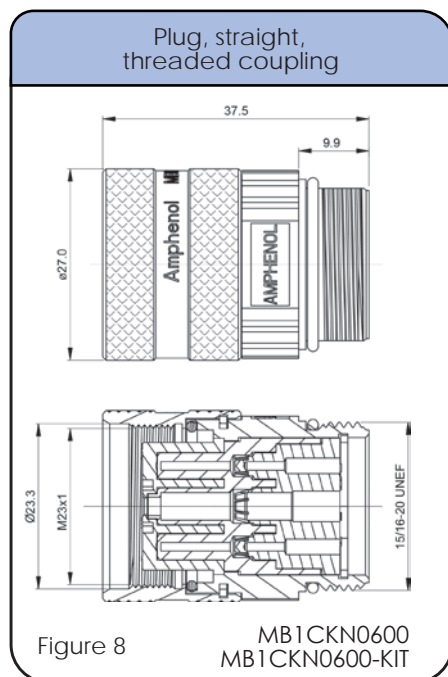
## Checkmate™ Dimensions 90° Receptacles

See Chart 2 for contacts options



## Threaded Dimensions Plugs/Plug Kit

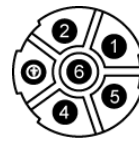
See Chart 1 for contacts options



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)





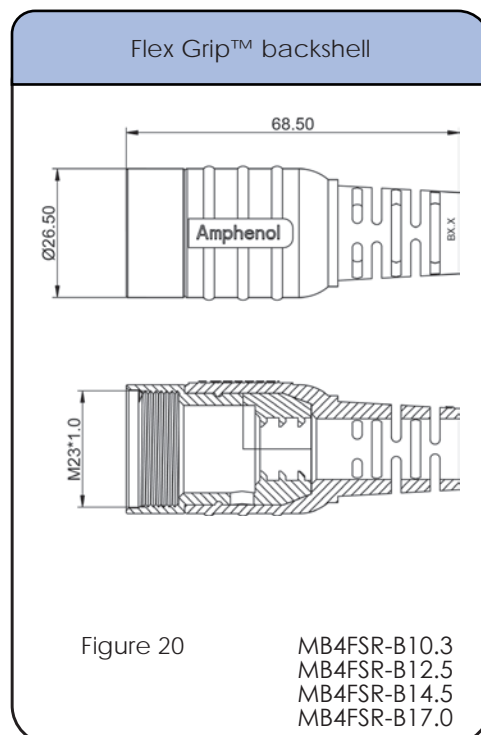
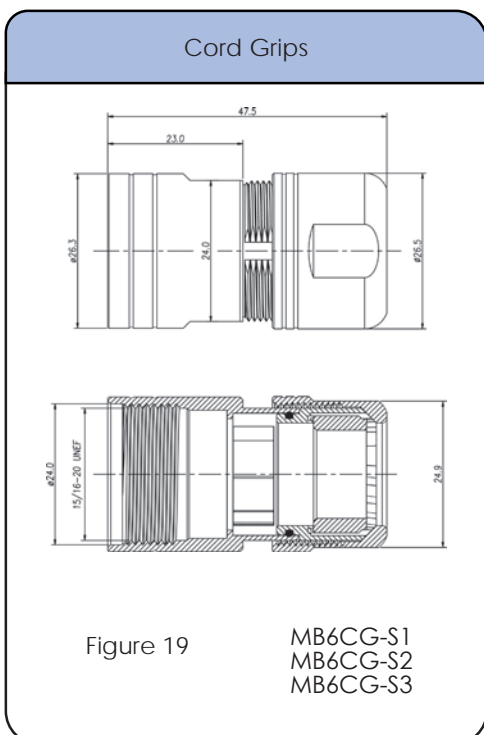
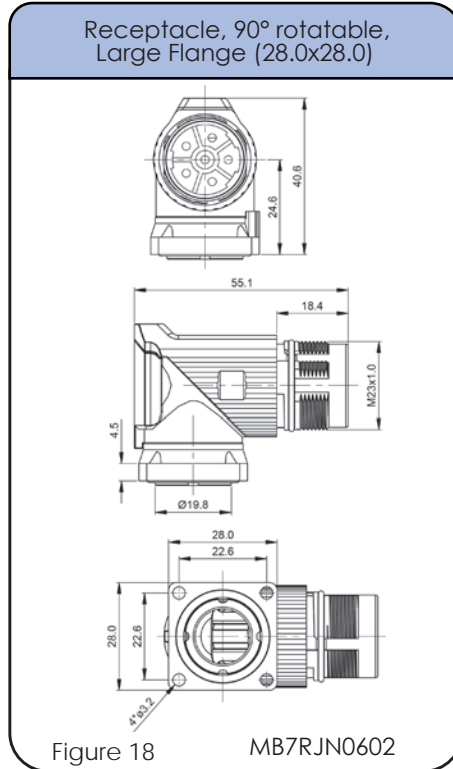
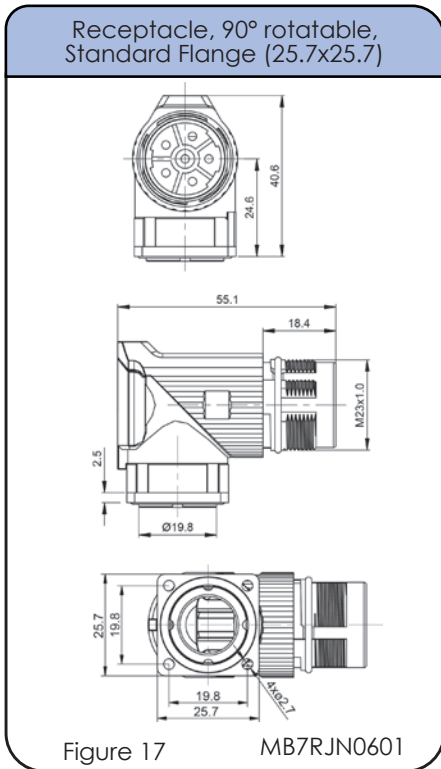


6 POSITIONS  
28A / 630V

Number of Contacts: 6    Contact Size: 2.0mm  
Sealing: IP66/67    AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

## Threaded Dimensions 90° Rotatable Receptacles / Dimensions Cord Grips / Backshells

See Chart 2 for contacts options for 90° Rotatable Receptacles



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Number of Contacts: 6    Contact Size: 2.0mm  
 Sealing: IP66/67    AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

## Contacts



Machined Contacts

### CHART 1

#### Crimp Contacts, Machined

For ALL Parts except those listed below in Chart 2

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000036	2.0mm	Pin	18-14	1.5 - 0.75	Gold
SC000045	2.0mm	Socket	18-14	1.5 - 0.75	Gold

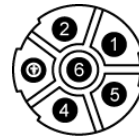
### CHART 2

#### Crimp Contacts, Machined

For parts: MB7RJN0601, MB7RJN0602, MB5RJN0601, MB5RJN0602

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000262	2.0mm	Pin	18-14	0.75 - 2.5	Gold
SC000260	2.0mm	Socket	20-14	2.5 - 0.5	Gold

Note: When 18 AWG wire is required use Elite Series plugs and 90° rotatable receptacles starting on page 105



6 POSITIONS  
28A / 630V

Number of Contacts: 6    Contact Size: 2.0mm  
Sealing: IP66/67    AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>)

## Tools & Accessories

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire Range 12-26AWG

AF8

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*. Wire Range 12-26AWG

WA27F

Extraction tool. Used for removal of 2.0mm contacts from inserts.

50-54931-2

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG

UH2-5

Dust Cap for Receptacle

P29687

Dust Cap for Plug, Threaded

P30663-06

Dust Cap for Plug, Checkmate™

P31661-06

\* The universal positioner is not included with the crimp tools and must be ordered separately.

\* The extraction tool is not required to remove contacts from the 90° Rotatable Receptacles

# Connector Solutions M23 Standard Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

STEP 3  
Choose Backshell/Cord Grip

See page 18 for connector configurations

## Plugs



MB1CKN0800



MB1EJN0800



MB1GJN0800



MB2CKN0800



MB2GJN0800

## Plug Connector Kits



MB1CKN0800-KIT

## Receptacles



MB1LKN0800



MB7RJN0801  
MB7RJN0802



MB1LLN0800



MB1JJN0800



MB3TNN0800-S1  
MB3TNN0800-S2  
MB3TNN0800-S3



MB2JJN0800



MB5RJN0801  
MB5RJN0802



MB2LLN0800



MB2LKN0800

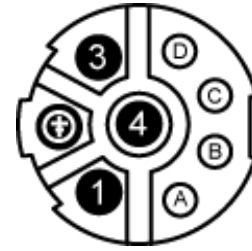
## Receptacle Kits



MB1LLN0800-KIT



Checkmate™  
MB2LLN0800-KIT



## Cord Grips



MB6CG-S1  
MB6CG-S2  
MB6CG-S3

## FlexGrip™ Backshell System



MB4FSR-B10.3  
MB4FSR-B12.5  
MB4FSR-B14.5  
MB4FSR-B17

more about  
FlexGrip™  
on page 282

**BULK CABLE**  
starts on  
page 23

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 230

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266





**8 (4+4) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**



### Checkmate™ Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Contact Type male = pin female = socket	Figure Drawings
MB2CKN0800	Plug, straight, <b>Checkmate™</b>	Socket	1
MB2GJN0800	Plug, straight, panel mount, <b>Checkmate™</b>	Socket	2
MB2LLN0800	Receptacle, straight, flange mount, <b>Checkmate™</b>	Pin	3
MB2LLN0800-KIT	Receptacle Kit, straight, <b>Checkmate™</b> . Contacts included.	Pin	3
MB2LKN0800	Receptacle, straight, M25, <b>Checkmate™</b>	Pin	4
MB2JJN0800	Receptacle extension, <b>Checkmate™</b>	Pin	5
↑ Contacts supplied separately see Chart 1 page 230			
MB5RJN0801*	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	Pin	6
MB5RJN0802*	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	Pin	7
↑ Contacts supplied separately see Chart 2 page 230			

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Contact Type male = pin female = socket	Figure Drawings
MB1CKN0800	Plug, straight, threaded coupling	Socket	8
MB1CKN0800-KIT	Plug kit, straight, threaded. Kit includes contacts	Socket	8
MB1EJN0800	Plug, 90° rotatable, threaded coupling	Socket	9
MB1GJN0800	Plug, straight, panel mount, threaded	Socket	10
MB1LLN0800	Receptacle, straight, flange mount, threaded coupling	Pin	11
MB1LLN0800-KIT	Receptacle Kit, straight, threaded. Kit includes contacts	Pin	11
MB1LKN0800	Receptacle, straight, M25, threaded coupling	Pin	12
MB3TNN0800-S1	Receptacle, bulkhead, threaded, 7-11mm cord grip	Pin	13
MB3TNN0800-S2	Receptacle, bulkhead, threaded, 11-14.5mm cord grip	Pin	14
MB3TNN0800-S3	Receptacle, bulkhead, threaded, 14.5-17mm cord grip	Pin	15
MB1JJN0800	Receptacle extension, threaded coupling	Pin	16
↑ Contacts supplied separately see Chart 1 page 230			
MB7RJN0801*	Receptacle, 90° rotatable, threaded Standard Flange (25.7x25.7)	Pin	17
MB7RJN0802*	Receptacle, 90° rotatable, threaded Large Flange (28.0x28.0)	Pin	18
↑ Contacts supplied separately see Chart 2 page 230			

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

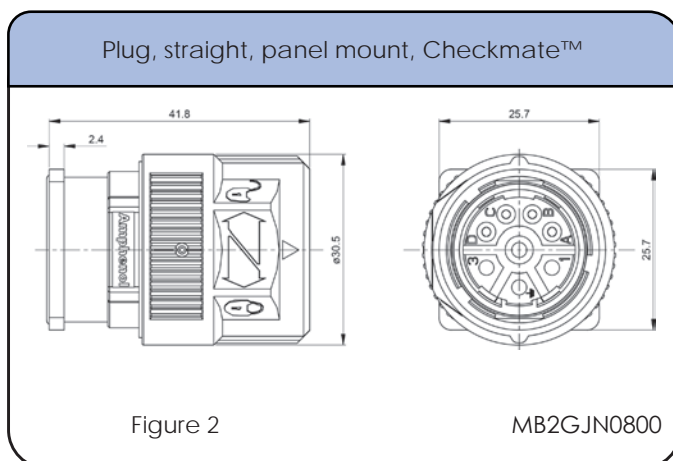
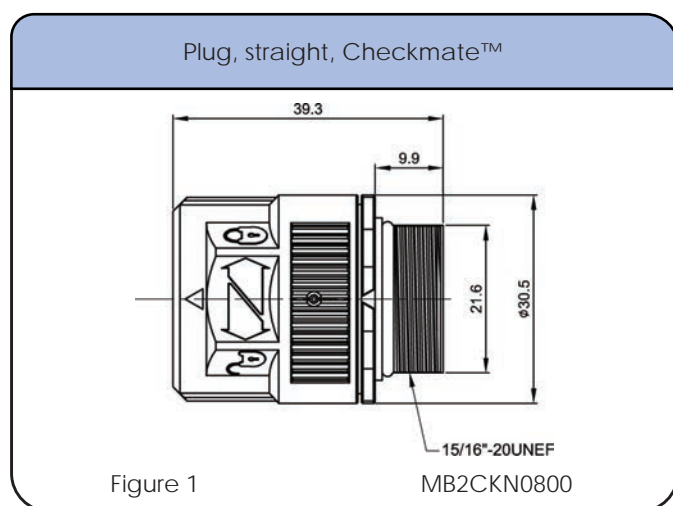
## Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MB6CG-S1	Cord grip	7.5-11mm	19
MB6CG-S2	Cord grip	11.0-14.5mm	19
MB6CG-S3	Cord grip	14.5-17mm	19
MB4FSR-B10.3*	Flex Grip™ backshell	9.5-10.3mm	20
MB4FSR-B12.5*	Flex Grip™ backshell	11.5-12.5mm	20
MB4FSR-B14.5*	Flex Grip™ backshell	13.5-14.5mm	20
MB4FSR-B17*	Flex Grip™ backshell	15.5-17mm	20

\*Must be potted to achieve IP67 ratings.

## Checkmate™ Dimensions Straight Plug/ Plug Kits/ Panel Mount

See [Chart 1](#) for contacts options



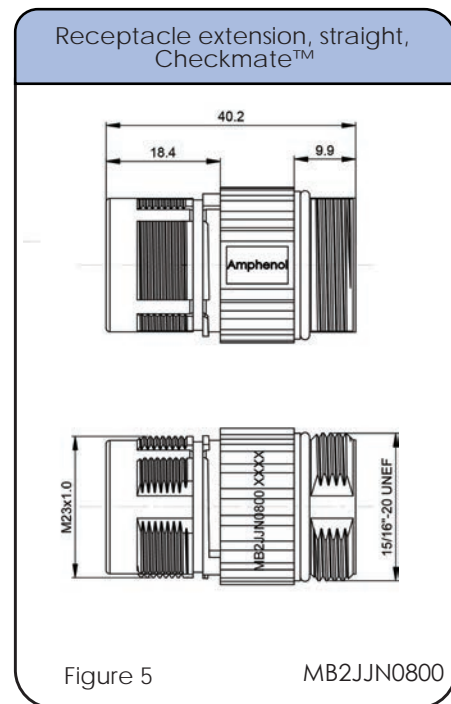
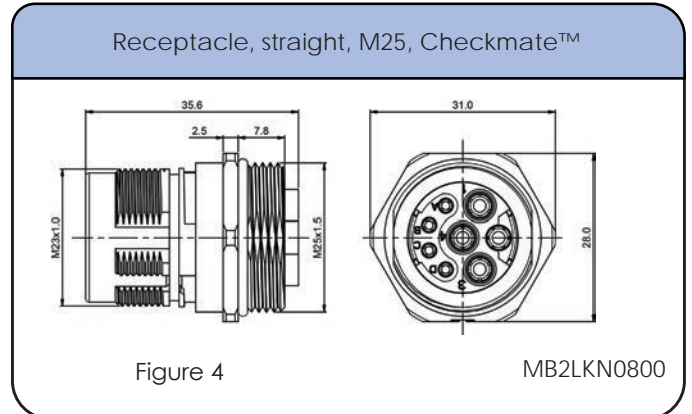
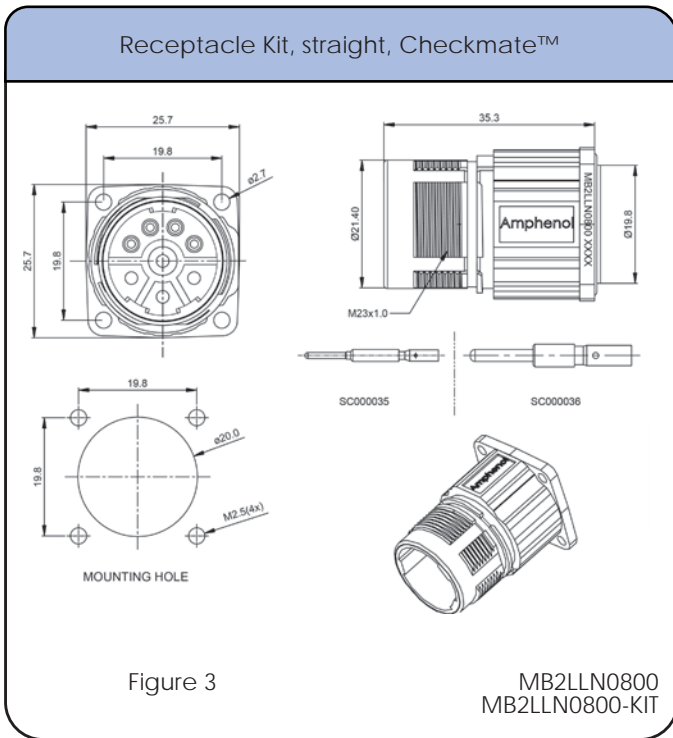


**8 (4+4) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

## Checkmate™ Dimensions Straight Receptacles / Receptacles Extension

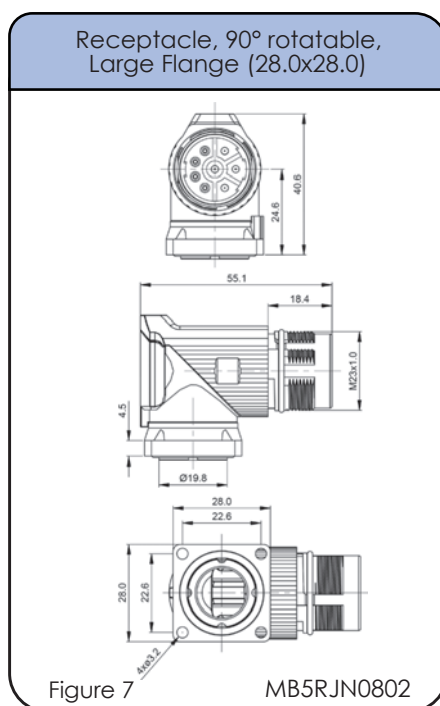
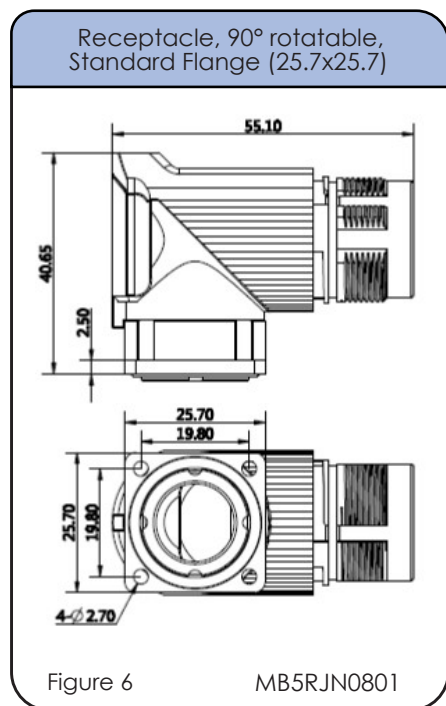
See Chart 1 for contacts options



Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)

