



## Connectors for Winter and Road Service Area Equipments

### Comprehensive Solution for Vehicles & Equipments

**Standardized interface for trucks & accessories**

■ Approved by EN 16330

**Outdoor use & Heavy duty**

■ Enhanced grip to use while wearing gloves  
Waterproof IP68/69K  
UV resistance  
Resistance to shocks & vibrations

**Covering all aspects from vehicles to attachments**

■ Complete range with connectors, closing cap, backshells and accessories

## Typical Applications



Winter & Road Service Vehicles



Accessories



Agriculture



Off road - Mining



Mobile Machinery

## General Technical Characteristics

WME1: Solution from vehicle to attachment



### Materials

- **Shell:** Thermoplastic
- **Backshells and cable glands:** Thermoplastic
- **Coupling ring:** Thermoplastic
- **Spring:** Stainless steel
- **Insert:** Thermoplastic
- **Contacts:** See page 6
- **Halogen free**
- **RoHS compliant & conforms to the Chinese standard SJ/T1166-2006 (Chinese RoHS equivalent)**



### Environmental

- **Operating temperature:** from -30°C to +85°C
- **Flammability rating:** UL94 V-0
- **Salt spray:** ≥ 500 hours
- **Sealing:** IP68/IP69K
- **Fluid resistance:**
  - Gasoil
  - Mineral oil
  - Acid bath
  - Cleaning agent
  - Basic bath



With courtesy of Dainger

### Electrical

- **Withstand voltage:** 5.000 V
- **Current rating:**
  - Power #8: 44 Amps
  - Signal #16: 13 Amps
- **Contact resistance:**
  - #8: ≤ 5 mΩ
  - #16: ≤ 3 mΩ

### Mechanical

- **Durability:** 250 matings & unmatings
- **Vibration resistance ISO 16750-3:**
  - Acceleration 5.79 g.
  - Duration: 32 hours per axe
  - Frequency: 10-20,000 Hz
- **Thermal shock:** 100 cycles 1h30, from -30°C +85°C.

WME2: Solution for inside the cabin



### Materials

- **Shell:** Thermoplastic
- **Backshells and cable glands:** Thermoplastic
- **Coupling ring:** Thermoplastic
- **Insert:** Thermoplastic
- **Contacts:** See page 10
- **Halogen free**
- **RoHS compliant & conforms to the Chinese standard SJ/T1166-2006 (Chinese RoHS equivalent)**



### Environmental

- **Operating temperature:** from -40°C to +125°C
- **Flammability rating:** UL94 V-0
- **Salt spray:**
  - > 1,000 hours (mated connectors)
  - 48 hours (unmated connectors)
- **Sealing:** IP67/IP68
- **Fluid resistance:**
  - Gasoil
  - Mineral oil
  - Acid bath
  - Basic bath



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### Electrical

- **Withstand voltage:** 1.500 V
- **Contact resistance:** < 3 mΩ
- **Current rating:** #16: 13 Amps



### Mechanical

- **Durability:** 250 matings & unmatings
- **Frequency range:**
  - 10-20,000 Hz, 20 g.
  - 10 cycles in accordance with CEI 28-2-6



## WME1: 4x#8 + 7x#16



## Connector Part Numbers

| Connector type              | Contact type                                    | Layout         | Connector delivered with |           | Part numbers     |                  |
|-----------------------------|---|----------------|--------------------------|-----------|------------------|------------------|
|                             |   |                | Closing cap              | Backshell | Male insert      | Female insert    |
| Square flange receptacle    | Crimped contacts supplied separately see page 6 | 4 x #8 + 7# 16 | No                       | No        | <b>WME10003A</b> | -                |
| Receptacle with closing cap |   |                | Yes                      | No        | <b>WME10007A</b> | -                |
|                             |   |                | Yes                      | Yes       | <b>WME10012A</b> | -                |
| Plug                        |   |                | N/A                      | No        | -                | <b>WME10002A</b> |
|                             |   |                | N/A                      | Yes       | -                | <b>WME10013A</b> |