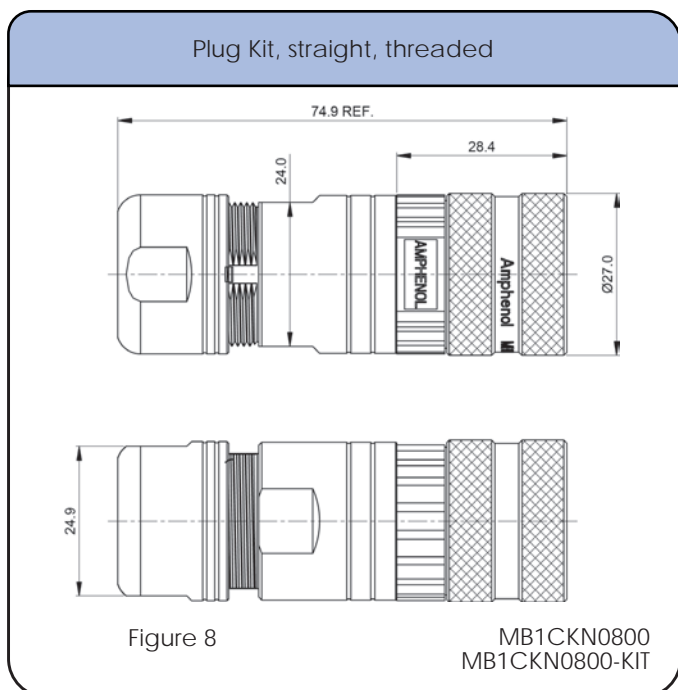
## Checkmate™ Dimensions 90° Receptacles

See Chart 2 for contacts options



## Threaded Dimensions Plugs/Plug Kit

See Chart 1 for contacts options



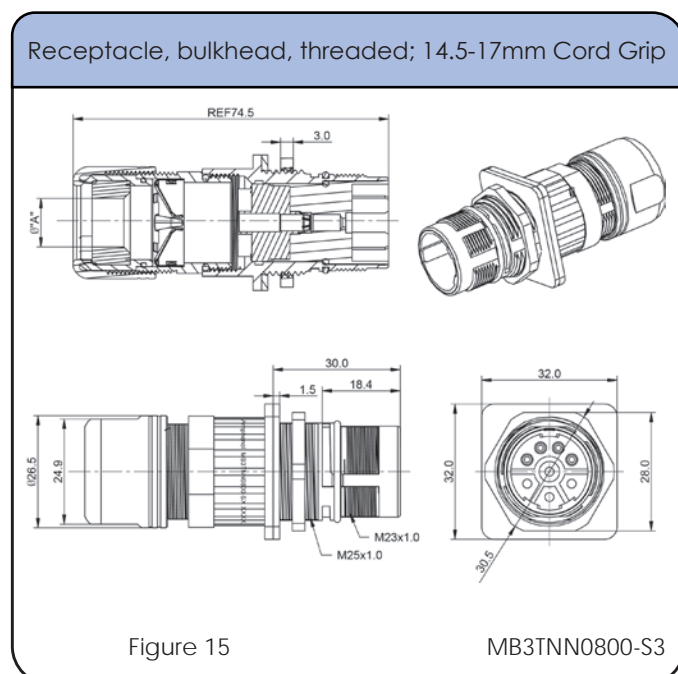
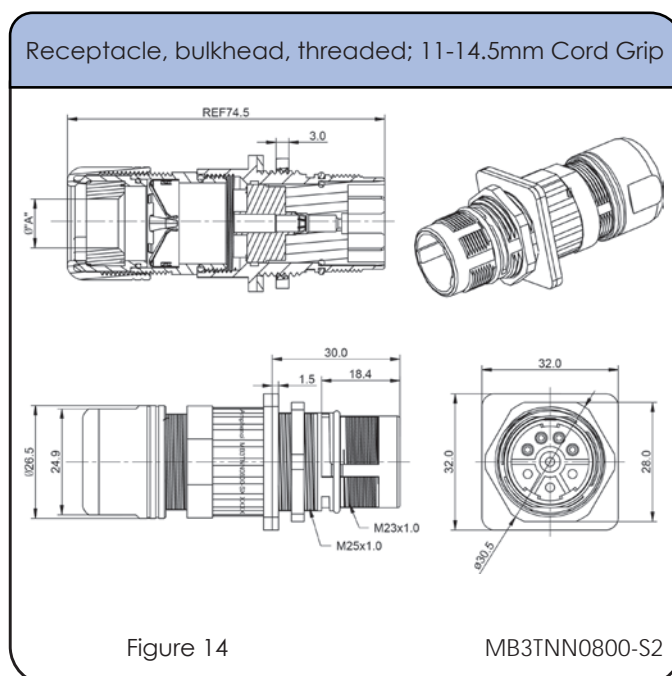
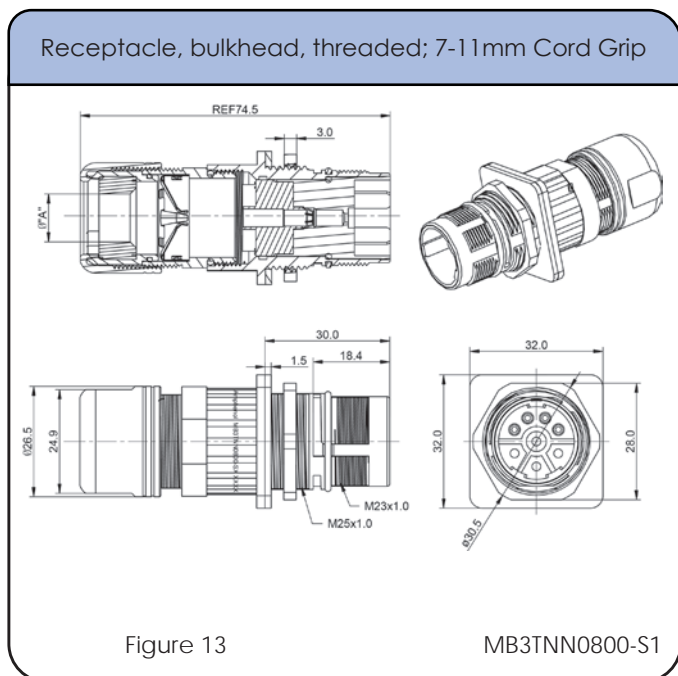
Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

## Threaded Dimensions Bulkhead Receptacles / Receptacle Kits

See *Chart 1* for contacts options



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



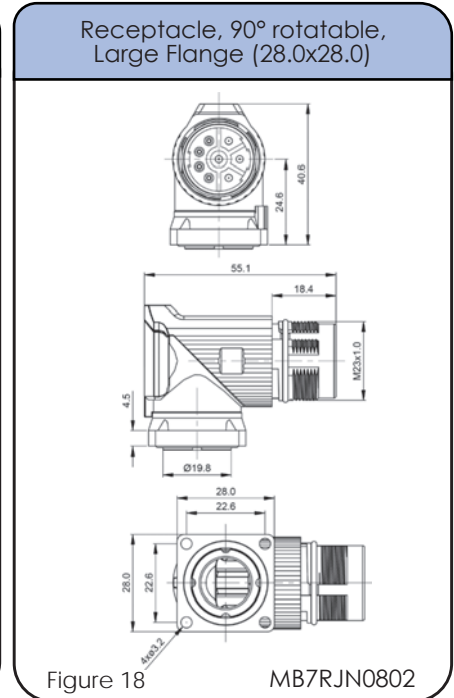
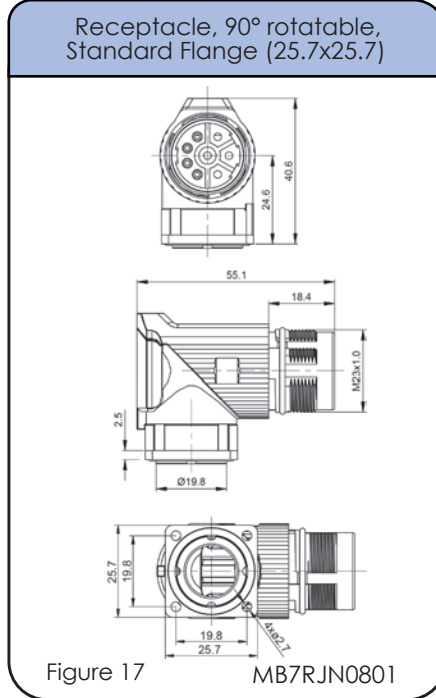
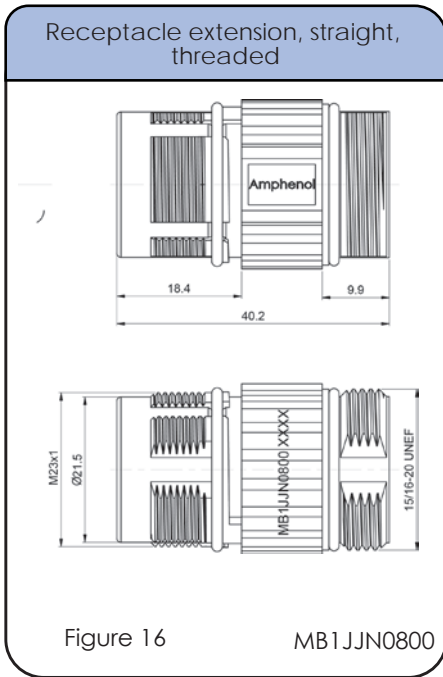
**8 (4+4) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

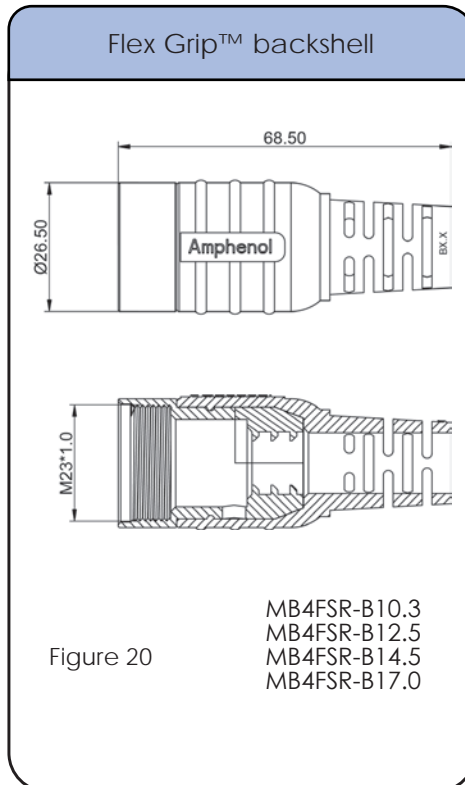
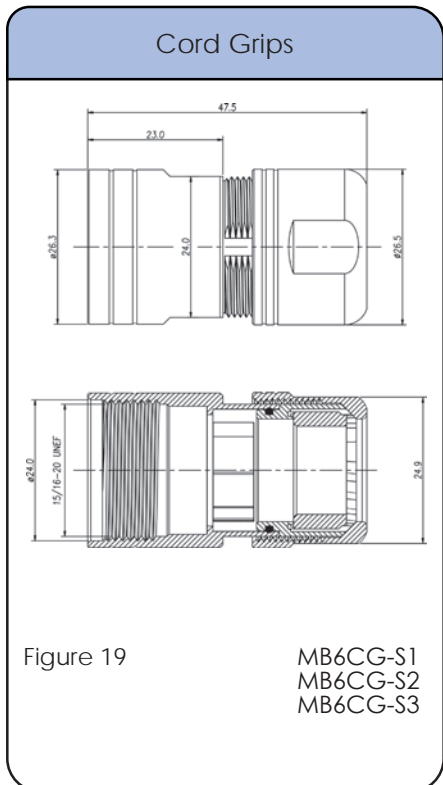
**Threaded Dimensions Receptacle Extension / 90° Rotatable Receptacles**

See Chart 1 for contacts options

See Chart 2 for contacts options for 90° Rotatable Receptacles



**Dimensions Cord Grips / Backshells**



**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

## Contacts



Machined Contacts

### CHART 1

#### Crimp Contacts, Machined

For ALL Parts except those listed below in Chart 2

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000035	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000146	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000036	2.0mm	Pin	18-14	1.5 - 0.75	Gold
SC000044	1.0mm	Socket	22-18	0.37 - 0.75	Gold
SC000030	1.0mm	Socket	28-24	0.10 - 0.25	Gold
SC000045	2.0mm	Socket	18-14	1.5 - 0.75	Gold

### CHART 2

#### Crimp Contacts, Machined

For parts: MB7RJN0801, MB7RJN0802, MB5RJN0801, MB5RJN0802

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000261	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000386	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000262	2.0mm	Pin	18-14	0.75 - 2.5	Gold
SC000260	2.0mm	Socket	20-14	2.5 - 0.5	Gold
SC000259	2.0mm	Socket	18-14	0.75 - 2.5	Gold
SC000385	1.0mm	Socket	28-24	0.10 - 0.25	Gold

Note: When 18-22 AWG wire is required use Elite Series plugs and 90° rotatable receptacles starting on page 117





**8 (4+4) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**

**Number of Contacts: 8 (4+4)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

## Tools

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
Wire Range 20-32AWG



WA22

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*. Wire Range 12-26AWG



WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.



50-54931-1

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
Wire Range 12-26AWG



AF8

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
Wire Range 20-32AWG



AFM8

Extraction tool. Used for removal of 2.0mm contacts from inserts.



50-54931-2

Universal positioner is used with the universal hand crimp tool (AF8).  
Wire range 12-26AWG



UH2-5

Universal positioner is used with crimp tools AFM8 and WA22.  
Wire range 20-32AWG



SK2-2

Dust Cap for Receptacle



P29687

Dust Cap for Plug, Threaded



P30663-08

Dust Cap for Plug, Checkmate™



P31661-08

\* The universal positioner is not included with the crimp tools and must be ordered separately.

\* The extraction tool is not required to remove contacts from the 90° Rotatable Receptacles

# Connector Solutions M23 Standard Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

STEP 3  
Choose Backshell/Cord Grip

See page 18 for connector configurations

## Plugs



MB1CKN0900



MB1EJN0900



MB1GJN0900



MB2CKN0900



MB2GJN0900

## Plug Connector Kits



MB1CKN0900-KIT

## Receptacles



MB1LKN0900



MB5RJN0901  
MB5RJN0902



MB1LLN0900



MB1JJN0900



MB3TNN0900-S1  
MB3TNN0900-S2  
MB3TNN0900-S3



MB2LKN0900



MB7RJN0901  
MB7RJN0902



MB2LLN0900



MB2JJN0900

## Receptacle Kits



MB1LLN0900-KIT



Checkmate™  
MB2LLN0900-KIT



## Cord Grips



MB6CG-S1  
MB6CG-S2  
MB6CG-S3

## FlexGrip™ Backshell System



MB4FSR-B10.3  
MB4FSR-B12.5  
MB4FSR-B14.5  
MB4FSR-B17

more about  
FlexGrip™  
on page 282

**BULK CABLE**  
starts on  
page 23

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 240

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266



**9 (4+5) POSITIONS**  
**Power 30A/ 630V**  
**Signal 10A/ 250V**

**Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**



### Checkmate™ Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Contact Type male = pin female = socket	Figure Drawings
MB2CKN0900	Plug, straight, <b>Checkmate™</b>	Socket	1
MB2GJN0900	Plug, straight, panel mount, <b>Checkmate™</b>	Socket	2
MB2LLN0900	Receptacle, straight, flange mount, <b>Checkmate™</b>	Pin	3
MB2LLN0900-KIT	Receptacle kit, straight, <b>Checkmate™</b> . Contacts included.	Pin	3
MB2LKN0900	Receptacle, straight, M25, <b>Checkmate™</b>	Pin	4
MB2JJN0900	Receptacle extension, straight, <b>Checkmate™</b>	Pin	5
↑ Contacts supplied separately see Chart 1 page 240			
MB5RJN0901*	Receptacle, 90° rotatable, <b>Checkmate™</b> Standard Flange (25.7x25.7)	Pin	6
MB5RJN0902*	Receptacle, 90° rotatable, <b>Checkmate™</b> Large Flange (28.0x28.0)	Pin	7
↑ Contacts supplied separately see Chart 2 page 240			

### Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Contact Type male = pin female = socket	Figure Drawings
MB1CKN0900	Plug, straight, threaded coupling	Socket	8
MB1CKN0900-KIT	Plug kit, straight, threaded coupling. Contact included.	Socket	8
MB1EJN0900	Plug, 90° rotatable, threaded coupling	Socket	9
MB1GJN0900	Plug, straight, panel mount, threaded	Socket	10
MB1LLN0900	Receptacle, straight, flange mount, threaded coupling	Pin	11
MB1LLN0900-KIT	Receptacle kit, straight, threaded. Contacts included.	Pin	11
MB1LKN0900	Receptacle, straight, M25, threaded coupling	Pin	12
MB3TNN0900-S1	Receptacle, bulkhead, threaded; 7-11mm cord grip	Pin	13
MB3TNN0900-S2	Receptacle, bulkhead, threaded; 11-14.5mm cord grip	Pin	14
MB3TNN0900-S3	Receptacle, bulkhead, threaded; 14.5-17mm cord grip	Pin	15
MB1JJN0900	Receptacle extension, straight, threaded	Pin	16
↑ Contacts supplied separately see Chart 1 page 240			
MB7RJN0901*	Receptacle, 90° rotatable, Threaded Standard Flange (25.7x25.7)	Pin	17
MB7RJN0902*	Receptacle, 90° rotatable, Threaded Large Flange (28.0x28.0)	Pin	18
↑ Contacts supplied separately see Chart 2 page 240			

**Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

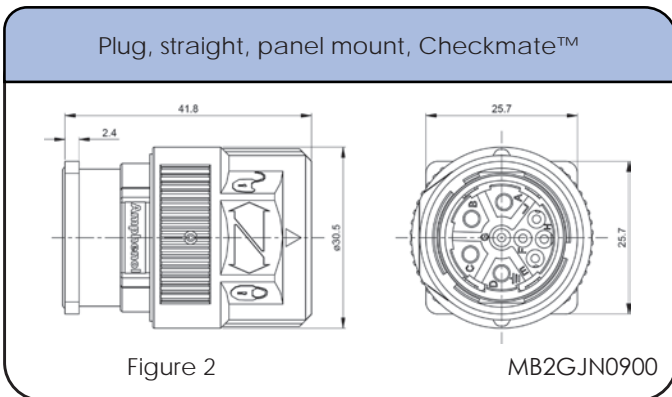
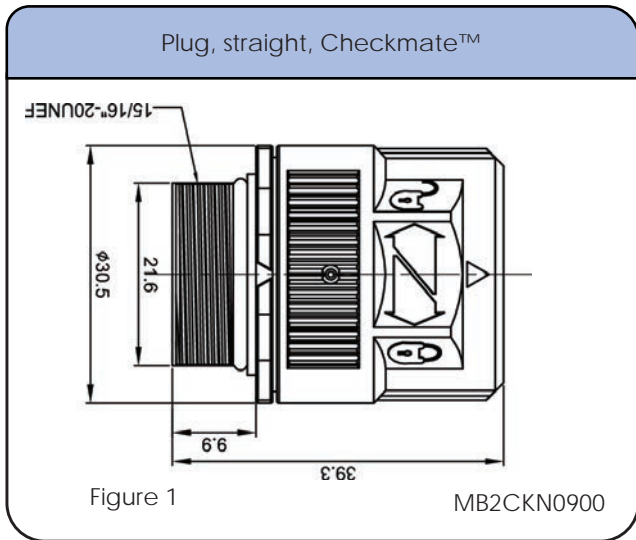
### Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MB6CG-S1	Cord grip	7.5-11mm	19
MB6CG-S2	Cord grip	11.0-14.5mm	19
MB6CG-S3	Cord grip	14.5-17mm	19
MB4FSR-B10.3*	Flex Grip™ backshell	9.5-10.3mm	20
MB4FSR-B12.5*	Flex Grip™ backshell	11.5-12.5mm	20
MB4FSR-B14.5*	Flex Grip™ backshell	13.5-14.5mm	20
MB4FSR-B17*	Flex Grip™ backshell	15.5-17mm	20

\*Must be potted to achieve IP67 ratings.

### Checkmate™ Dimensions Straight Plug/ Plug Kits/ Panel Mount

See Chart 1 for contacts options





9 (4+5) POSITIONS  
 Power 30A/ 630V  
 Signal 10A/ 250V

Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)

## Checkmate™ Dimensions Straight Receptacles / Receptacles Extension

See Chart 1 for contacts options

Receptacle kit, straight, Checkmate™

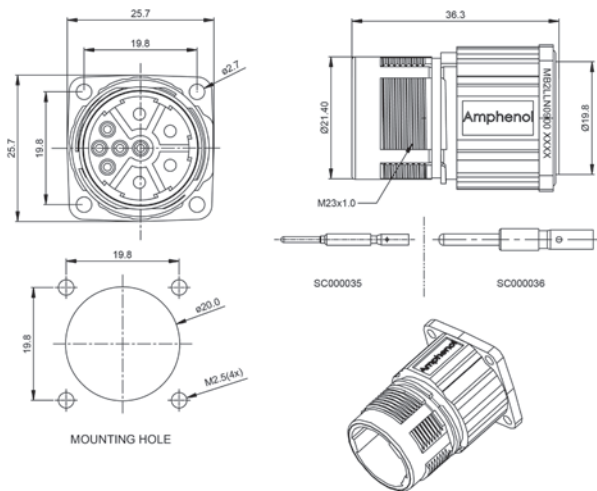


Figure 3

MB2LLN0900  
 MB2LLN0900-KIT

Receptacle, straight, M25, Checkmate™

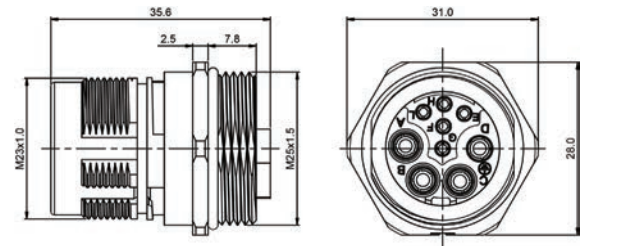


Figure 4

MB2LKN0900

Receptacle extension, straight Checkmate™

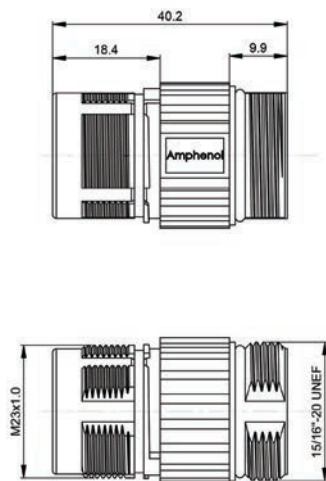


Figure 5

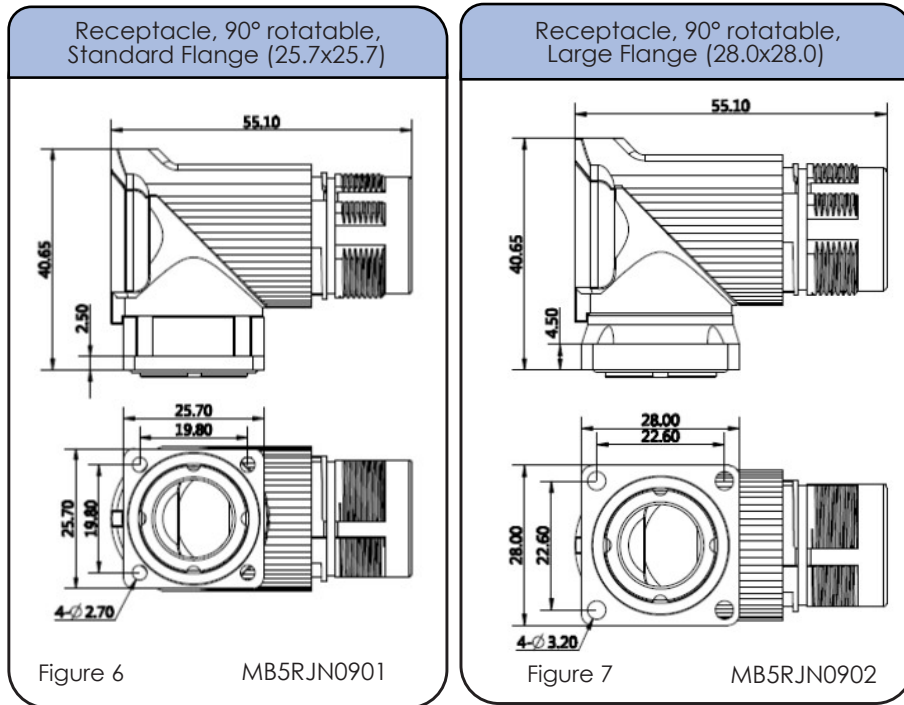
MB2JJN0900

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)

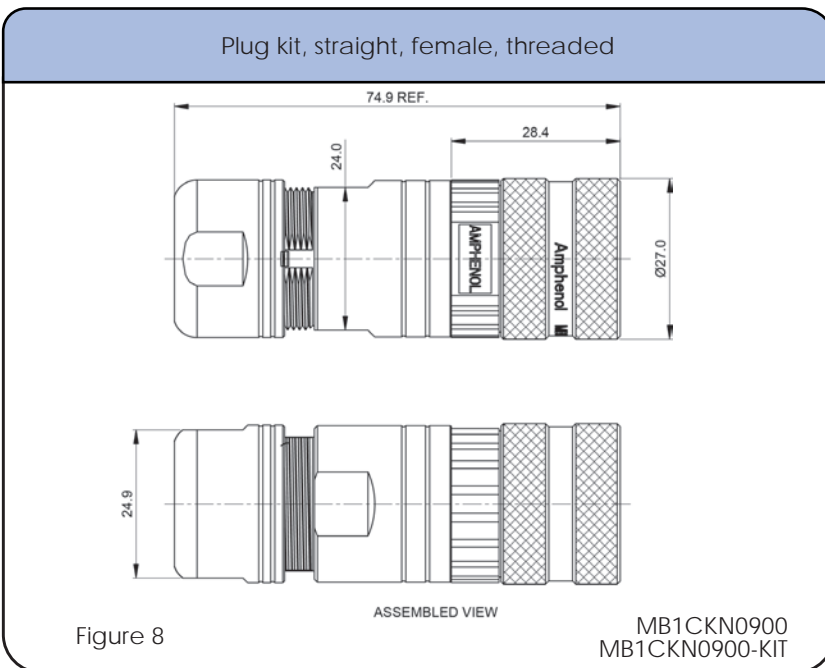
## Checkmate™ Dimensions 90° Receptacles

See Chart 2 for contacts options



## Threaded Dimensions Plugs/Plug Kit

See Chart 1 for contacts options



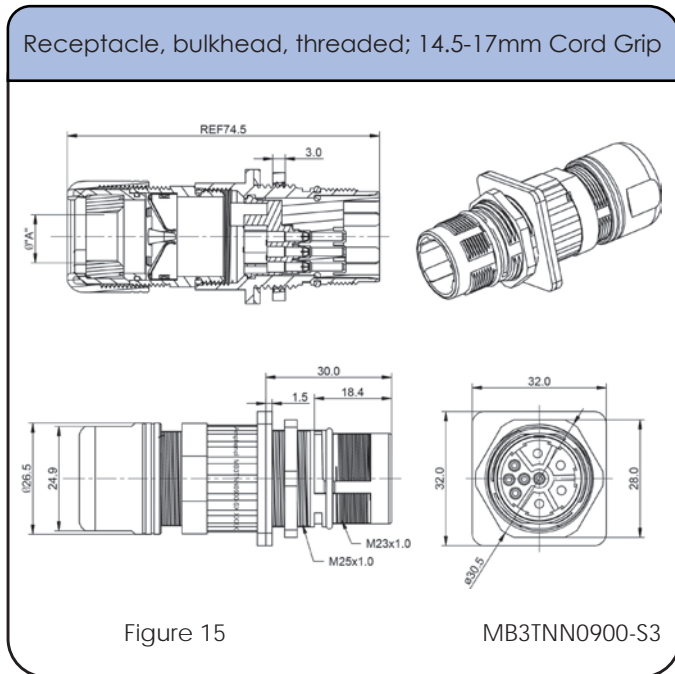
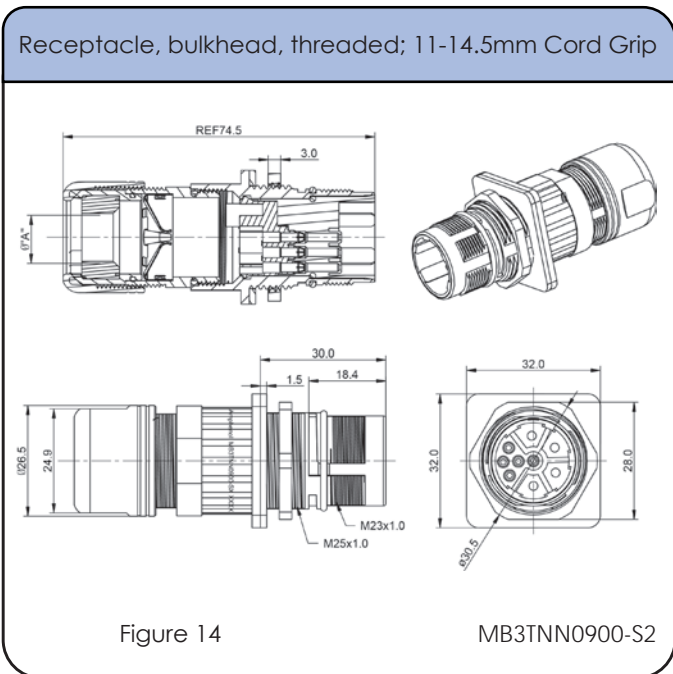
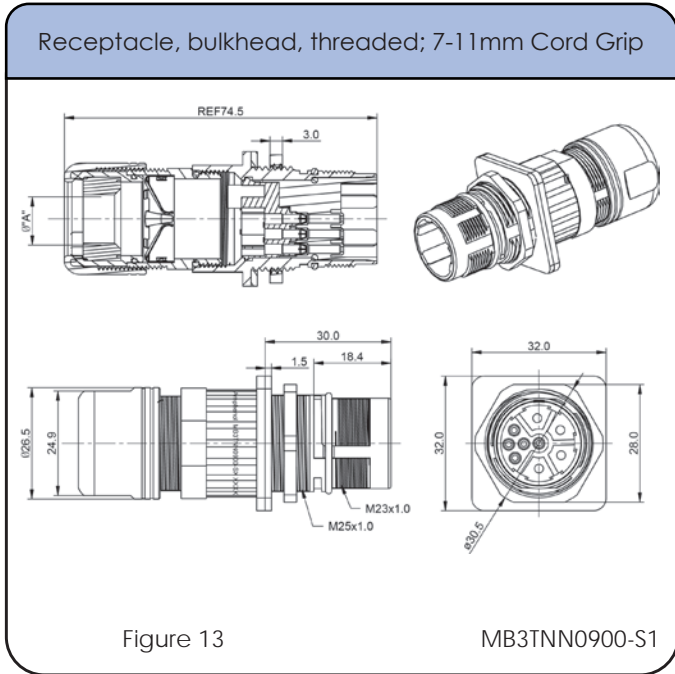
Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)

### Threaded Dimensions Bulkhead Receptacles / Receptacle Kits

See Chart 1 for contacts options



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)





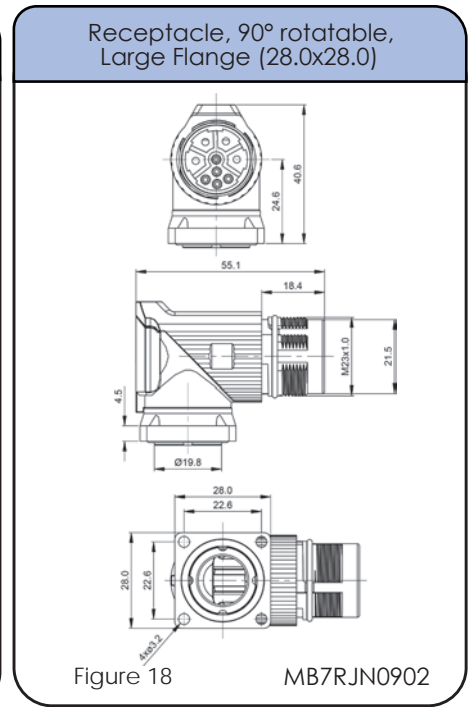
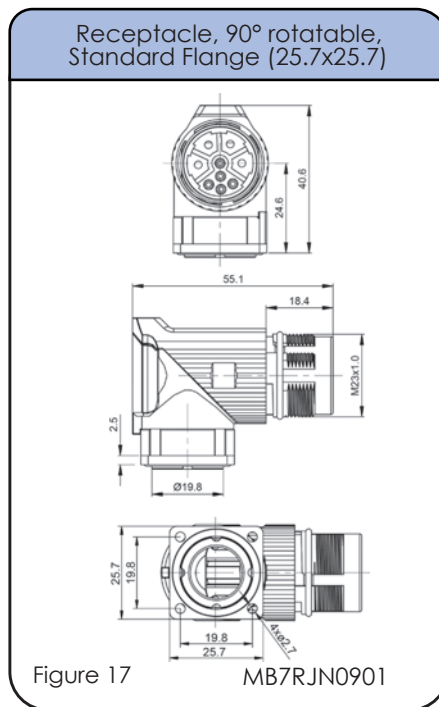
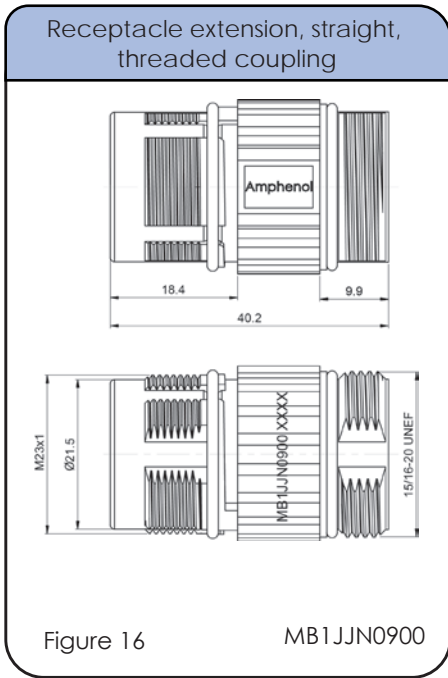
9 (4+5) POSITIONS  
 Power 30A/ 630V  
 Signal 10A/ 250V

Number of Contacts: 9 (4+5) Contact Size: 1.0mm, 2.0mm Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)

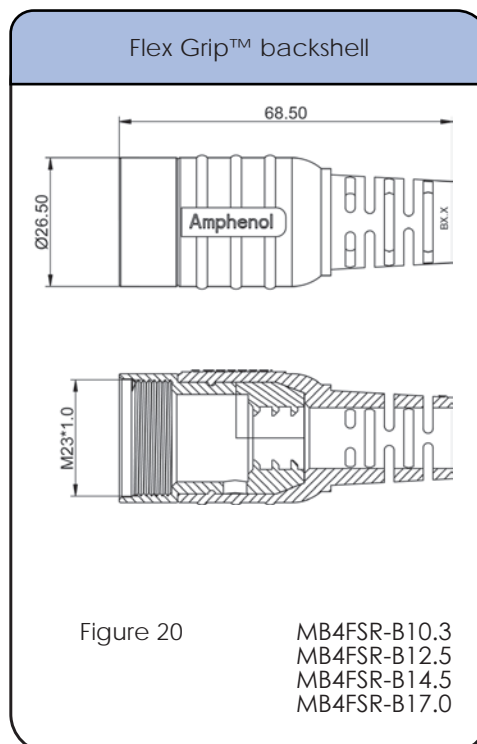
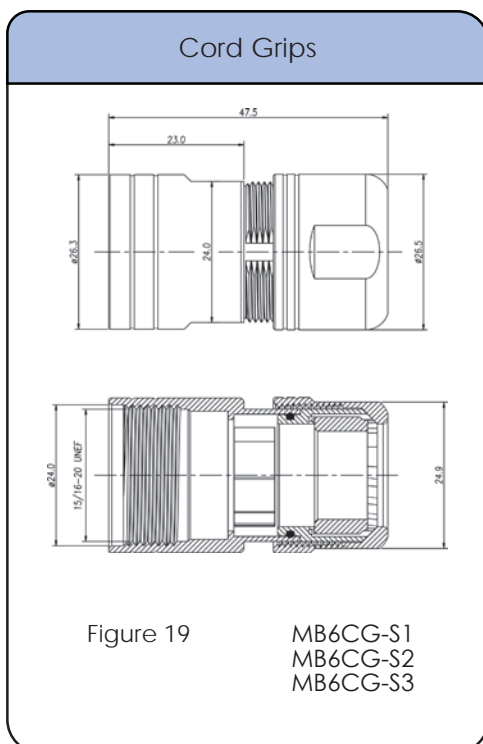
Threaded Dimensions Receptacle Extension /  
 90° Rotatable Receptacles

See Chart 1 for contacts options

See Chart 2 for contacts options for 90° Rotatable Receptacles



### Dimensions Cord Grips / Backshells



Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)

## Contacts



Machined Contacts

### CHART 1

#### Crimp Contacts, Machined

For ALL Parts except those listed below in Chart 2

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000035	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000146	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000036	2.0mm	Pin	18-14	1.5 - 0.75	Gold
SC000044	1.0mm	Socket	22-18	0.37 - 0.75	Gold
SC000030	1.0mm	Socket	28-24	0.10 - 0.25	Gold
SC000045	2.0mm	Socket	18-14	1.5 - 0.75	Gold

### CHART 2

#### Crimp Contacts, Machined

For parts: MB7RJN0801, MB7RJN0802, MB5RJN0801, MB5RJN0802

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000261	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000386	1.0mm	Pin	28-24	0.10 - 0.25	Gold
SC000262	2.0mm	Pin	18-14	0.75 - 2.5	Gold
SC000260	2.0mm	Socket	20-14	2.5 - 0.5	Gold
SC000259	2.0mm	Socket	18-14	0.75 - 2.5	Gold
SC000385	1.0mm	Socket	28-24	0.10 - 0.25	Gold

Note: When 18-22 AWG wire is required use Elite Series plugs and 90° rotatable receptacles starting on page 129



9 (4+5) POSITIONS  
 Power 30A/ 630V  
 Signal 10A/ 250V

Number of Contacts: 9 (4+5)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 18-22 (0.75 - 0.37 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)

## Tools

Pneumatic crimp tool. Uses universal positioner part no. SK2-2\*  
 Wire Range 20-32AWG

WA22

Pneumatic crimp tool. Uses universal positioner part no. UH2-5\*.  
 Wire Range 12-26AWG

WA27F

Extraction tool. Used for removal of 1.0mm contacts from inserts.

50-54931-1

Universal hand crimp tool. Uses universal positioner part no. UH2-5\*  
 Wire Range 12-26AWG

AF8

Universal hand crimp tool. Uses universal positioner part no. SK2-2\*  
 Wire Range 20-32AWG

AFM8

Extraction tool. Used for removal of 2.0mm contacts from inserts.

50-54931-2

Universal positioner is used with the universal hand crimp tool (AF8).  
 Wire range 12-26AWG

UH2-5

Universal positioner is used with crimp tools AFM8 and WA22.  
 Wire range 20-32AWG

SK2-2

Dust Cap for Receptacle

P29687

Dust Cap for Plug, Threaded

P30663-09

Dust Cap for Plug, Checkmate™

P31661-09

\* The universal positioner is not included with the crimp tools and must be ordered separately.