## Backshells

| Backshell type                                   | IP level | Ø cable range mini/maxi | Part numbers     |
|--|----------|-------------------------|------------------|
| Backshell with grommet and spacer for receptacle | IP68/69K | 9/18 mm                 | <b>WME10010A</b> |
| Backshell with grommet and spacer for plug       | IP68/69K |                         | <b>WME10011A</b> |

## Accessories

**Protectiv cap for Plug**

IP40

**Part number**  
**WME11011A**

**Dust cap for WME10003A/10007A/10012A**

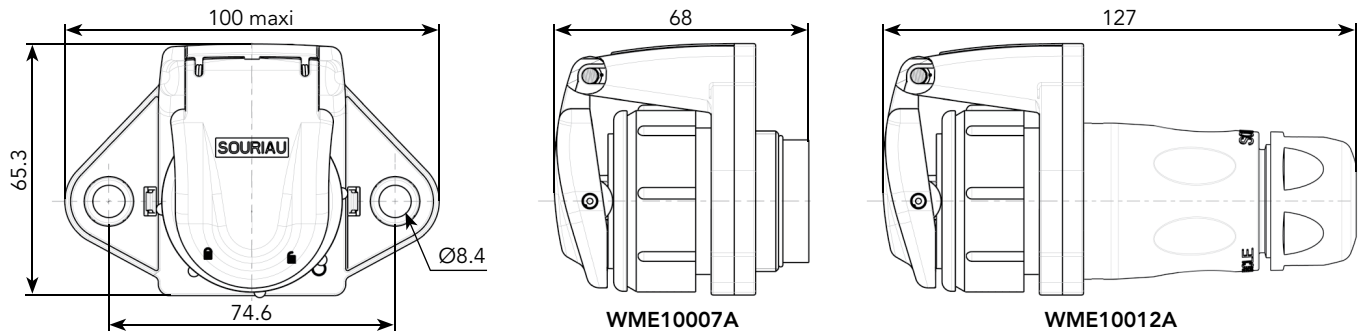
IP65

**Part number**  
**WME10015A**  
With chain

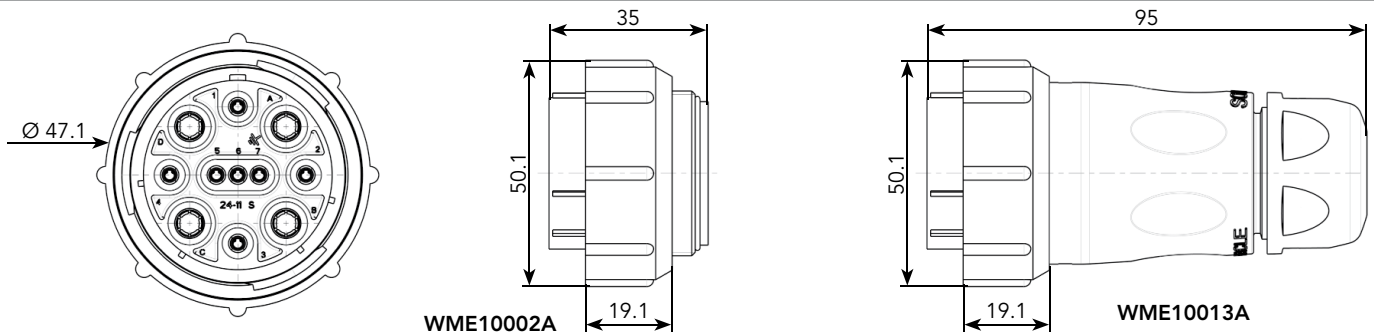
## Dimensions

11 pos.

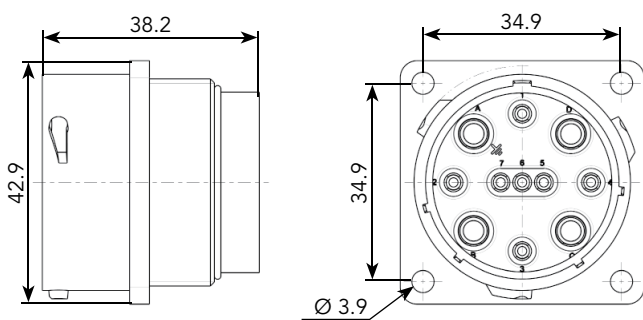
### Square flange receptacle - WME10007A & WME10012A



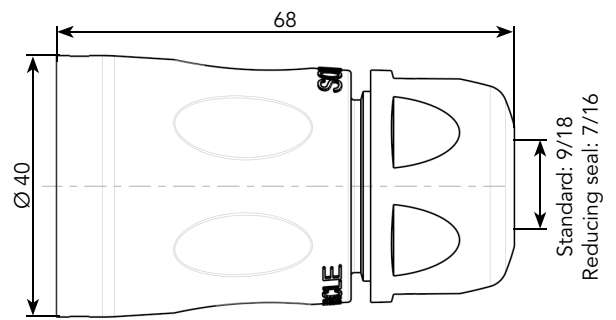
### Plug - WME10002A & WME10013A



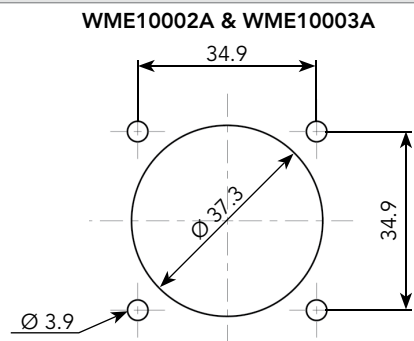
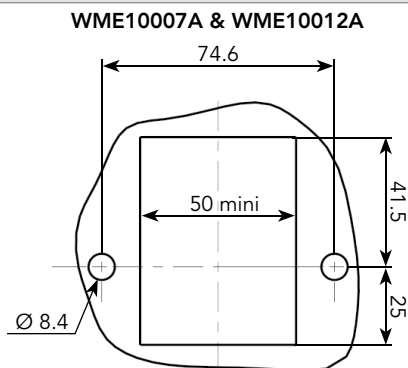
### Square flange receptacle - WME10003A