\* The extraction tool is not required to remove contacts from the 90° Rotatable Receptacles

# Connector Solutions M23 Standard Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

STEP 3  
Choose Backshell/Cord Grip

See page 18 for connector configurations

## Plugs



MB1CKNNG36



MB1EJNNG36



MB1GJNNG36

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MB2CKNNG36



MB2GJNNG36

## Receptacles



MB1LLNNG36



MB1RJNNG36



MB1LKNNG36



MB1JNNG36

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MB2LLNNG36



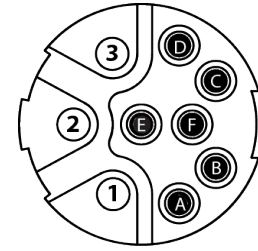
MB2RJNNG36



MB2LKNNG36



MB2JNNG36



## Cord Grips



MB6CG-S1  
MB6CG-S2  
MB6CG-S3

## FlexGrip™ Backshell System



MB4FSR-B10.3  
MB4FSR-B12.5  
MB4FSR-B14.5  
MB4FSR-B17

more about  
FlexGrip™  
on page 282

**BULK CABLE**  
starts on  
page 23

## Receptacle Kit

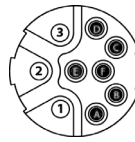


MB1LLNNG36-KIT

\*Elite Series receptacles are offered here as additional options for mating with Standard Series plugs. See Assembly Instructions starting on page 266

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 248



**9 (3+6) POSITIONS**  
**Power 30A/ 250V**  
**Signal 10A/ 630V**

**Number of Contacts: 9 (3+6)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 12 (4.0mm<sup>2</sup>) / 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**



## Checkmate™ Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Contact Type male = pin mates with female = socket ↓Mating Parts↓	Figure Drawings
MB2CKNNG36	Plug, straight, <b>Checkmate™</b>	Socket	1
MB2GJNNG36	Plug, straight, panel mount, <b>Checkmate™</b>	Socket	2
MB2LLNNG36	Receptacle, straight flange mount, <b>Checkmate™</b>	Pin	3
MB2LKNNG36	Receptacle, straight, M25, <b>Checkmate™</b>	Pin	4
MB2RJNNG36	90° rotatable receptacle, <b>Checkmate™</b>	Pin	5
MB2JJNNG36	Receptacle extension, straight, <b>Checkmate™</b>	Pin	6
↑ Contacts supplied separately see Chart 1 page 248			

## Threaded Connector Part Numbers

Part Number	Connector Type <i>Checkmate™ parts will mate with threaded parts. Just remove the O-ring from the threaded part.</i>	Contact Type male = pin mates with female = socket ↓Mating Parts↓	Figure Drawings
MB1CKNNG36	Plug, straight, threaded coupling	Socket	7
MB1EJNNG36	Plug, 90° rotatable, threaded coupling	Socket	8
MB1GJNNG36	Plug, straight, panel mount, threaded coupling	Socket	9
MB1LLNNG36	Receptacle, straight, flange mount, threaded coupling	Pin	10
MB1LLNNG36-KIT	Receptacle kit, straight, threaded coupling. Kit includes contacts	Pin	13
MB1LKNNG36	Receptacle, straight, M25, threaded coupling	Pin	11
MB1RJNNG36	Receptacle, 90° rotatable, threaded coupling	Pin	12
MB1JJNNG36	Receptacle extension, straight, threaded coupling	Pin	14
↑ Contacts supplied separately see Chart 1 page 248			

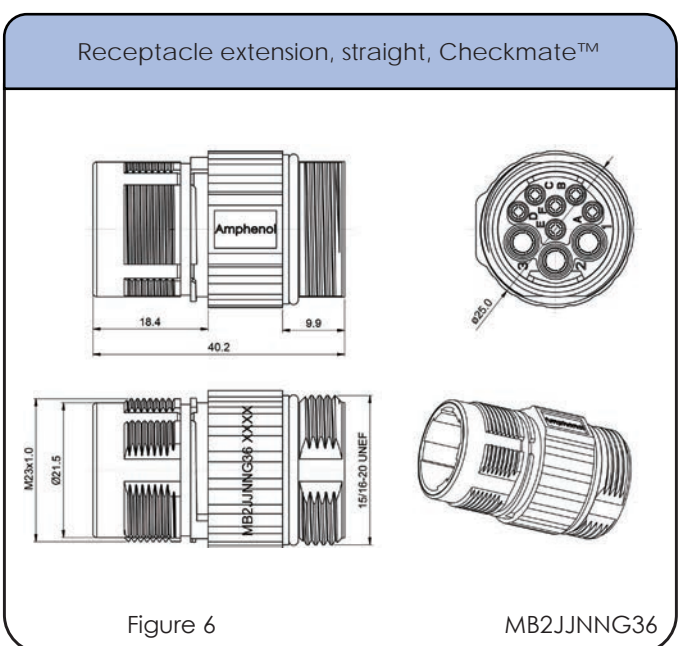
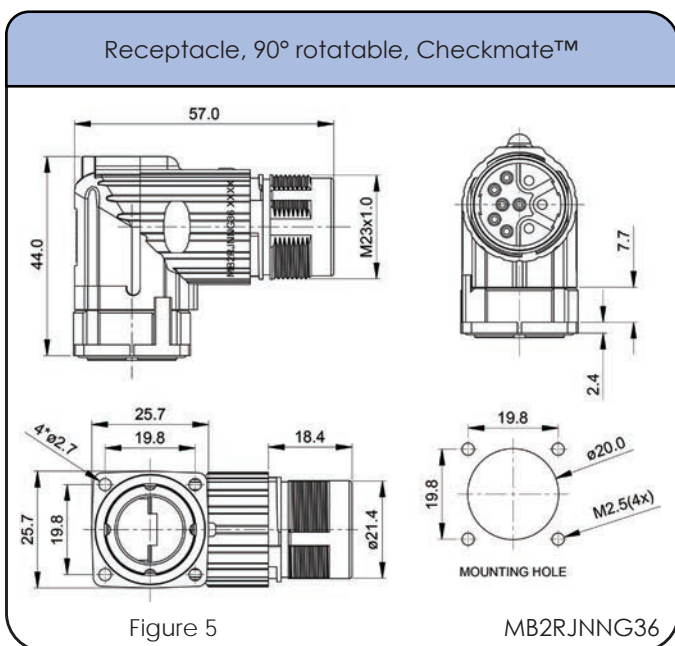
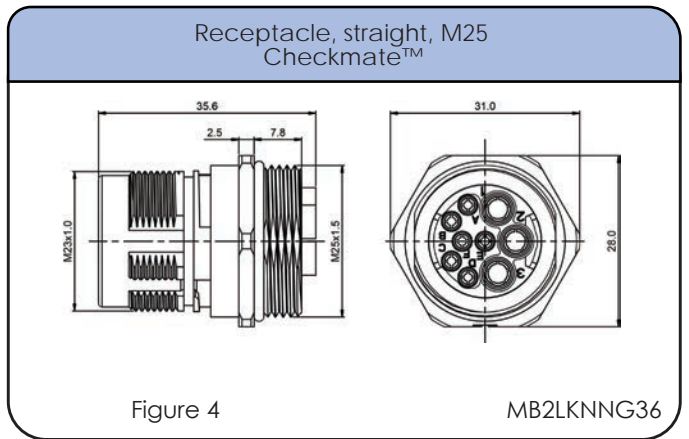
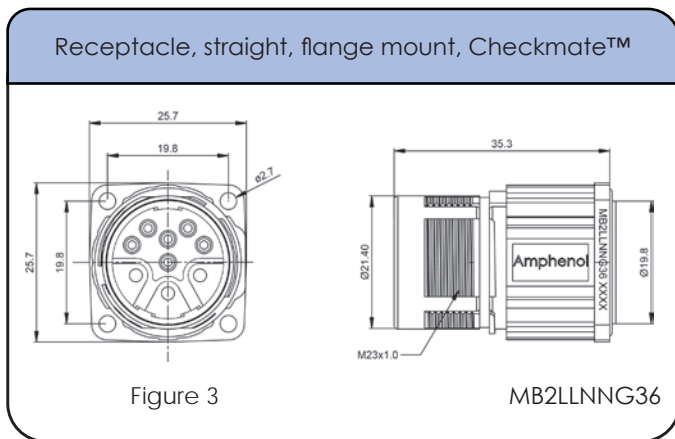
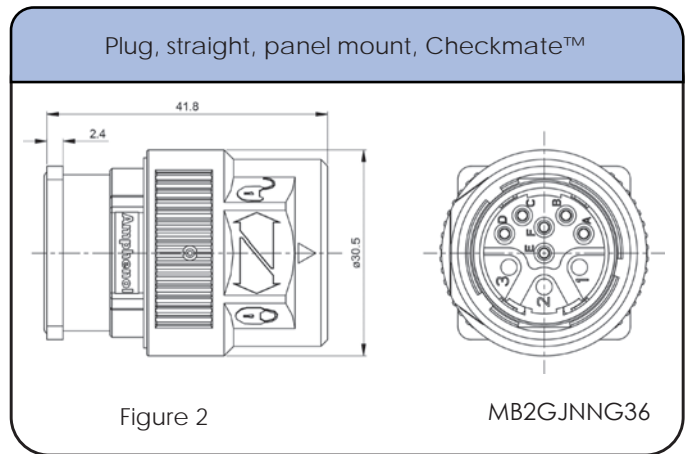
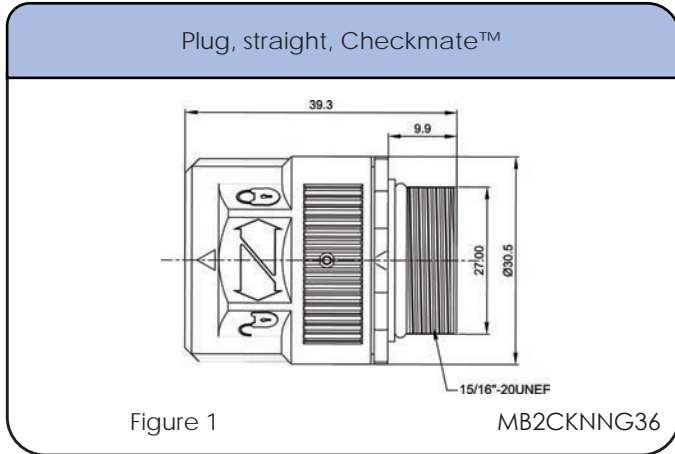
## Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MB6CG-S1	Cord grip	7.5-11mm	14
MB6CG-S2	Cord grip	11.0-14.5mm	14
MB6CG-S3	Cord grip	14.5-17mm	14
MB4FSR-B10.3*	Flex Grip™ backshell	9.5-10.3mm	15
MB4FSR-B12.5*	Flex Grip™ backshell	11.5-12.5mm	15
MB4FSR-B14.5*	Flex Grip™ backshell	13.5-14.5mm	15
MB4FSR-B17*	Flex Grip™ backshell	15.5-17mm	15

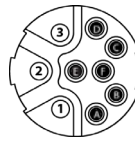
\*Must be potted to achieve IP67 ratings.

Number of Contacts: 9 (3+6)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67  
 AWG: 12 (4.0mm<sup>2</sup>) / 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)

## Checkmate™ Dimensions Straight Plugs / Receptacles



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



**9 (3+6) POSITIONS**  
**Power 30A/ 250V**  
**Signal 10A/ 630V**

**Number of Contacts: 9 (3+6)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 12 (4.0mm<sup>2</sup>) / 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

### Threaded Dimensions Plugs/ Receptacles

Plug, straight, threaded coupling

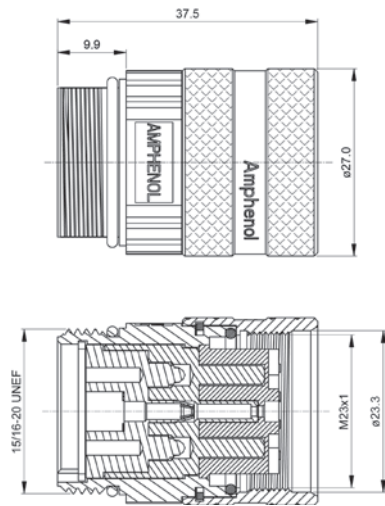


Figure 7

MB1CKNNG36

Plug, 90° rotatable, threaded coupling

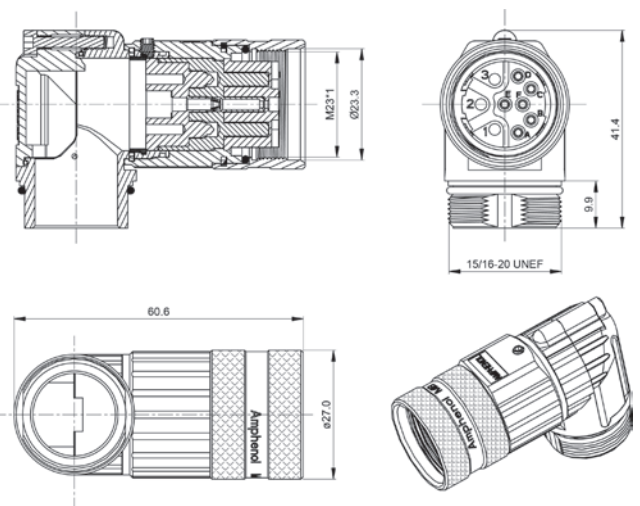


Figure 8

MB1EJNNG36

Plug, straight, panel mount, threaded

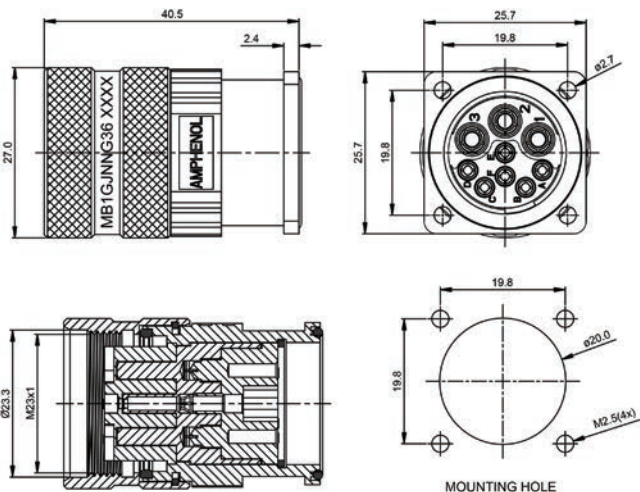


Figure 9

MB1GJNNG36

Receptacle, straight, flange mount, threaded coupling

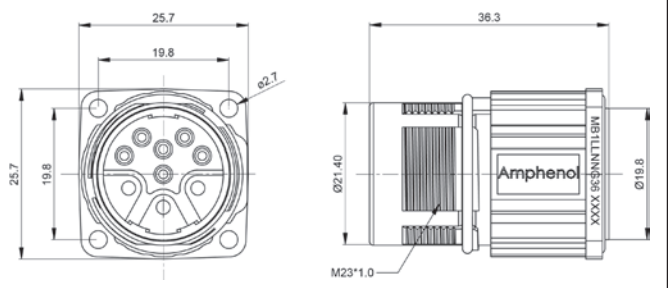


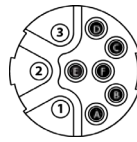
Figure 10

MB1LLNNG36

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



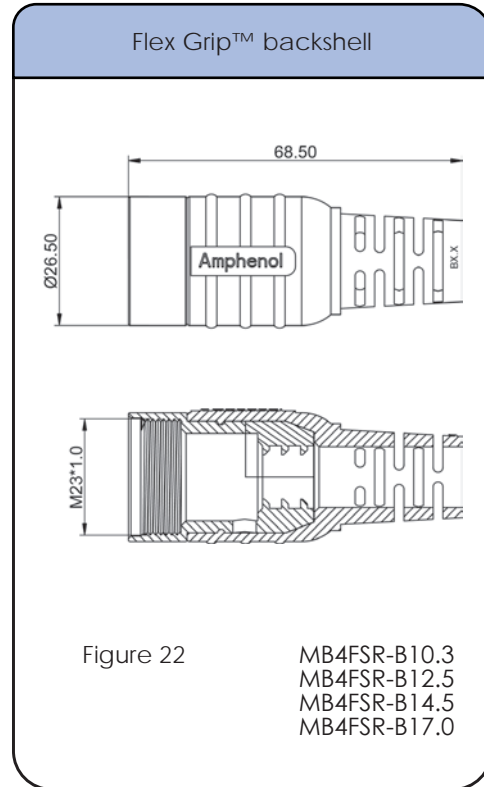
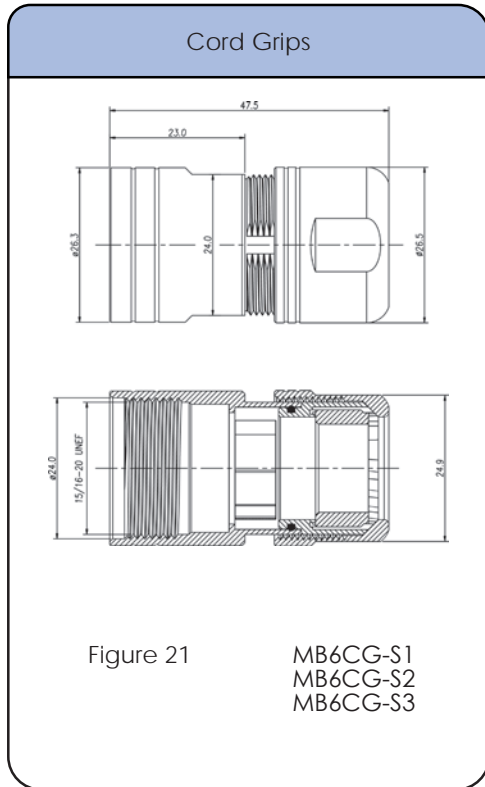




**9 (3+6) POSITIONS**  
**Power 30A/ 250V**  
**Signal 10A/ 630V**

**Number of Contacts: 9 (3+6)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 12 (4.0mm<sup>2</sup>) / 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

## Dimensions Cord Grips/ Backshells



**Number of Contacts: 9 (3+6)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 12 (4.0mm<sup>2</sup>) / 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

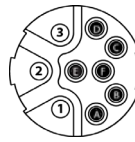
## Contacts



Machined Contacts

### CHART 1 Crimp Contacts, Machined

Part #	Size	Type	AWG	mm <sup>2</sup>	Plating
SC000035	1.0mm	Pin	22-18	0.37 - 0.75	Gold
SC000146	1.0mm	Pin	28-24	0.10 - 0.37	Gold
SC000036	2.0mm	Pin	18-14	1.5 - 0.75	Gold
SC000036-12	2.0mm	Pin	12	4.0	Gold
SC000044	1.0mm	Socket	22-18	0.37 - 0.75	Gold
SC000030	1.0mm	Socket	28-24	0.10 - 0.37	Gold
SC000045	2.0mm	Socket	18-14	1.5 - 0.75	Gold
65-80041	2.0mm	Socket	12	4.0	Gold



**9 (3+6) POSITIONS**  
**Power 30A/ 250V**  
**Signal 10A/ 630V**

**Number of Contacts: 9 (3+6)    Contact Size: 1.0mm, 2.0mm    Sealing: IP66/67**  
**AWG: 12 (4.0mm<sup>2</sup>) / 18-14 (0.75 - 2.5 mm<sup>2</sup>) / 22-18 (0.37 - 0.75 mm<sup>2</sup>) / 24-28 (0.25 - 0.10mm<sup>2</sup>)**

## Tools

<p>Pneumatic crimp tool. Uses universal positioner part no. SK2-2* Wire Range 20-32AWG</p>  <p>WA22</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5* Wire Range 12-26AWG</p>  <p>WA27F</p>	<p>Extraction tool. Used for removal of 1.0mm contacts from inserts.</p>  <p>50-54931-1</p>
<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5* Wire Range 12-26AWG</p>  <p>AF8</p>	<p>Universal hand crimp tool. Uses universal positioner part no. SK2-2* Wire Range 20-32AWG</p>  <p>AFM8</p>	<p>Extraction tool. Used for removal of 2.0mm contacts from inserts.</p>  <p>50-54931-2</p>
<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Universal positioner is used with crimp tools AFM8 and WA22. Wire range 20-32AWG</p>  <p>SK2-2</p>	<p>Dust Cap for Receptacle</p>  <p>P29687</p>
<p>Dust Cap for Plug, Threaded</p>  <p>P30663-09</p>	<p>Dust Cap for Plug, Checkmate™</p>  <p>P31661-09</p>	

\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M40 Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

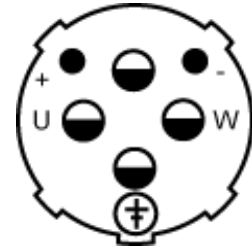
STEP 3  
Choose Backshell/Cord Grip

See page 20 for connector configurations

## Plugs



## Receptacles



## Receptacle Extension

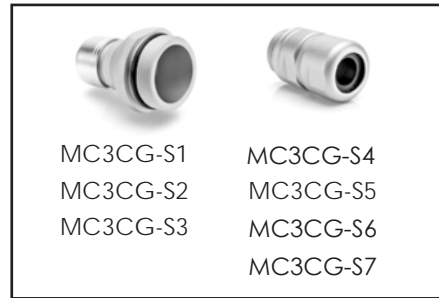


## FlexGrip™ Backshell System



more about FlexGrip™  
on page 282

## Cord Grips



## Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
MC2UPN0600	Plug, straight, Checkmate™	Socket	1
MC2JJN0600	Receptacle extension, straight, Checkmate™	Pin	2
MC2NKN0600	Receptacle, 90° fixed, Checkmate™	Pin	3
MC2LKN0600	Receptacle, straight, Checkmate™	Pin	4

Contacts supplied separately, see page 252

## Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MC4FSR-C18.5*	Flex Grip™ backshell	17.5-18.5mm	6
MC3CG-S1	Cord grip	10.0-12.0mm	7
MC3CG-S2	Cord grip	12.0-14.5mm	7
MC3CG-S3	Cord grip	14.0-17.0mm	7
MC3CG-S4	Cord grip	17.0-19.0mm	8
MC3CG-S5	Cord grip	19.0-21.0mm	8
MC3CG-S6	Cord grip	21.0-23.0mm	8
MC3CG-S7	Cord grip	23.5-25.5mm	8

\*Must be potted to achieve IP67 ratings.

**BULK CABLE starts on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

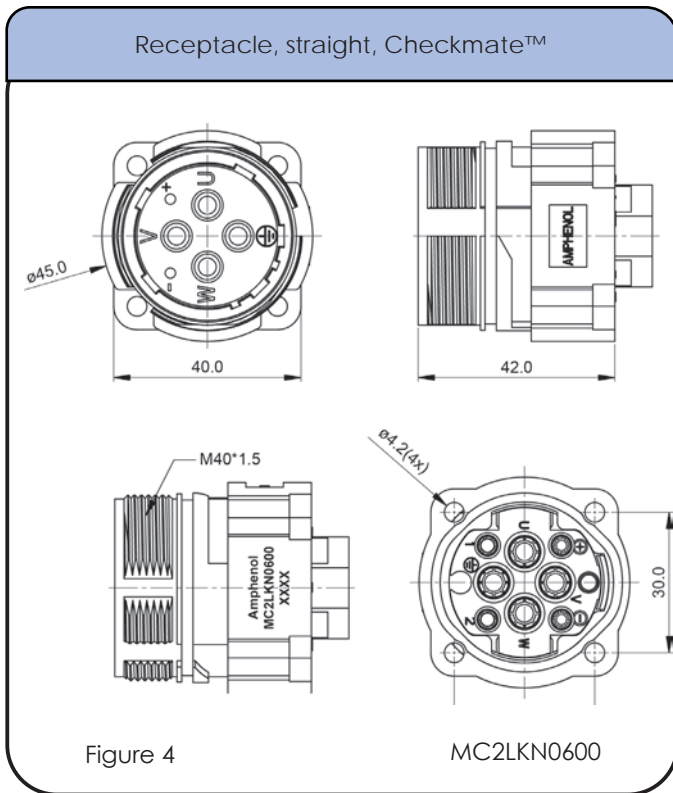
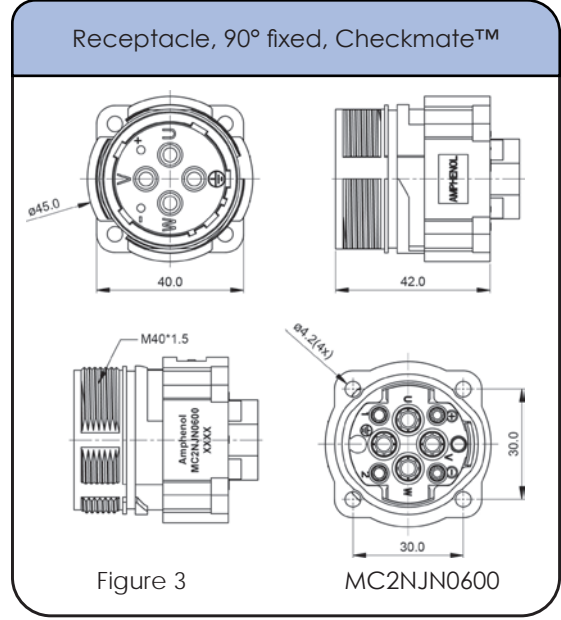
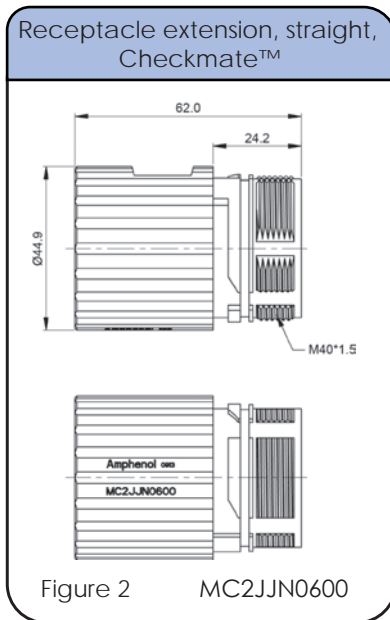
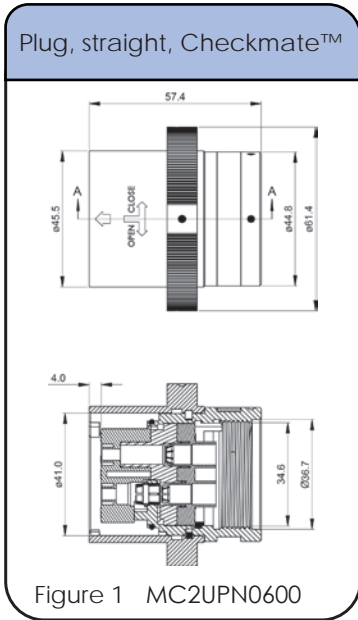
CONTACTS SOLD SEPARATELY SEE PAGE 252



6 (4+2) POSITIONS  
 Power 75A/ 630V  
 Signal 30A/ 250V  
 Checkmate™

Number of Contacts: 6 (4+2) Contact Sizes: 2.0mm, 3.6mm Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)

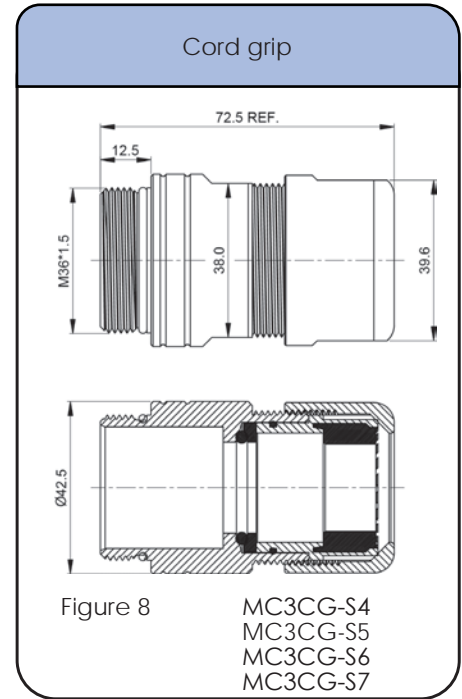
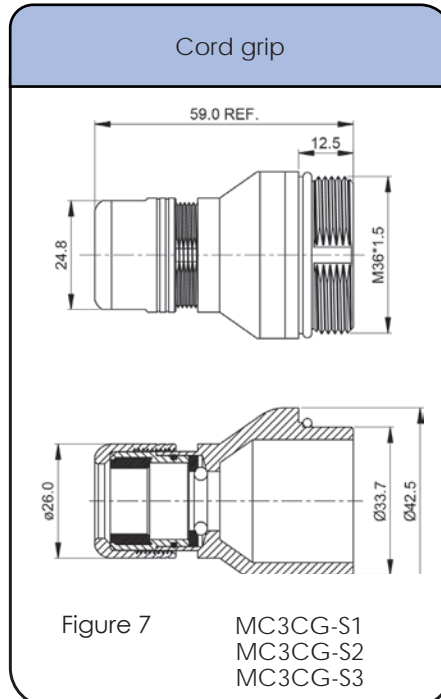
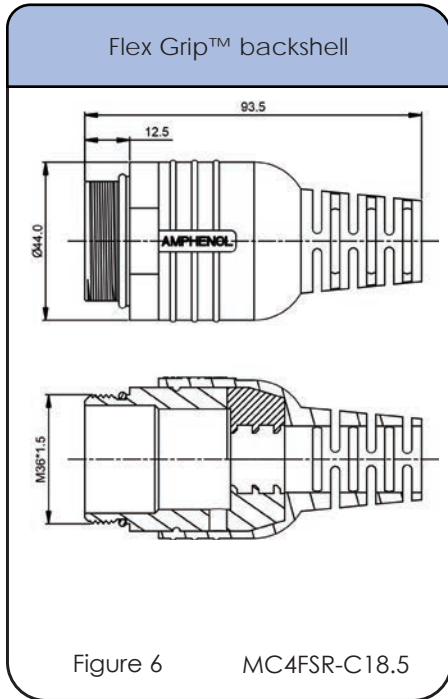
### Dimensions Plug / Cable Connector / Receptacles



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Number of Contacts: 6 (4+2)    Contact Sizes: 2.0mm, 3.6mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)

## Dimensions Cord Grips



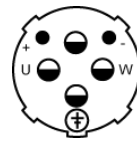
## Contacts



### Crimp Contacts, Machined

Part Number	Size	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000040	2.0mm	Pin	18-14	0.75 - 2.5	Gold
SC000041	3.6mm	Pin	12-8	4.0 - 10.0	Gold
SC000045	2.0mm	Socket	18-14	0.75 - 2.5	Gold
SC000046	3.6mm	Socket	12-8	4.0 - 10.0	Gold

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



6 (4+2) POSITIONS  
 Power 75A/ 630V  
 Signal 30A/ 250V  
 Checkmate™

CONNECTOR SOLUTIONS

Number of Contacts: 6 (4+2) Contact Sizes: 2.0mm, 3.6mm Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)

Tools

Extraction tool. Used for removal of 2.0mm (#14) contacts from inserts.

50-54931-2

Extraction tool. Used for removal of 3.6mm (#8) contacts from inserts.

50-54931-3

Universal hand crimp tool. Uses universal positioner part no. UH2-5. Wire crimp range 12-26AWG

AF8

Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG

UH2-5

Pneumatic crimp tool. Uses universal positioner part no. WA23-101DA

WA23

Pneumatic crimp tool. Uses universal positioner part no. UH2-5. Wire range 12-26WG

WA27F

Die Assembly, Size 10, is used with the Pneumatic crimp tool. WA23

WA23-101DA

Hand Crimp tool. Uses MFX-3966 crimp locator

M300-25A

Crimp Locator 3.6mm Power contact adjustable. Used with WA23 Crimp tool

MFX-3961

Contact Locator Tool

MFX-3966

\* The universal positioner is not included with the crimp tools and must be ordered separately.

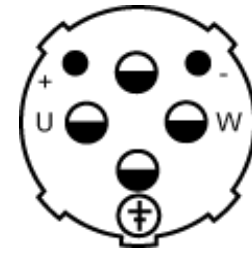
# Connector Solutions M40 Series

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

STEP 3  
Choose Backshell/Cord Grip

See page 20 for connector configurations



## Plugs



MC1CJN0600

## Receptacles



MC1LKN0600

MC1NJN0600

## Receptacle Extension



MC1JJN0600

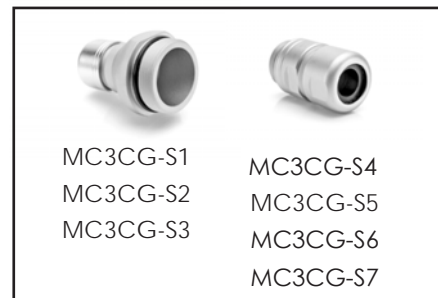
## FlexGrip™ Backshell System



MC4FSR-C18.5

more about FlexGrip™  
on page 282

## Cord Grips



MC3CG-S1

MC3CG-S2

MC3CG-S3

MC3CG-S4

MC3CG-S5

MC3CG-S6

MC3CG-S7

## Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
MC1CJN0600	Plug, straight, threaded	Socket	1
MC1JJN0600	Receptacle extension, straight, threaded	Pin	2
MC1NJN0600	Receptacle, 90° fixed, threaded	Pin	3
MC1LKN0600	Receptacle, straight, threaded	Pin	4

Contacts supplied separately, see page 256

## Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MC4FSR-C18.5*	Flex Grip™ backshell	17.5-18.5mm	5
MC3CG-S1	Cord grip	10.0-12.0mm	6
MC3CG-S2	Cord grip	12.0-14.5mm	6
MC3CG-S3	Cord grip	14.0-17.0mm	6
MC3CG-S4	Cord grip	17.0-19.0mm	7
MC3CG-S5	Cord grip	19.0-21.0mm	7
MC3CG-S6	Cord grip	21.0-23.0mm	7
MC3CG-S7	Cord grip	23.5-25.5mm	7

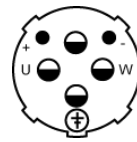
\*Must be potted to achieve IP67 ratings.

**BULK CABLE starts on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 228

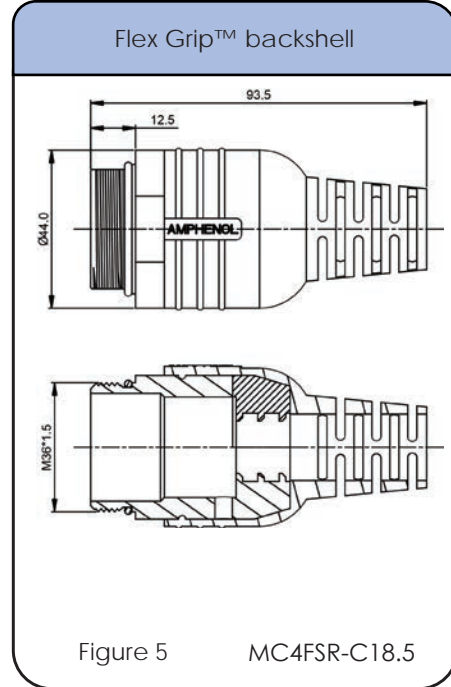
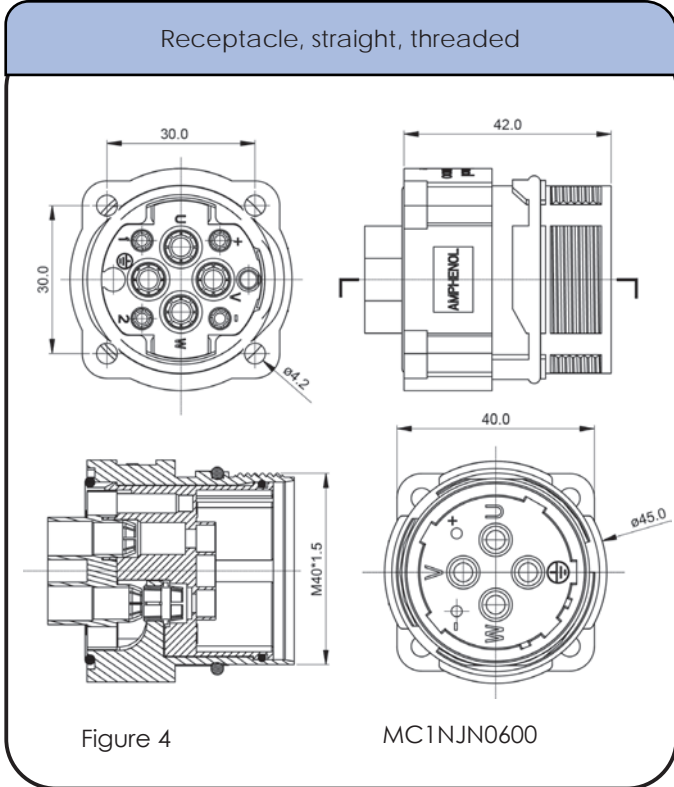
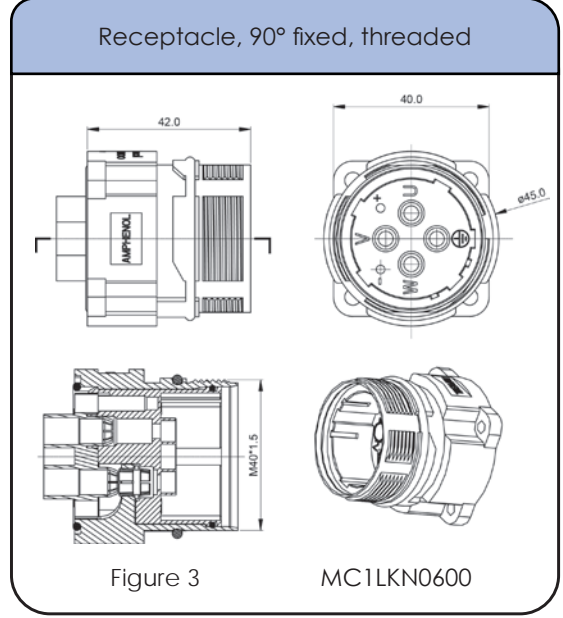
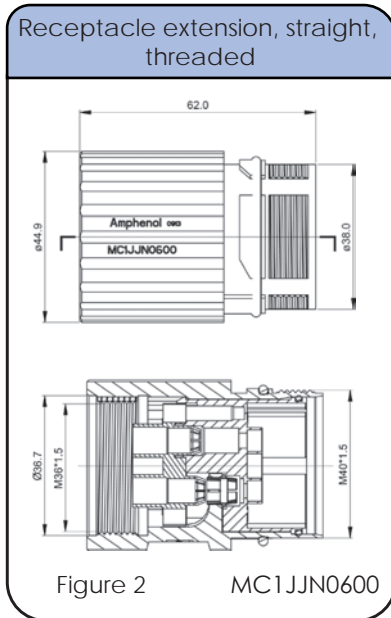
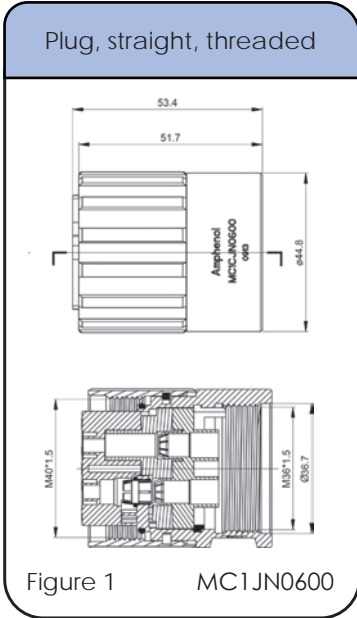




6 (4+2) POSITIONS  
 Power 75A/ 630V  
 Signal 30A/ 250V  
 Threaded

Number of Contacts: 6 (4+2) Contact Sizes: 2.0mm, 3.6mm Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)

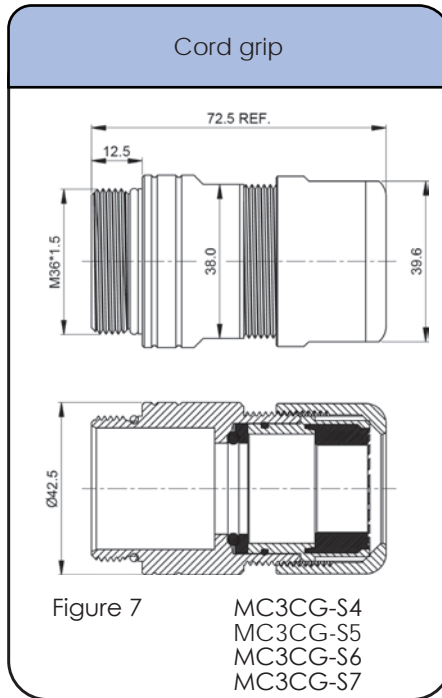
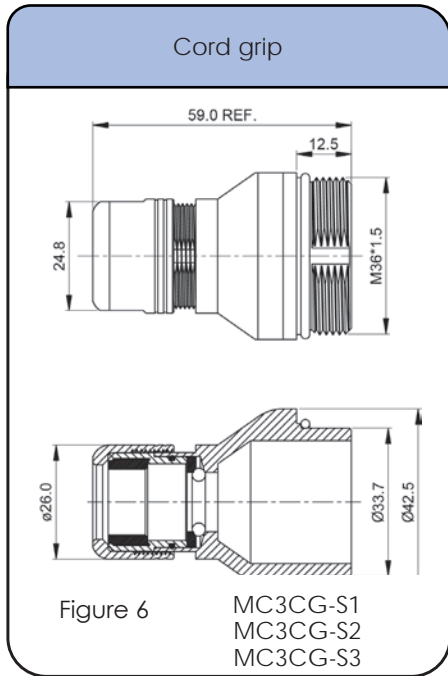
### Dimensions Plug / Cable Connector / Receptacles



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Number of Contacts: 6 (4+2)    Contact Sizes: 2.0mm, 3.6mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)

### Dimensions Cord Grips



### Contacts



### Crimp Contacts, Machined

Part Number	Size	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000040	2.0mm	Pin	18-14	0.75 - 2.5	Gold
SC000041	3.6mm	Pin	12-8	4.0 - 10.0	Gold
SC000045	2.0mm	Socket	18-14	0.75 - 2.5	Gold
SC000046	3.6mm	Socket	12-8	4.0 - 10.0	Gold

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



**6 (4+2) POSITIONS**  
**Power 75A/ 630V**  
**Signal 30A/ 250V**  
**THREADED**

**Number of Contacts: 6 (4+2)    Contact Sizes: 2.0mm, 3.6mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)**

**Tools**

Extraction tool. Used for removal of 2.0mm (#14) contacts from inserts.