### WME10010A & WME10011A



### Panel Cut Out



Note: all dimensions are in mm

## Contacts for WME1

| Contact size      | Conector type | Type             | Wire size |                 | Part number   |   | Max wire Ø (mm) | Max insulator Ø (mm) | Available plating see below |
|-------------------|---------------|------------------|-----------|-----------------|---|---|-----------------|----------------------|-----------------------------|
|                   |               |                  | AWG       | mm <sup>2</sup> | Male  | Female  |                 |                      |                             |
| #16<br>Ø1.6<br>mm | WME1          | Machined         | 30-28     | 0.05-0.08       | <b>RM28M1-</b>  | <b>RC28M1-</b>  | 0.55            | 1.1                  | K, J                        |
|                   |               | Machined         | 26-24     | 0.13-0.2        | <b>RM24M9-</b>  | <b>RC24M9-</b>  | 0.8             | 1.6                  | K, J                        |
|                   |               | Stamped & Formed | 26-24     | 0.13-0.25       | <b>SM24M1-</b> <sup>(1)</sup><br><b>SM24ML1-</b> <sup>(2)</sup>   | <b>SC24M1-</b> <sup>(1)</sup><br><b>SC24ML1-</b> <sup>(2)</sup>   | 0.89-1.28       | Insulation grip      | S31, S18, TK6               |
|                   |               | Machined         | 22-20     | 0.32-0.52       | <b>RM20M13-</b><br><b>RM20M12-</b>                                | <b>RC20M13-</b><br><b>RC20M12-</b>                                | 1.18            | 1.8<br>2.2           | K, J                        |
|                   |               | Stamped & Formed | 22-20     | 0.35-0.5        | <b>SM20M1-</b> <sup>(1)</sup><br><b>SM20ML1-</b> <sup>(2)</sup>   | <b>SC20M1-</b> <sup>(1)</sup><br><b>SC20ML1-</b> <sup>(2)</sup>   | 1.17-2.08       | Insulation grip      | S31, S18, TK6               |
|                   |               | Machined         | 20-16     | 0.52-1.5        | <b>RM16M23-</b>   | <b>RC16M23-</b>   | 1.8             | 3.2                  | K, J                        |
|                   |               | Stamped & Formed | 18-16     | 0.8-1.5         | <b>SM16M1-</b> <sup>(1)</sup><br><b>SM16ML1-</b> <sup>(2)</sup>   | <b>SC16M1-</b> <sup>(1)</sup><br><b>SC16ML1-</b> <sup>(2)</sup>   | 3.0             | No insulation grip   | S31, S18, TK6               |
|                   |               | Stamped & Formed | 18-16     | 0.8-1.5         | <b>SM16M11-</b> <sup>(1)</sup><br><b>SM16ML11-</b> <sup>(2)</sup> | <b>SC16M11-</b> <sup>(1)</sup><br><b>SC16ML11-</b> <sup>(2)</sup> | 2.0-3.0         | Insulation grip      | S31, S18, TK6               |
|                   |               | Machined         | 16-14     | 1.5-2.5         | <b>RM14M30-</b>   | <b>RC14M30-</b>   | 2.28            | 3.2                  | K, J                        |
|                   |               | Stamped & Formed | 14        | 2.0-2.5         | <b>SM14M1-</b> <sup>(1)</sup><br><b>SM14ML1-</b> <sup>(2)</sup>   | <b>SC14M1-</b> <sup>(1)</sup><br><b>SC14ML1-</b> <sup>(2)</sup>   | 3.0             | No insulation grip   | S31, S18, TK6               |
| #8<br>Ø3.6<br>mm  | Machined      |                  | 16        | 1.5             | <b>82913601A</b>  | <b>82913600A</b>  | -               | 6.5                  | A                           |
|                   |               |                  | 14        | 2.5             | <b>82913603A</b>  | <b>82913602A</b>  |                 |                      |                             |
|                   |               |                  | 12        | 4               | <b>82913605A</b>  | <b>82913604A</b>  |                 |                      |                             |
|                   |               |                  | 10        | 6.0             | <b>82913607A</b>  | <b>82913606A</b>  |                 |                      |                             |
|                   |               |                  | 8         | 10.0            | <b>82913609A</b>  | <b>82913608A</b>  |                 |                      |                             |

(1) contact reeled (2) loose contact  
 Exemple: **RM28M1K** - Size #16, Machined, AWG30 wire.

### Contact Selector Guide

#### Contacts Supplied Separately

| Electrical characteristics: contact resistance |                  |       |
|--|------------------|-------|
| #16<br>Ø1.6mm                                  | Machined         | < 3mΩ |
|  | Stamped & formed | < 6mΩ |
| #8<br>Ø3.6mm                                   | Machined         | < 5mΩ |

| Available plating options                                      |   |
|--|---|
| <b>A</b>   | 2µ Ni + 2µ Ag   |
| <b>J</b>   | Gold flash over 2µ Ni   |
| <b>K</b>   | Min 0.4µ gold over 2µ Ni  |
| <b>S31</b>   | Active part: Gold flash over Ni<br>Crimp area: Nickel                                   |
| <b>S18</b>   | Active part: 0.75µ gold min over 2µ Ni<br>Crimp area: 1.3µ tin over Ni<br>Other: Nickel |
| <b>TK6</b>   | 2-5µ Sn pre-plated  |
| <b>D70</b>   | Superseded by S31   |
| <b>S6</b>  | Superseded by S18   |
| <b>Other platings on request (contact supplied separately)</b> |   |
| <b>T</b>   | T: 2µm Ni mini all over +<br>3 to 5 µm Sn all over                                      |
| <b>D28</b>   | 0.75µ gold over Ni  |

# Tooling for WME1

11 pos.