50-54931-2

Extraction tool. Used for removal of 3.6mm (#8) contacts from inserts.

50-54931-3

Universal hand crimp tool. Uses universal positioner part no. UH2-5. Wire crimp range 12-26AWG

AF8

Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG

UH2-5

Pneumatic crimp tool. Uses universal positioner part no. WA23-101DA

WA23

Pneumatic crimp tool. Uses universal positioner part no. UH2-5. Wire range 12-26WG

WA27F

Die Assembly, Size 10, is used with the Pneumatic crimp tool. WA23

WA23-101DA

Hand Crimp tool. Uses MFX-3966 crimp locator

M300-25A

Crimp Locator 3.6mm Power contact adjustable. Used with WA23 Crimp tool

MFX-3961

Contact Locator Tool

MFX-3966

CONNECTOR SOLUTIONS

\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M40

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

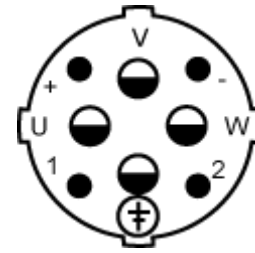
STEP 3  
Choose Backshell/Cord Grip

See page 20 for connector configurations

## Plugs



## Receptacles



## Receptacle Extension

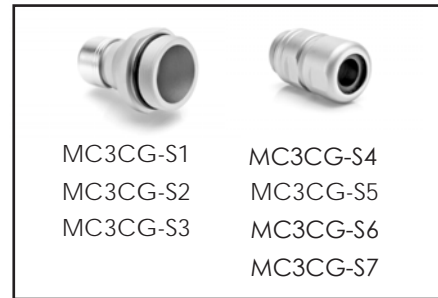


## FlexGrip™ Backshell System



more about FlexGrip™  
on page 282

## Cord Grips



## Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
MC2UPN0800	Plug, straight, Checkmate™	Socket	1
MC2JJN0800	Receptacle extension, straight, Checkmate™	Pin	2
MC2LKN0800	Receptacle, straight, Checkmate™	Pin	3
MC2NHN0800	Receptacle, 90° fixed, Checkmate™	Pin	4

Contacts supplied separately, see page 260

## Cord Grips and Backshells

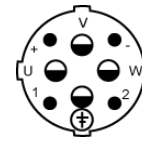
Part Number	Type	Cable Range (mm)	Figure Drawings
MC4FSR-C18.5*	Flex Grip™ backshell*	17.5-18.5mm	5
MC3CG-S1	Cord grip	10.0-12.0mm	6
MC3CG-S2	Cord grip	12.0-14.5mm	6
MC3CG-S3	Cord grip	14.0-17.0mm	6
MC3CG-S4	Cord grip	17.0-19.0mm	7
MC3CG-S5	Cord grip	19.0-21.0mm	7
MC3CG-S6	Cord grip	21.0-23.0mm	7
MC3CG-S7	Cord grip	23.5-25.5mm	7

\*Must be potted to achieve IP67 ratings.

**BULK CABLE starts on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 260



8 (4+4) POSITIONS  
 Power 75A/ 630V  
 Signal 30A/ 250V  
 Checkmate™

Number of Contacts: 8 (4+4) Contact Sizes: 2.0mm, 3.6mm Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)

Plug, straight, Checkmate™

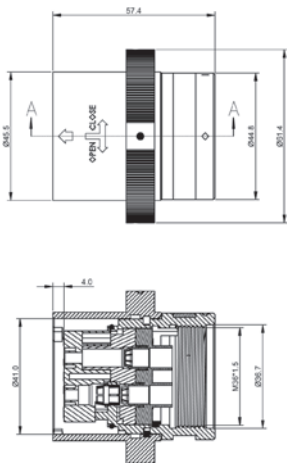


Figure 1 MC2UPN0800

Receptacle extension, straight, Checkmate™

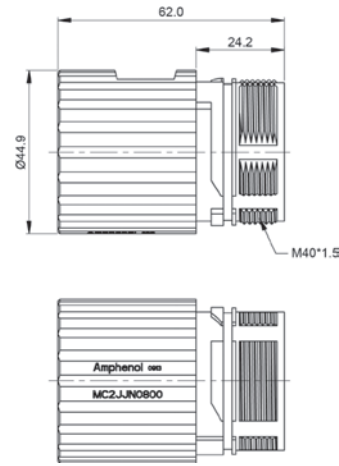


Figure 2 MC2JJN0800

Receptacle, straight, Checkmate™

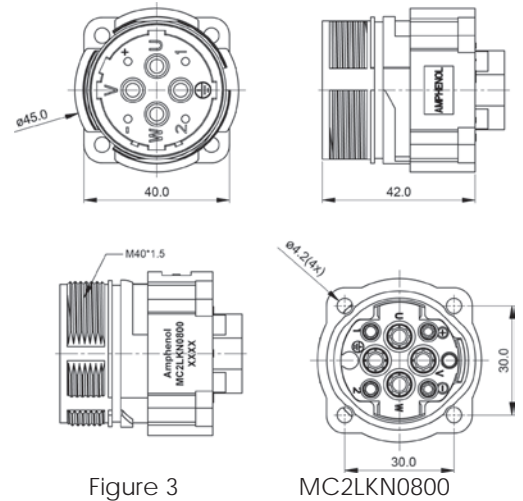


Figure 3 MC2LKN0800

Receptacle, 90° fixed, Checkmate™

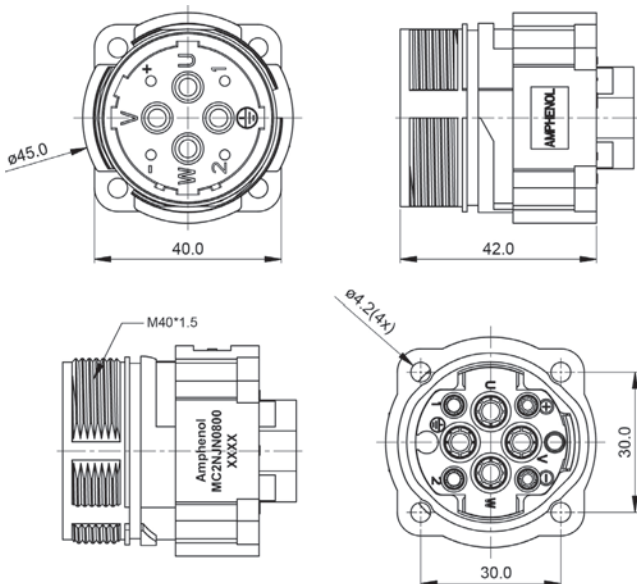
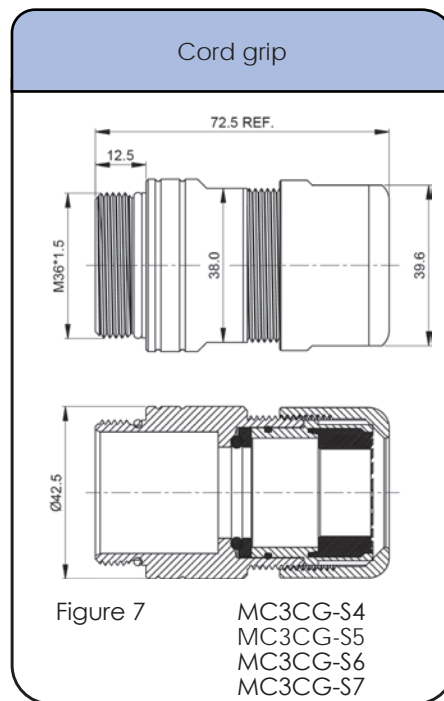
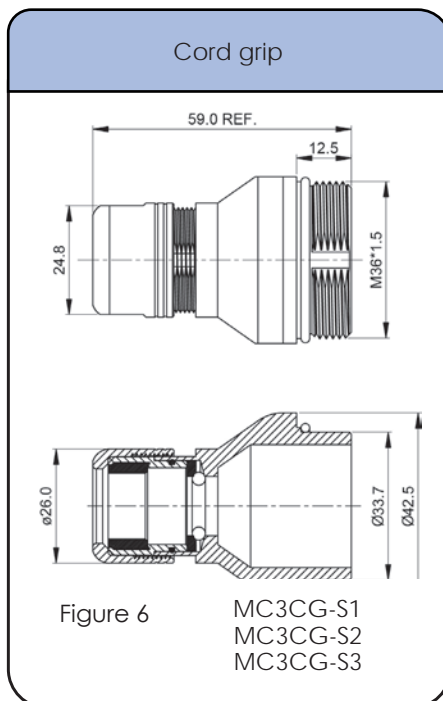
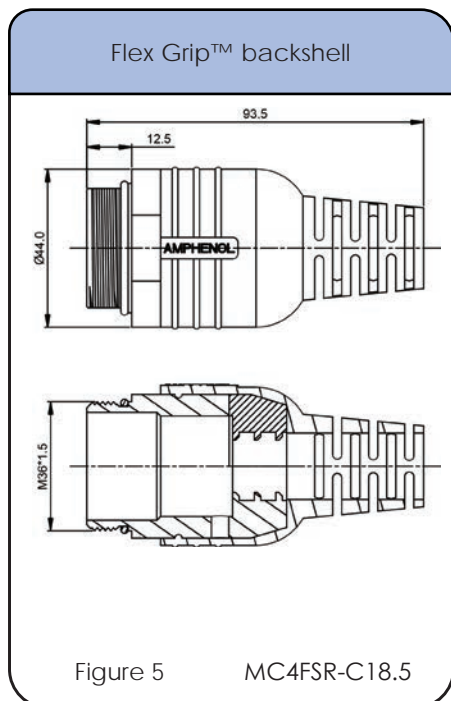


Figure 4 MC2NKN0800

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Number of Contacts: 8 (4+4)    Contact Sizes: 2.0mm, 3.6mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)

## Dimensions Cord Grips



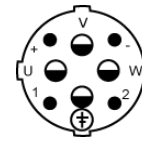
## Contacts



### Crimp Contacts, Machined

Part Number	Size	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000040	2.0mm	Pin	18-14	0.75 - 2.5	Gold
SC000041	3.6mm	Pin	12-8	4.0 - 10.0	Gold
SC000045	2.0mm	Socket	18-14	0.75 - 2.5	Gold
SC000046	3.6mm	Socket	12-8	4.0 - 10.0	Gold

Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



**8 (4+4) POSITIONS**  
**Power 75A/ 630V**  
**Signal 30A/ 250V**  
**Checkmate™**

**Number of Contacts: 8 (4+4)    Contact Sizes: 2.0mm, 3.6mm    Sealing: IP66/67**  
**AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)**

**Tools**

<p>Extraction tool. Used for removal of 2.0mm (#14) contacts from inserts.</p>  <p>50-54931-2</p>	<p>Extraction tool. Used for removal of 3.6mm (#8) contacts from inserts.</p>  <p>50-54931-3</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5. Wire crimp range 12-26AWG</p>  <p>AF8</p>
<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. WA23-101DA</p>  <p>WA23</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5. Wire range 12-26WG</p>  <p>WA27F</p>
<p>Die Assembly, Size 10, is used with the Pneumatic crimp tool. WA23</p>  <p>WA23-101DA</p>	<p>Hand Crimp tool. Uses MFX-3966 crimp locator</p>  <p>M300-25A</p>	<p>Crimp Locator 3.6mm Power contact adjustable. Used with WA23 Crimp tool</p>  <p>MFX-3961</p>
<p>Contact Locator Tool</p>  <p>MFX-3966</p>		

\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Connector Solutions M40

STEP 1  
Choose Plug

STEP 2  
Choose Receptacle

STEP 3  
Choose Backshell/Cord Grip

See page 20 for connector configurations

## Plugs



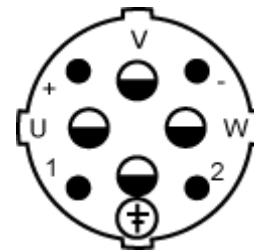
MC1CJN0800

## Receptacles



MC1LKN0800

MC1NJN0800



## Receptacle Extension



MC1JJN0800

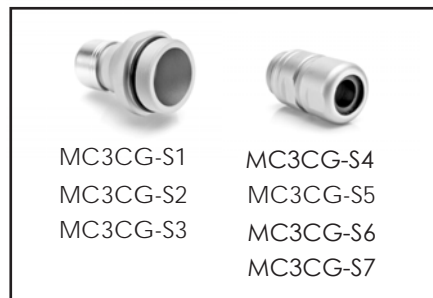
## FlexGrip™ Backshell System



MC4FSR-C18.5

more about FlexGrip™  
on page 282

## Cord Grips



MC3CG-S1

MC3CG-S4

MC3CG-S2

MC3CG-S5

MC3CG-S3

MC3CG-S6

MC3CG-S7

## Connector Part Numbers

Part Number	Connector Type	Contact Type male = pin female = socket	Figure Drawings
MC1CJN0800	Plug, straight, threaded	Socket	1
MC1JJN0800	Receptacle extension, straight, threaded	Pin	2
MC1LKN0800	Receptacle, straight, threaded	Pin	3
MC1NJN0800	Receptacle, 90° fixed, threaded	Pin	4

Contacts supplied separately, see page 236

## Cord Grips and Backshells

Part Number	Type	Cable Range (mm)	Figure Drawings
MC4FSR-C18.5*	Flex Grip™ backshell*	17.5-18.5mm	5
MC3CG-S1	Cord grip	10.0-12.0mm	6
MC3CG-S2	Cord grip	12.0-14.5mm	6
MC3CG-S3	Cord grip	14.0-17.0mm	6
MC3CG-S4	Cord grip	17.0-19.0mm	7
MC3CG-S5	Cord grip	19.0-21.0mm	7
MC3CG-S6	Cord grip	21.0-23.0mm	7
MC3CG-S7	Cord grip	23.5-25.5mm	7

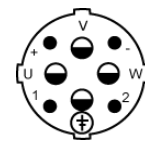
\*Must be potted to achieve IP67 ratings.

**BULK CABLE starts on page 23**

SEE TABLE ON NEXT PAGE FOR PART DETAILS

CONTACTS SOLD SEPARATELY SEE PAGE 236

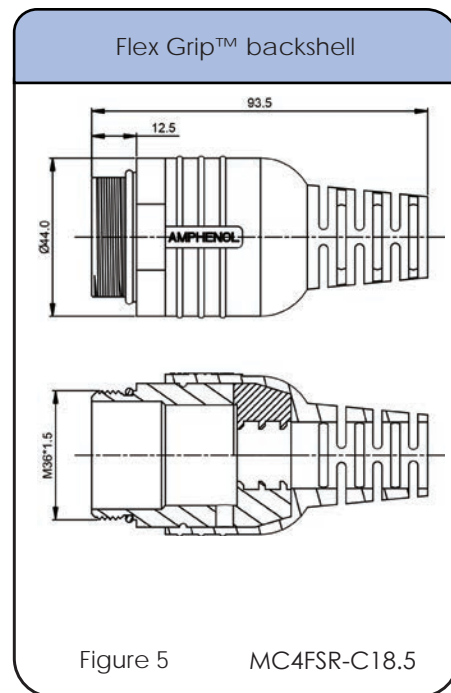
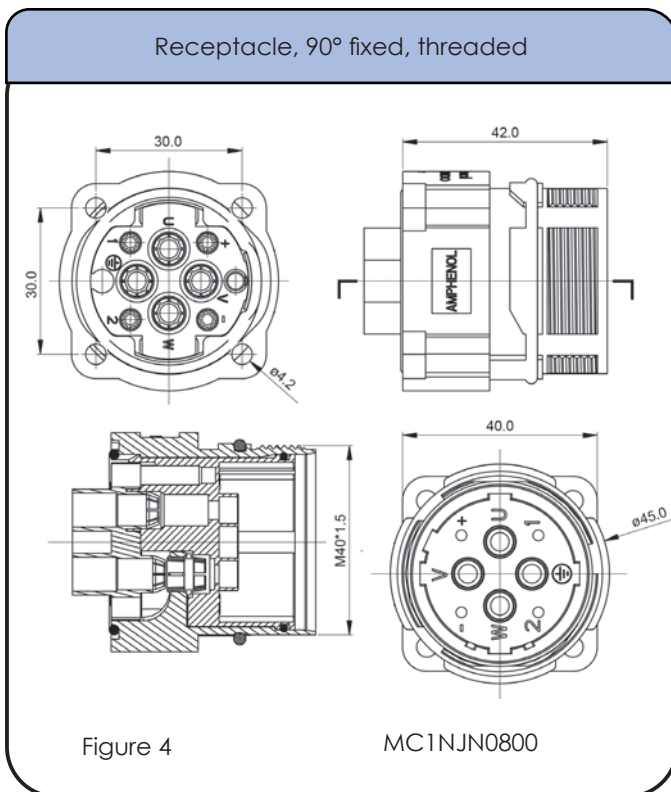
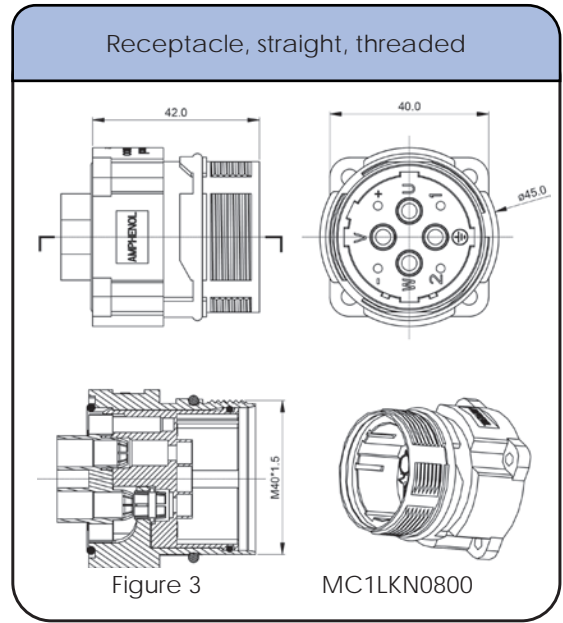
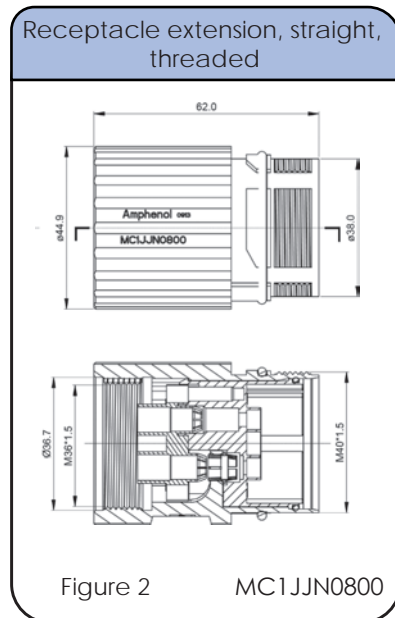
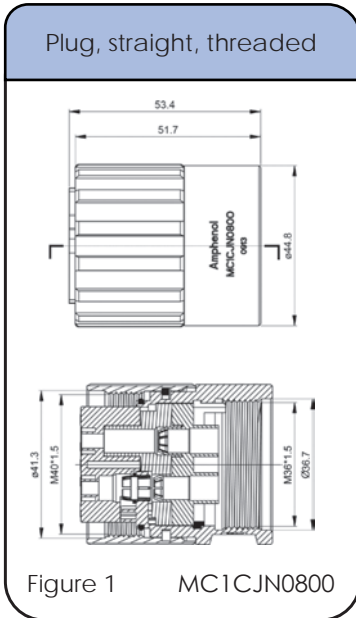




8 (4+4) POSITIONS  
 Power 75A/ 630V  
 Signal 30A/ 250V  
 Threaded

Number of Contacts: 8 (4+4) Contact Sizes: 2.0mm, 3.6mm Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)

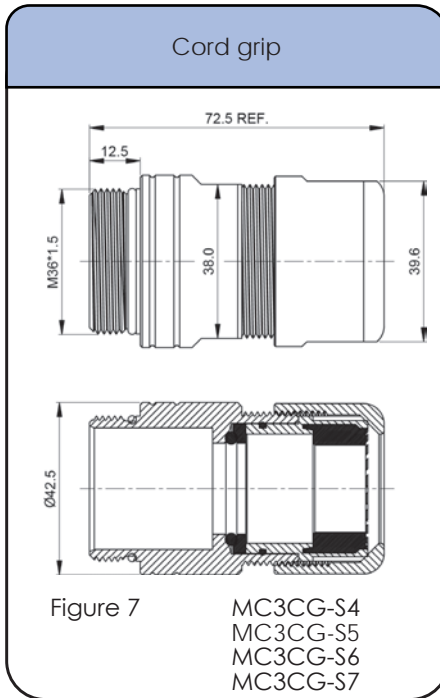
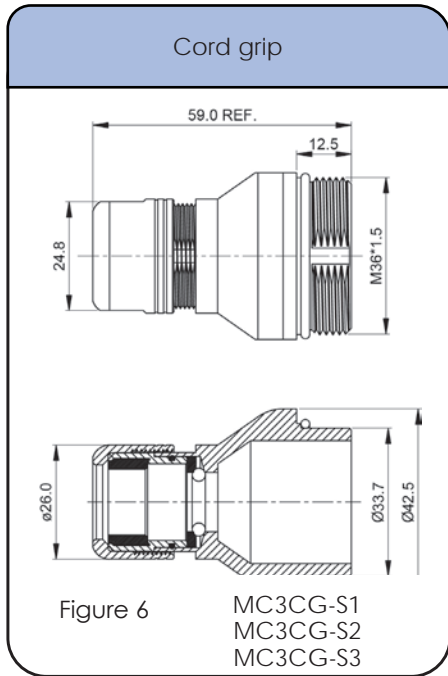
### Dimensions Plug / Cable Connector / Receptacles



Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)

Number of Contacts: 8 (4+4)    Contact Sizes: 2.0mm, 3.6mm    Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)

### Dimensions Cord Grips



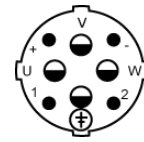
### Contacts



### Crimp Contacts, Machined

Part Number	Size	Pin/Socket	AWG	mm <sup>2</sup>	Plating
SC000040	2.0mm	Pin	18-14	0.75 - 2.5	Gold
SC000041	3.6mm	Pin	12-8	4.0 - 10.0	Gold
SC000045	2.0mm	Socket	18-14	0.75 - 2.5	Gold
SC000046	3.6mm	Socket	12-8	4.0 - 10.0	Gold


Complete datasheets can be found at [www.amphenol-sine.com](http://www.amphenol-sine.com)



8 (4+4) POSITIONS  
 Power 75A/ 630V  
 Signal 30A/ 250V  
 Threaded

Number of Contacts: 8 (4+4) Contact Sizes: 2.0mm, 3.6mm Sealing: IP66/67  
 AWG: 18-14 (0.75 - 2.5 mm<sup>2</sup>) 12-8 (4.0 - 10.0 mm<sup>2</sup>)

### Tools

<p>Extraction tool. Used for removal of 2.0mm (#14) contacts from inserts.</p>  <p>50-54931-2</p>	<p>Extraction tool. Used for removal of 3.6mm (#8) contacts from inserts.</p>  <p>50-54931-3</p>	<p>Universal hand crimp tool. Uses universal positioner part no. UH2-5. Wire crimp range 12-26AWG</p>  <p>AF8</p>
<p>Universal positioner is used with the universal hand crimp tool (AF8). Wire range 12-26AWG</p>  <p>UH2-5</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. WA23-101DA</p>  <p>WA23</p>	<p>Pneumatic crimp tool. Uses universal positioner part no. UH2-5. Wire range 12-26WG</p>  <p>WA27F</p>
<p>Die Assembly, Size 10, is used with the Pneumatic crimp tool. WA23</p>  <p>WA23-101DA</p>	<p>Hand Crimp tool. Uses MFX-3966 crimp locator</p>  <p>M300-25A</p>	<p>Crimp Locator 3.6mm Power contact adjustable. Used with WA23 Crimp tool</p>  <p>MFX-3961</p>
<p>Contact Locator Tool</p>  <p>MFX-3966</p>		

\* The universal positioner is not included with the crimp tools and must be ordered separately.

# Assembly Instructions

## M23 Elite Series 12,16,17 Position Plug Assembly Instructions



**Step 1** - Slide the components over the cable



**Step 2** - Remove the cable jacket 28mm



**Step 3** - Cut the shield back 13mm



**Step 4** - Fold the shield back over the cable jacket



**Step 5** - Strip the wires 4.5mm



**Step 6** - Crimp a contact onto each wire



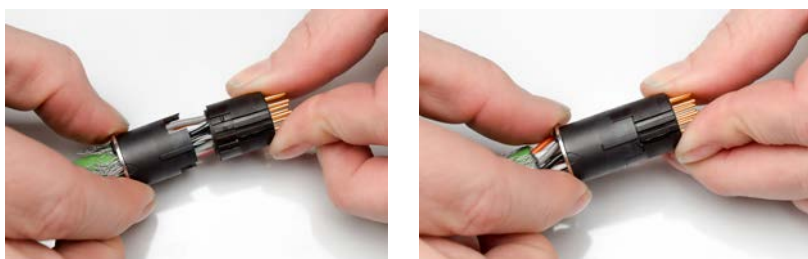
**Step 7** - Push the contacts into the insert as required

# Assembly Instructions

## M23 Elite Series 12,16,17 Position Plug Assembly Instructions (cont)



Step 8 - Pushed contacts



Step 9 - Push the Collar onto the insert



Step 10 - Position the shield as shown

# Assembly Instructions

## M23 Elite Series 12,16,17 Position Plug Assembly Instructions (cont)



Step 11 - Slide the cord grip up to the collar



Step 12 - Trim the shield



Step 13 - Grip the sub-assembly as shown



Step 14 - Push the sub- assembly into the shell

# Assembly Instructions

## M23 Elite Series 12,16,17 Position Plug Assembly Instructions (cont)



Step 15 - Thread the top nut onto the shell



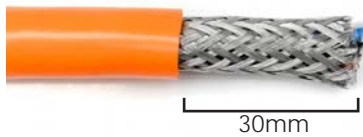
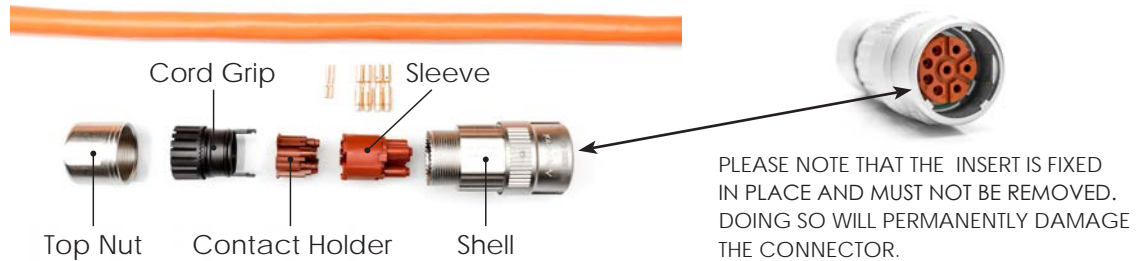
Step 16 - Tighten to 5-7 N/M using 25mm wrench



Step 17 - Finished Assembly

# Assembly Instructions

## M23 Elite Series 6,8,9 Position Plug Assembly Instructions



**Step 1** - Remove the cable jacket 30mm



**Step 2** - Cut the shield back 19mm



**Step 3** - Fold shield back over cable



**Step 4** - Cut power & PE wires to 28mm

**Step 5a** - Strip power & PE wires 7mm



**Step 5b** - Strip signal wire 4.5mm



**Step 6** - Crimp contacts

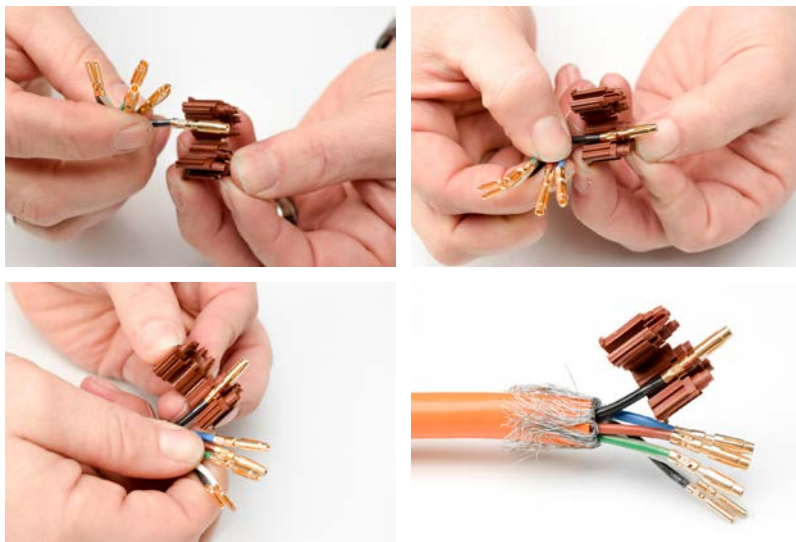


**Step 7** - Open contact holder

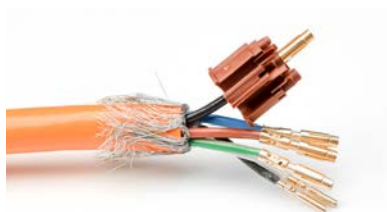


# Assembly Instructions

## M23 Elite Series 6,8,9 Position Plug Assembly Instructions (con't)



Step 8 - Insert contacts while the contact holder is open



Step 9 - Close the contact holder



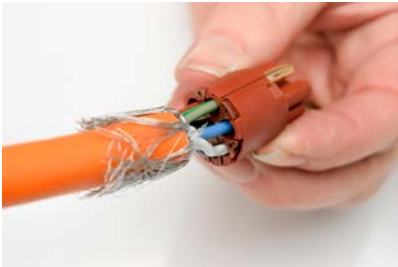
Step 10 - Insert the rest of the contacts



Step 11 - Push the contact holder into the sleeve

# Assembly Instructions

## M23 Elite Series 6,8,9 Position Plug Assembly Instructions (con't)



Step 12 - Position shield as shown back over the cable



Step 13 - Clip the cord grip as shown with the shield sticking out around it



Step 14 - Trim shield as shown



Step 15 - Push sub-assembly into shell

# Assembly Instructions

## M23 Elite Series 6,8,9 Position Plug Assembly Instructions (con't)



Step 16 - Thread the top nut on



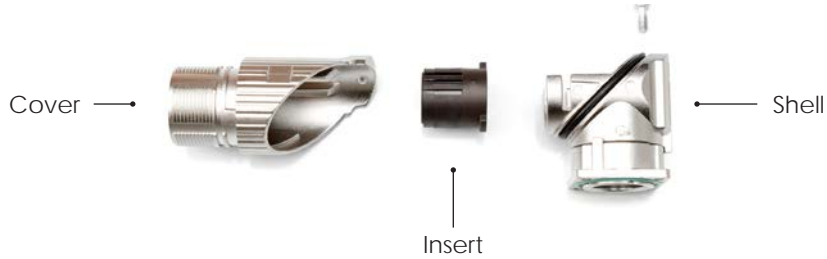
Step 17 - Tighten to 5-7 N/M  
using 25mm wrench



Step 18 - Finished Assembly

# Assembly Instructions

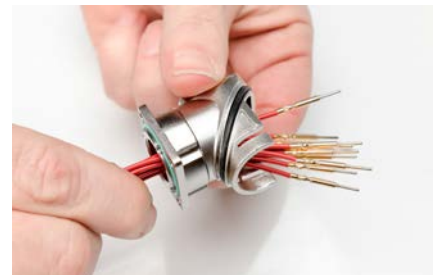
## M23 Elite Series 12,16,17 Position 90° Receptacle Assembly Instructions



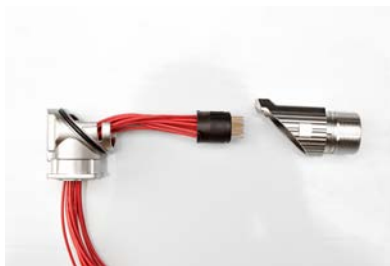
Step 1 - Strip wire 4.5mm



Step 4 - Crimp contacts onto wire



Step 3 - Slide wires through shell



Step 4 - Push wire into insert



Step 5 - Locate keys on sides of insert

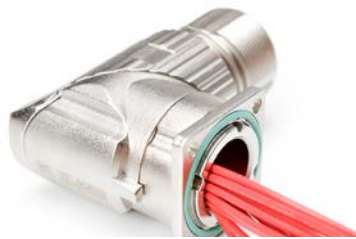


# Assembly Instructions

M23 Elite Series 12,16,17 Position 90° Receptacle Assembly Instructions (con't)



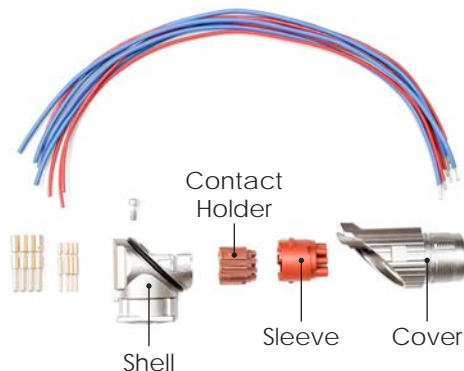
Step 8 - Screw the cover down using 2.5mm Allen Wrench



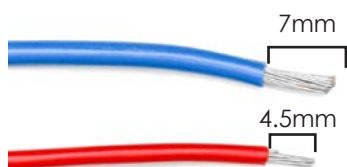
Step 9 - Finished product

# Assembly Instructions

## M23 Elite Series 6,8,9 Position 90° Receptacle Assembly Instructions



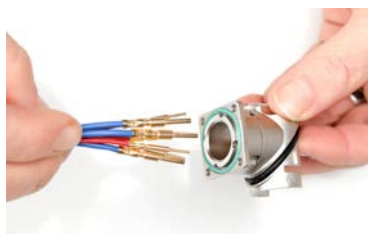
**Step 1A - Strip wire 7mm**  
(this uses 2.0mm contacts)



**Step 1B - Strip wire 4.5mm**  
(this uses 1.0mm contacts)



**Step 2 - Crimp wire to contact**



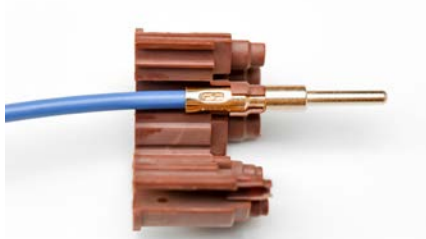
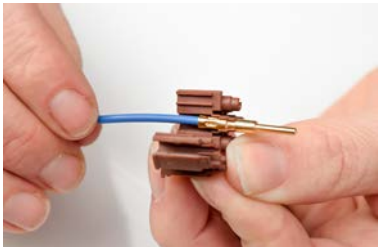
**Step 3 - Insert wires through shell**



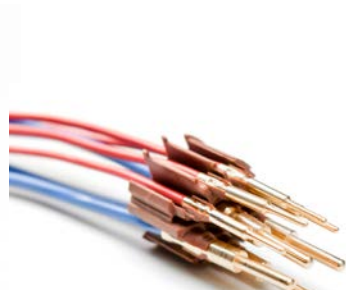
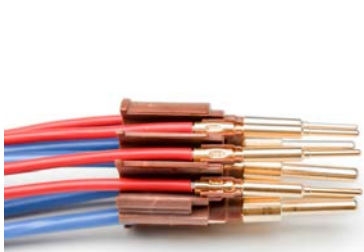
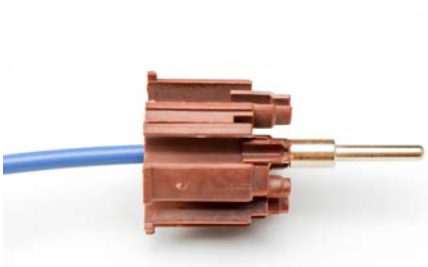
**Step 4 - Open Contact holder**

# Assembly Instructions

## M23 Elite Series 6,8,9 Position 90° Receptacle Assembly Instructions (con't)



Step 5 - Insert wire into the contact holder while its open

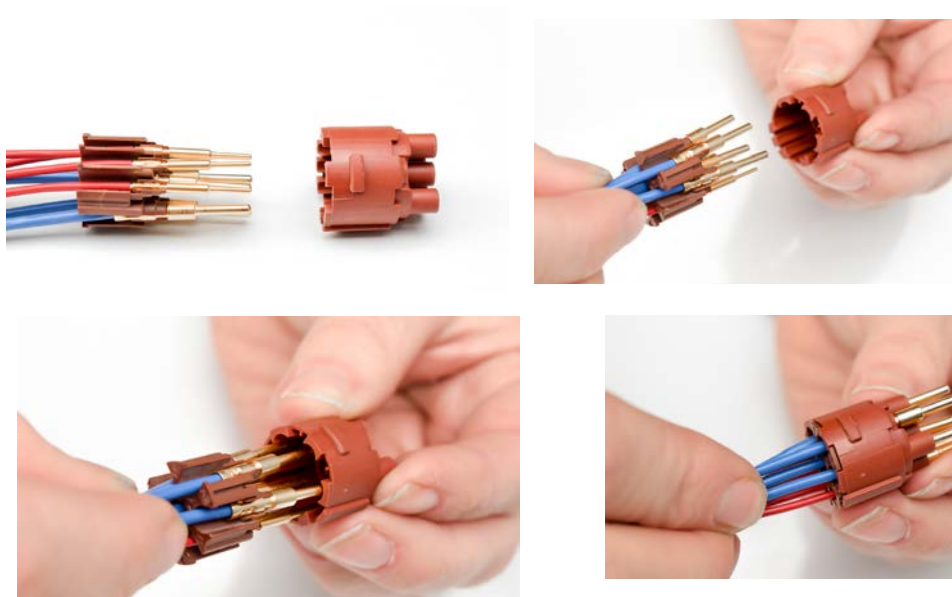


Step 6 - Close and insert the rest of the wires into the contact holder

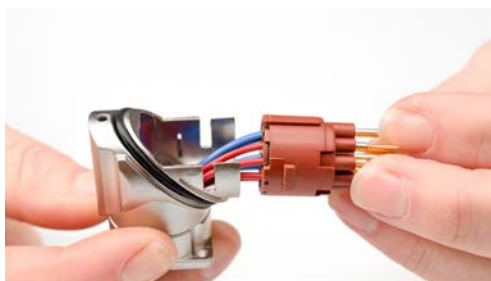


# Assembly Instructions

## M23 Elite Series 6,8,9 Position 90° Receptacle Assembly Instructions (con't)



Step 7 - Push the contact holder into the sleeve



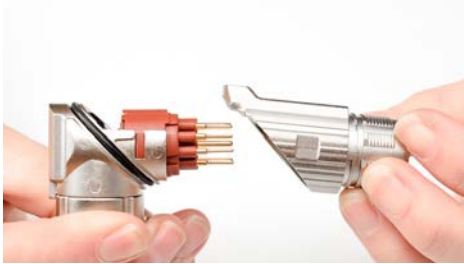
Step 8 - Align the key on the sleeve with the key on the shell