## Crimp Tooling

### Standard contacts

| Contact size   | Part number <sup>(1)</sup> | Head*     | Handles* | Extraction tools |
|----------------|----------------------------|-----------|----------|------------------|
| #16<br>Ø 1.6mm | RM/RC 28M-                 | S16RCM20  | SHANDLES | RX2025GE1        |
|                | RM/RC 24M9-                |           |          |                  |
|                | RM/RC 20M13-               |           |          |                  |
|                | RM/RC 20M12-               |           |          |                  |
|                | RM/RC 16M23-               | S16RCM16  |          |                  |
|                | RM/RC 14M30-               | S16RCM14  |          |                  |
|                | SM/SC 24ML1-               | S16SCM20  |          |                  |
|                | SM/SC 20ML1-               |           |          |                  |
|                | SM/SC 16ML1-               | S16SCML1  |          |                  |
|                | SM/SC 14ML1-               | S16SCML11 |          |                  |
| SM/SC 16ML11-  |                            |           |          |                  |

(1) see page 6 for plating options and other contact details

\* Endurance of SHANDLES & Head tools = 50,000 cycles

| Contact size  | Part number           | Tool with separate locator |                              | Extraction tools |
|---------------|-----------------------|----------------------------|------------------------------|------------------|
|               |                       | Hand tool                  | Positioner + locator setting |                  |
| #8<br>Ø 3.6mm | 82913601A / 82913600A | M317                       | VGE10078A                    | 51060210936      |
|               | 82913603A / 82913602A |                            |                              |                  |
|               | 82913605A / 82913604A |                            |                              |                  |
|               | 82913607A / 82913606A |                            |                              |                  |
|               | 82913609A / 82913608A |                            |                              |                  |

### Tools for contact #16



Part number Handle  
(without Head)

SHANDLES



Crimp Tooling  
(without Shandles)

S16RCM16\*



Part number  
Extraction Tool

RX2025GE1

### Tools for contact #8



Part number Hand Tool

M317



Part number  
Positioner + Locator Setting

VGE10078A

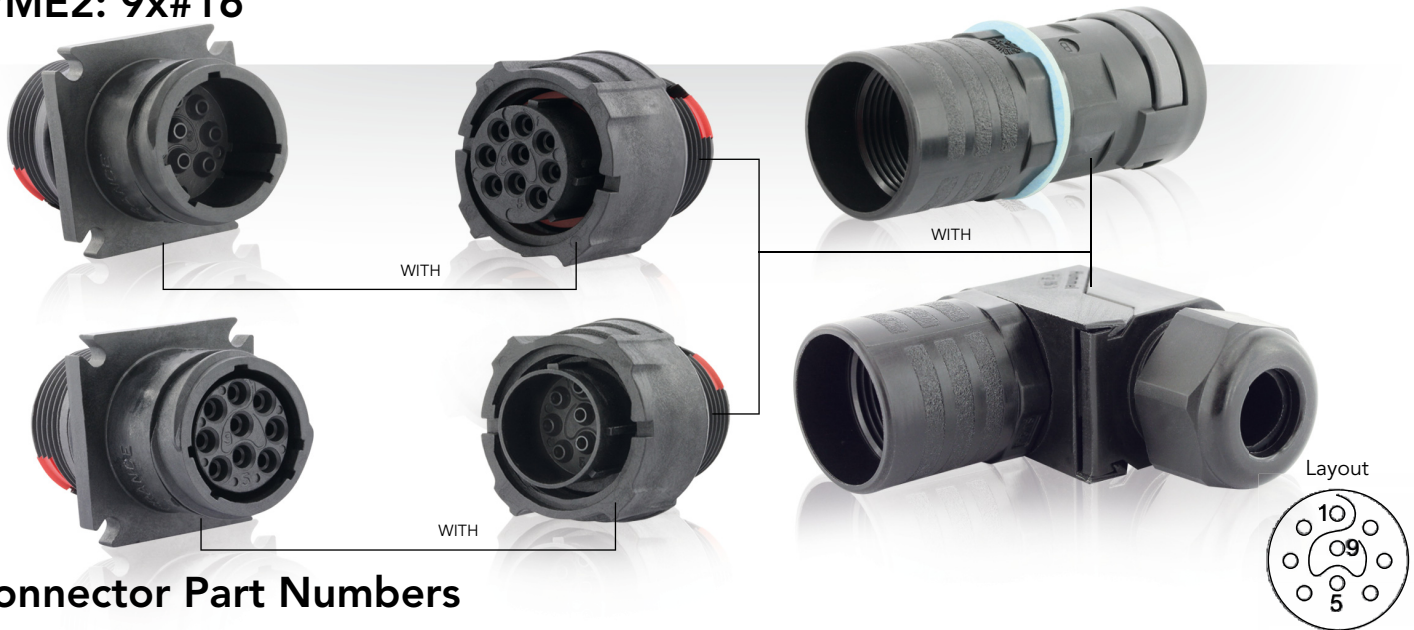


Part number  
Extraction Tool

51060210936

\* Heads to be used with handle PN: SHANDLES

## WME2: 9x#16



## Connector Part Numbers

| Connector type           | Contact type                                    | Layout | Backshell | Part numbers |               |
|--------------------------|---|--------|-----------|--------------|---------------|
|                          |   |        |           | Male insert  | Female insert |
| Square flange receptacle | Crimped contacts supplied separately see page 8 | 9 x 16 | No        | WME20003A    | WME20006A     |
| Plug                     |   |        | No        | WME20005A    | WME20002A     |

## Backshells

| Backshell type                                      | IP level | Part numbers |
|---|----------|--------------|
| Straight backshell for flexible conduit system      | IP67     | WME20008A    |
| Sealing gland backshell with anti-decoupling system | IP67     | WME20009A    |
| 90° backshell with sealing gland                    | IP67     | WME20010A    |

## Accessories

**Receptacle dustcap**

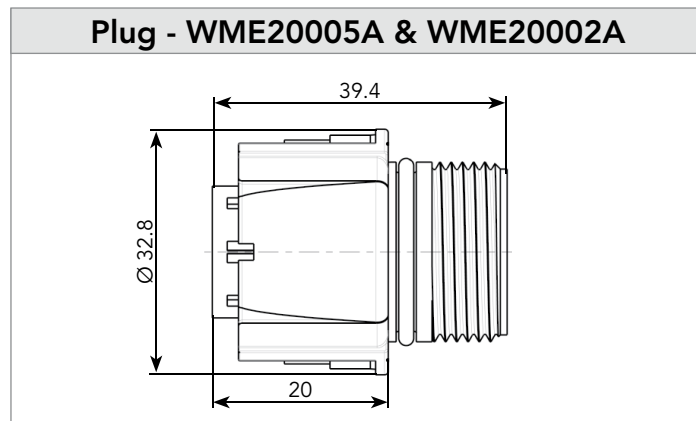
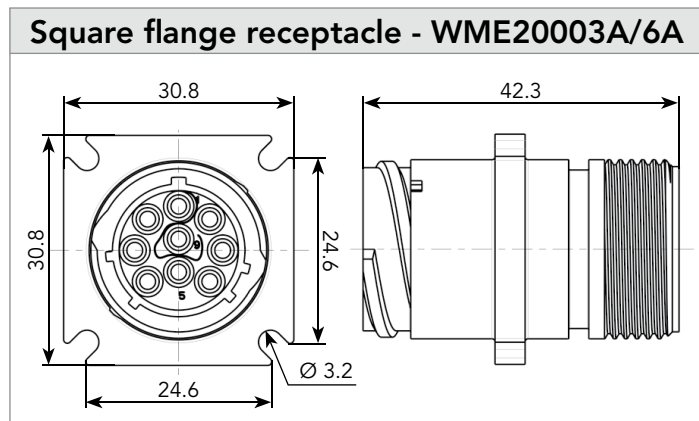
|                    |      |
|--------------------|------|
| <b>Part number</b> | IP67 |
| WME20007A          |      |