Step 9 - Place sub-assembly into shell

# Assembly Instructions

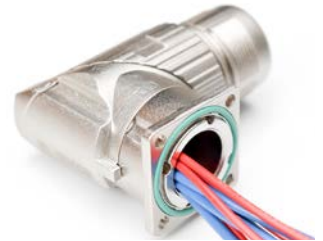
## M23 Elite Series 6,8,9 Position 90° Receptacle Assembly Instructions (con't)



Step 10 - Assemble cover



Step 11 - Tighten screw down using 2.5mm Allen Wrench



Step 12 - Finsihed Product

# Assembly Instructions

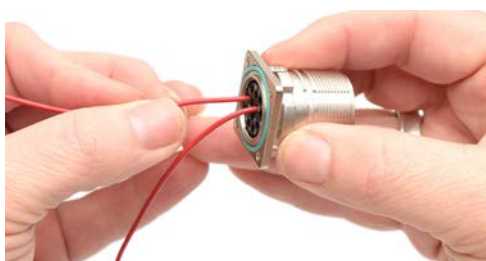
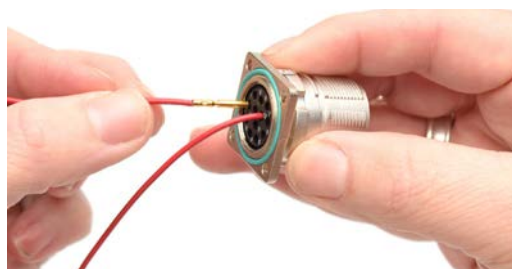
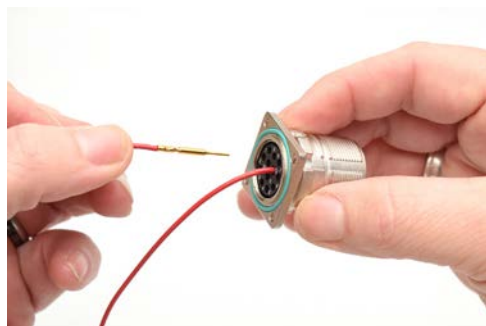
## M23 Standard Series Straight Receptacle Assembly Instructions



Step 1 - Strip wire 4.5mm



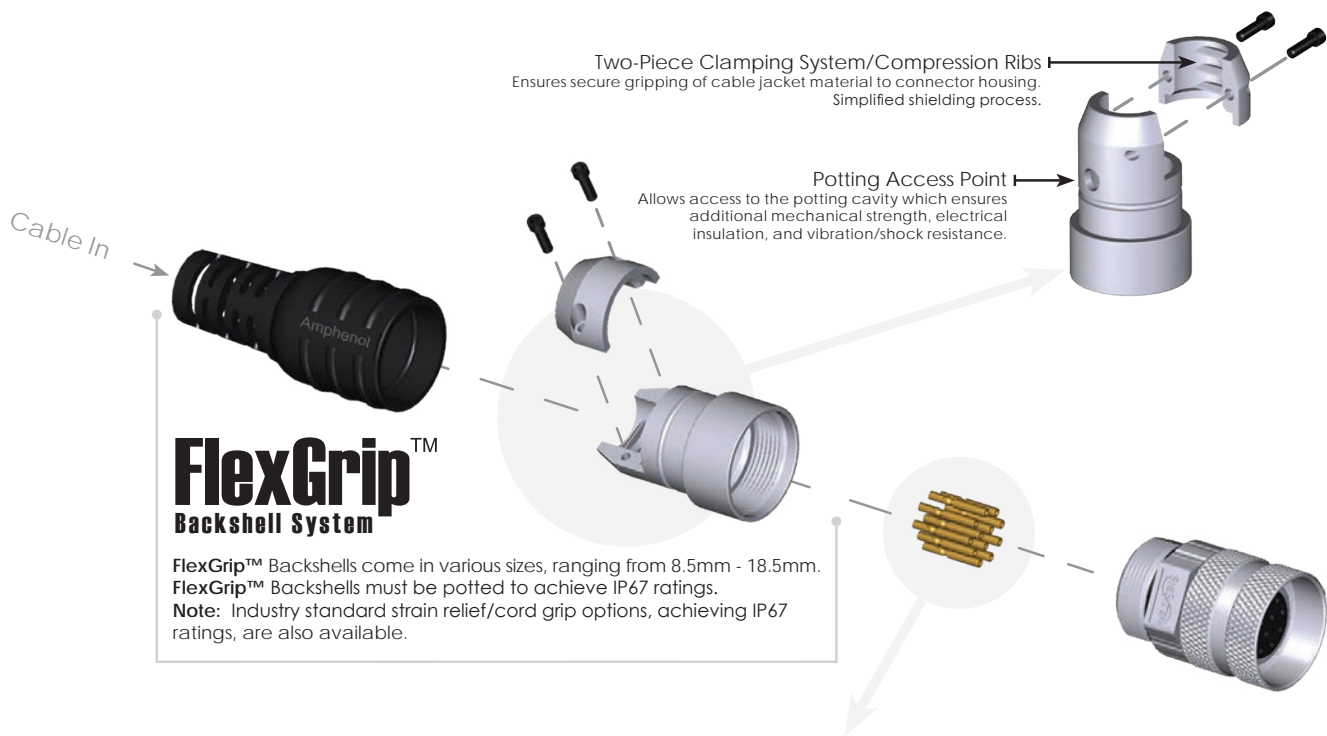
Step 2 - Crimp contact to wire



Step 3 - Push contact into place

# Assembly Instructions

## FlexGrip™ Backshell System



# Assembly Instructions

## Standard Series Plug and Cable Prep and Assembly featuring the FlexGrip™ Backshell

**FlexGrip™ Prep Details:** During cable prep specific to using the FlexGrip backshell, be sure excess shielding material is pulled back over the cable jacket and taped down. This allows for ease of sliding FlexGrip™ parts into place.

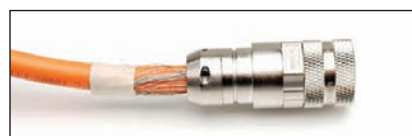
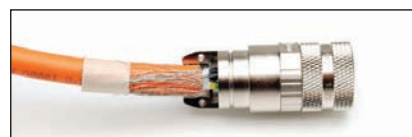
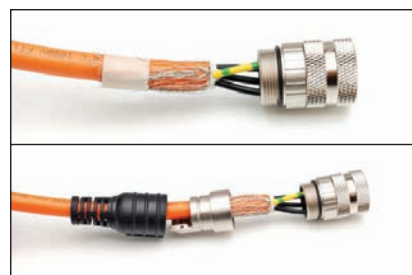
**Note:** \*\* Cable prep is same for P1 (Male) connectors using FlexGrip™ backshells as P2 (Female).

**Step 7B: (FlexGrip™ Only)** Thread into position the bottom part of the Two-Piece Clamp onto the backend of the connector body tightly, ensuring excess shielding material is still exposed underneath the Two-Piece Clamp.

**Step 8B: (FlexGrip™ Only)** Place the top portion of the Two-Piece Clamp into position and use the enclosed screws to tighten into place.

**Step 9B: (FlexGrip™ Only)** Cut off excess shielding material behind Two-Piece Clamp.

**Step 10: (FlexGrip™ Only)** Slide FlexGrip™ Shell over-top the backend portion of the Two-Piece Clamp hardware.



# Assembly Instructions

## M23 Shielded Backshell Assembly Instructions

1. Slide seal-nut (A), cable grommet (B), and backshell (C) onto cable as shown in Figure 1.
2. Remove outer cable jacket per dimension (42mm) shown in Figure 1. Make sure exposed shielding is not nicked or cut.
3. Accurately locate and tighten tie wrap (D) 8mm from cable jacket (Figure 1).
4. Trim excess tie wrap as close as possible to ratchet body. Refer to Reference View A, shown below.
5. Trim the braided shield flush to the edge of the tie wrap (D), exposing the individual wires as shown in Figure 2.
6. Strip individual wire leads to expose 5mm of bare conductor as shown in Figure 2.
7. Crimp contacts (E) onto stripped wire leads (Figure 3).
8. Insert crimped contacts (E) into connector cavities (F), as shown in Figure 3. Verify contacts are properly sealed once installed.

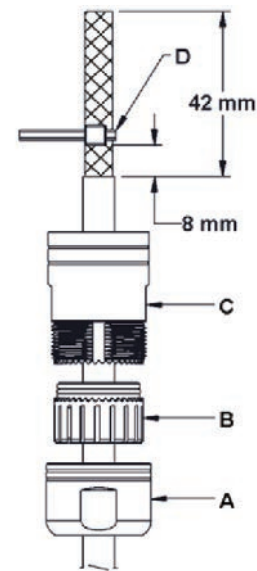


Figure 1

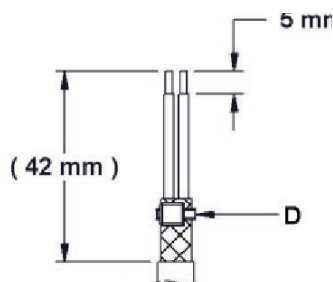


Figure 2

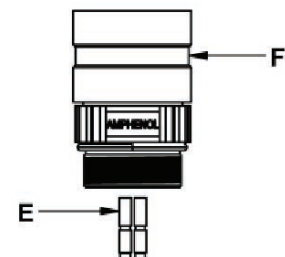
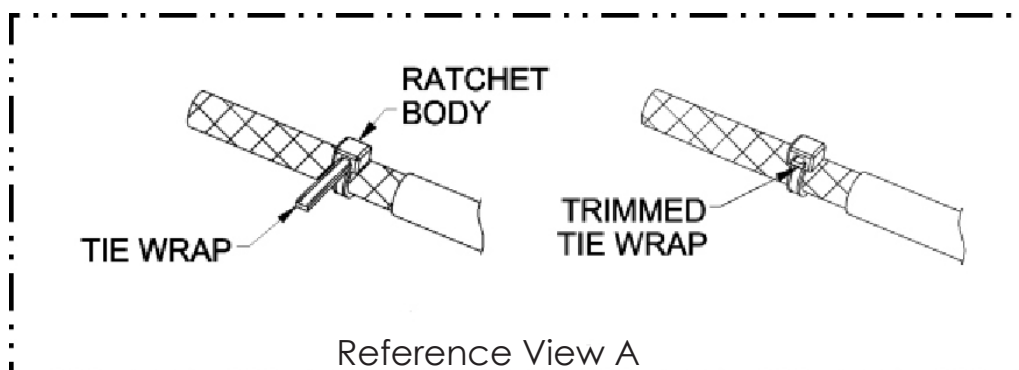


Figure 3



Reference View A

# Assembly Instructions

## M23 Shielded Backshell Assembly Instructions (con't)

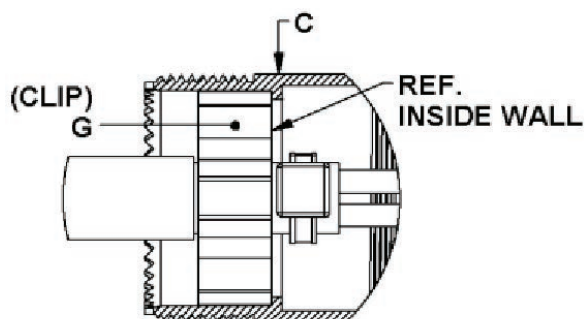
9. Tighten "backshell" (C) to connector (F) as shown in Figure 4. Use a 24mm open ended wrench for the backshell, and a 25mm open ended wrench for the connector. Tighten to a recommended torque of 10Nm.
10. Slide shielding clip (G) over cable jacket as shown in Figure 4.
11. Push shielding clip (G) into backshell (C) until it stops against inside wall as shown in Reference View-B. Clip must be seated over exposed shielding and not over cable jacket.

Note: Clip must be slightly compressed to allow it to enter into the backshell.

12. Push cable grommet (B) into backshell (C) as shown Figure 5.
13. Thread and tighten seal-nut (A) onto backshell (C) as shown in Figure 6. Use a 24mm open ended wrench for the backshell, and a 25mm open ended wrench for the seal-nut.

### Figure 3

Note: Seal nut torque required to properly retain and seal cable may vary depending on cable construction.



Reference View B

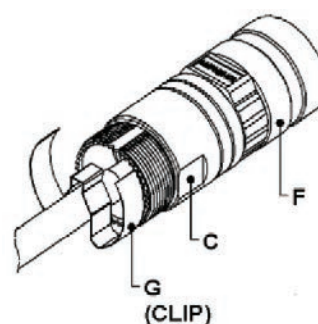


Figure 4

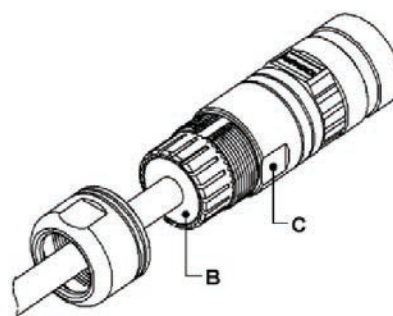


Figure 5

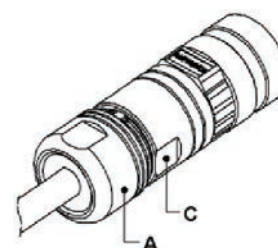


Figure 6

# Appendix

## Glossary of Terms

<b>American Wire Gauge (AWG)</b>	<b>Connector life</b>
System of numerical designations for wire sizes, based on specified ranges of cross-sectional areas. Starts with 4/0 (000) at the largest size, going to 3/0, 2/0, 1/0, 1, 2, and up to 40 and beyond for the smallest size. A step of one AWG number corresponds to a reduction of cross-sectional area of appr. 20 %.	The number of mating cycles prior to abrasion of the conductive contact surface and which does not result in a significant rise of the contact resistance. Tests according to test 9a of ICE 60512-5 / DIN EN 60512 Part 5.
<b>Attenuation</b>	<b>Contact</b>
A reduction of power. Occurs naturally when waves travel through lines, wave guides, or media such as air or water. Is produced additionally by imperfections in electrical or optical connections (attenuation in fibre optics), e. g. contact resistance, mismatch, etc.	The conductive element in a connector which mates with a corresponding element to provide an electrical path.
<b>Bulkhead connector</b>	<b>Contact resistance</b>
Connector designed to be inserted into a panel cutout from the rear of the panel, thus forming part of the barrier between two spaces. Back-mounted.	The electrical resistance of a mated set of contacts under specified conditions. Tested according to tests 2a, 2b, 2c, of IEC 60 512 -2/ DIN EN 60 512-2.
<b>Clearance</b>	<b>Contact size</b>
The shortest distance in air between two conductive parts, see IEC 60664.	The designation used to differentiate one contact from another. It may be denoted by one of the following numbering systems:
<b>Climatic stability</b>	<b>Creepage distance</b>
General term describing the behavior of components under various climatic conditions, e. g. high and low temperatures, tropical climate, high humidity, moist heat, fungus, atmospheric conditions (industrial atmosphere), reduced air pressure, etc. Climatic conditions for test purposes are explained in IEC 60068, DIN 46 040.	The shortest distance along the surface of the insulating material between two conductive parts. The longer the distance, the less the risk of arc damage or tracking. Minimum creepage distances are specified according to the rated voltage and the applicable pollution degree and Comparative Tracking Index.
<b>Connector</b>	<b>Crimped connection</b>
A component which terminates conductors for the purpose of providing connection and disconnection to a suitable mating component which shall not be engaged or disengaged when live. Depending on the fastening to a cabinet, panel, rack etc. or a cable, they are classified as fixed or free connectors. A connector comprises one or more contacts and a housing which may have a separate connector insert and a separate outer housing or shell.	A solderless connection made by crimping. IEC 60352-2 / DIN IEC 60352 Part 2.
<b>Connector housing</b>	<b>Derating curve</b>
The part of a connector into which the insert and the contacts are assembled. It may function as part of the locking mechanism.	The method for determining derating is specified in IEC 60 512-3. Here the combination of ambient temperature (Tu) and the current (I) leading to the same maximum allowable temperature (Tb) at the hottest point of the connector are plotted.
<b>Connector insert</b>	<b>DIN</b>
An insulating element designed to support and position contacts in a connector housing. In connectors electromagnetic interference is prevented by shielding. Shielded connectors normally provide means to connect the screens of attached cables.	Deutsches Institut für Normung. A German standards organization.
	<b>Electromagnetic interference (EMI)</b>
	General term describing the undesirable effects of the immission or emission of radio frequency fields.
	<b>Funnel entry (restricted entry C146 D series)</b>
	Flared or widened entrance to a conductor barrel permitting easier insertion of the conductor.
	<b>Insertion or withdrawal force</b>
	The force required to fully insert or withdraw a set of mated connectors without the effect of coupling, locking or similar devices. The insertion force is usually greater than the withdrawal force.



# Appendix

## Connector Glossary

<b>Insulation grip</b>
The area of a crimp contact that has been reshaped around the insulation of the conductor by compression during the crimping operation.
<b>Insulation resistance</b>
The resistance of the insulation between two conductive elements, in particular, the resistance between two contacts or between a contact and a metallic housing or shield. Tested according to test 3a of IEC 60512-2 / DIN IEC 60512 Part 2.
<b>Intermateable</b>
Two connectors are intermateable when they are capable of being connected electrically and mechanically but without regard to their performance and intermountability.
<b>Locator</b>
In a crimping tool the device used for positioning a crimp contact or terminal end.
<b>Mating cycle</b>
One mating cycle comprises one insertion and one withdrawal operation. Term used in the definition of connector life.
<b>Material group</b>
Classification of insulation materials according to their CTI values (CTI = Comparative Tracking Index)
<b>Overvoltage category</b>
A numeral defining a transient overvoltage condition. Overvoltage categories I, II, III and IV are used.
<b>Connector with braking capacity (CBC)</b>
A component which may be engaged or disengaged in normal use, when live or under load. Note: In the sense of this document the term - live- is used if contacts are under voltage not necessarily with a current flowing across the contacts. The term - load - is used if a current is flowing across the contacts.
<b>Rated current</b>
A current value assigned by the manufacturer which the connector or PSD can carry continuously (without interruption) and simultaneously through all its contacts wired with the largest conductor preferably at an ambient temperature of 40 °C without the upper temperature being exceeded.
<b>Shield, shielding</b>
Shielding of internal or external electric fields by means of a plane with a uniform electric potential, formed by metal shells or metallic layers on the inside or outside of plastic shells. The shield is normally connected to the shielding braid of the cable and/or chassis ground.

<b>Wire range</b>
The range of wire cross sections which is compatible with the dimensions the terminals of the contact (wire barrel). The wire range is expressed in mm <sup>2</sup> or in AWG numbers.

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Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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