**Panel gasket**

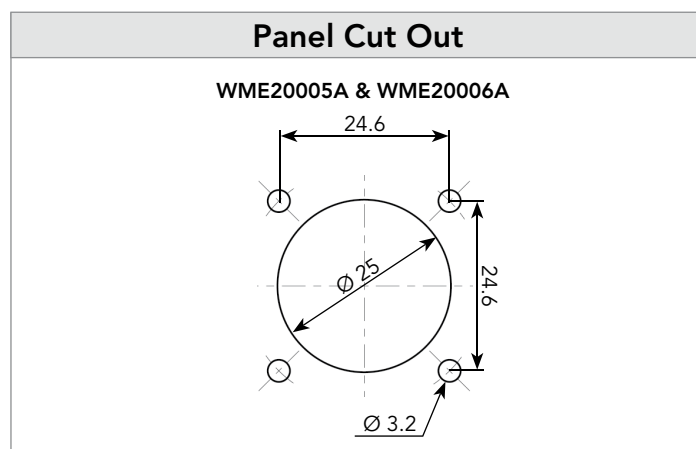
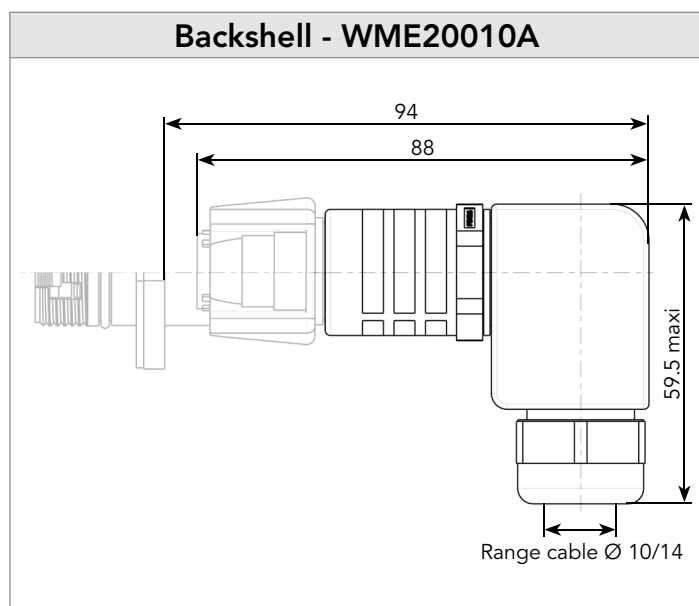
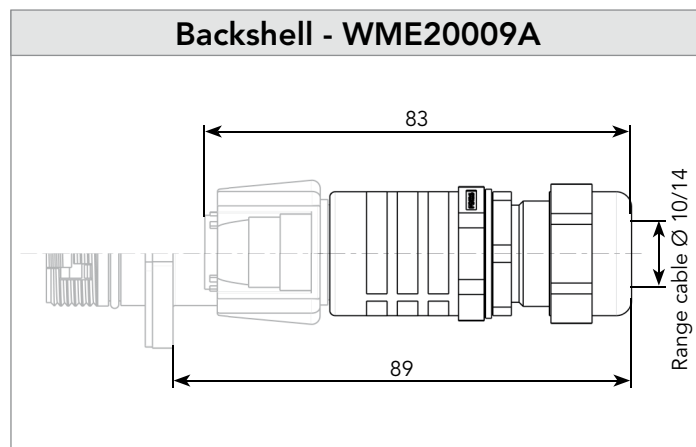
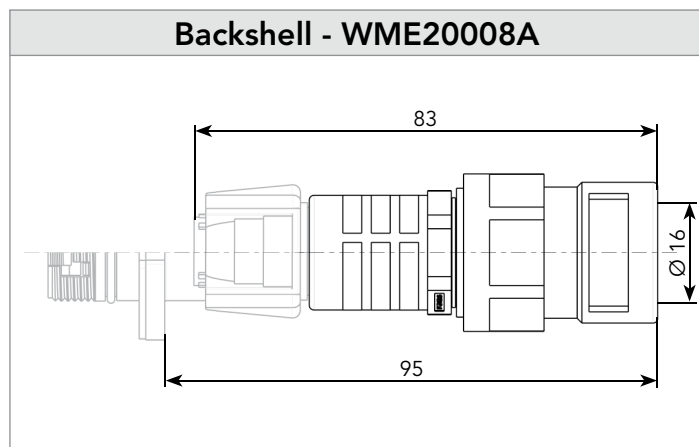
|                    |      |
|--------------------|------|
| <b>Part number</b> |      |
| WME20011A          |      |
|                    | IP67 |



## Dimensions



9 pos.



Note: all dimensions are in mm

## Contacts for WME2

| Contact size   | Conector type | Type             | Wire size |         | Part number               |                           | Contact resistance | Wire Ø (mm)  | Max insulator Ø (mm) | Available plating          |
|----------------|---------------|------------------|-----------|---------|---------------------------|---------------------------|--------------------|--------------|----------------------|----------------------------|
|                |               |                  | AWG       | mm²     | Male                      | Female                    |                    |              |                      |                            |
| #16<br>Ø1.6 mm | WME2          | Stamped & Formed | 18-16     | 0.8-1.5 | CF16PC10RF <sup>(1)</sup> | CF16SC10RF <sup>(1)</sup> | < 7mΩ              | 0.7 to 1.5   | 3                    | Active part:<br>Gold flash |
|                |               |                  | 14        | 2.5     | CF16PC18RF <sup>(2)</sup> | CF16SC18RF <sup>(2)</sup> |                    |              |                      |                            |
|                |               | Crimp Machined   | 18-14     | 0.8-2.5 | CM16PC10MQ                | CM16SC10MQ                | < 4mΩ              | 0.93 to 1.91 | 3                    | Active part:<br>0.4µ gold  |
|                |               | Solder Machined  | 14        | 2.5     | CM16PS10MQ                | CM16SS10MQ                | < 7mΩ              | -            | 3                    |                            |
|                |               | Crimp Machined   | 18 to 13  |         | CM16PC00MQ                | CM16SC00MQ                | < 4mΩ              | 0.93 to 2.6  | 3                    |                            |

(1): loose piece contacts

(2): reeled contacts

### Tools for stamped & formed contact #16

| Contact part Number      | Contact size   | Cable size | Cable section (mm²) | Crimping handle | Crimp head | Head cavity size |
|--------------------------|----------------|------------|---------------------|-----------------|------------|------------------|
| CF16PC10RF<br>CF16SC10RF | #16<br>Ø1.6 mm | AWG 19     | 0.70 min            | Shandles        | S16CFSP    | 19/18            |
|                          |                | AWG 18     | 0.80 max            |                 |            |                  |
|                          |                | AWG 16     | 1.5 max             |                 |            |                  |
| CF16PC40RF<br>CF16SC40RF | #16<br>Ø1.6 mm | AWG 14     | 2.5 min             | Shandle         | S16CFSP    | 14               |

### Tools for machined contact #16



Part number  
Positioner + Locator Setting  
8365-2



Part number Hand Tool  
8365

# SOURIAU

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## JONHON

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Разъемы специального, военного и аэрокосмического назначения:

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