

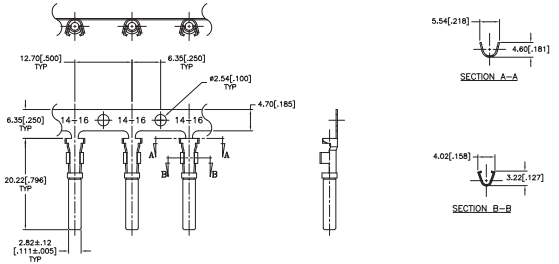
STAMPED AND FORMED CONTACTS, PG 1 of 2

Click on [blue underlined part numbers](#) to be taken to their spec sheets.

OPTIONS

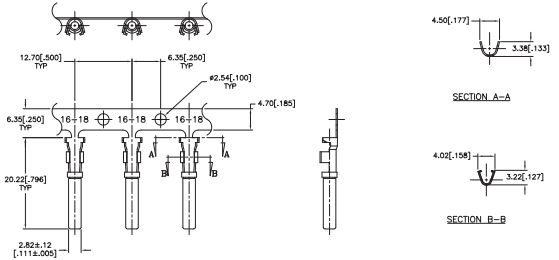
PART NUMBER: [AT62-14-01XX](#)
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

MATERIAL:
 CONTACT BODY: COPPER ALLOY
 HOOD: STAINLESS STEEL
PLATING SUFFIX CODE:
 XX=22 NICKEL PLATING
 XX=44 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: ATT-16-00, MFX-3950 & MFX-3953
CRIMPER SPECIFICATIONS: S2-15223 & S2-15224
CRIMP INFORMATION DRAWING: S2-15221 & S2-15222
CONTACTS PER REEL: APPROX. 4000 (PARTIAL REELS AVAILABLE)



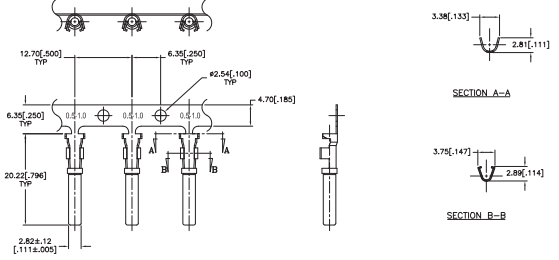
PART NUMBER: [AT62-16-01XX](#)
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

MATERIAL:
 CONTACT BODY: COPPER ALLOY
 HOOD: STAINLESS STEEL
PLATING SUFFIX CODE:
 XX=22 NICKEL PLATING
 XX=44 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: ATT-16-00, ATT-16-01, MFX-3950 & MFX-3953
CRIMPER SPECIFICATIONS: S2-15223 & S2-15224
CRIMP INFORMATION DRAWING: S2-15221 & S2-15222
CONTACTS PER REEL: APPROX. 4000 (PARTIAL REELS AVAILABLE)



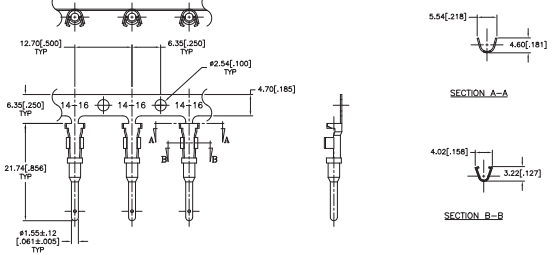
PART NUMBER: [AT62-16-06XX](#)
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

MATERIAL:
 CONTACT BODY: COPPER ALLOY
 HOOD: STAINLESS STEEL
PLATING SUFFIX CODE:
 XX=22 NICKEL PLATING
 XX=44 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: ATT-16-01, MFX-3950 & MFX-3953
CRIMPER SPECIFICATIONS: S2-15223 & S2-15224
CRIMP INFORMATION DRAWING: S2-15221 & S2-15222
CONTACTS PER REEL: APPROX. 4000 (PARTIAL REELS AVAILABLE)



PART NUMBER: [AT60-14-01XX](#)
DESCRIPTION: CONTACT, PIN, STAMPED, SIZE 16

MATERIAL: COPPER ALLOY
PLATING SUFFIX CODE:
 XX=22 NICKEL PLATING
 XX=44 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: ATT-16-00, MFX-3950 & MFX-3953
CRIMPER SPECIFICATIONS: S2-15223 & S2-15224
CRIMP INFORMATION DRAWING: S2-15221 & S2-15222
CONTACTS PER REEL: APPROX. 4000 (PARTIAL REELS AVAILABLE)

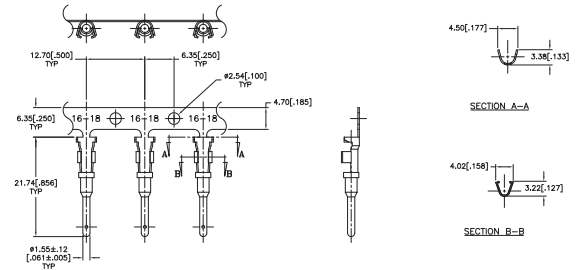


STAMPED AND FORMED CONTACTS, PG 2 of 2

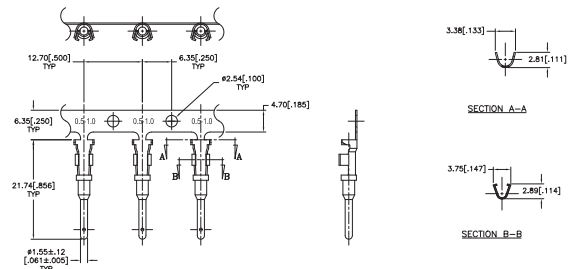
Click on [blue underlined part numbers](#) to be taken to their spec sheets.

OPTIONS

PART NUMBER: [AT60-16-01XX](#)
DESCRIPTION: CONTACT, PIN, STAMPED, SIZE 16
MATERIAL: COPPER ALLOY
PLATING SUFFIX CODE:
 XX=22 NICKEL PLATING
 XX=44 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: ATT-16-00, ATT-16-01, MFX-3950 & MFX-3953
CRIMPER SPECIFICATIONS: S2-15223 & S2-15224
CRIMP INFORMATION DRAWING: S2-15221 & S2-15222
CONTACTS PER REEL: APPROX. 4000 (PARTIAL REELS AVAILABLE)



PART NUMBER: [AT60-16-06XX](#)
DESCRIPTION: CONTACT, PIN, STAMPED, SIZE 16
MATERIAL: COPPER ALLOY
PLATING SUFFIX CODE:
 XX=22 NICKEL PLATING
 XX=44 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: ATT-16-01, MFX-3950 & MFX-3953
CRIMPER SPECIFICATIONS: S2-15223 & S2-15224
CRIMP INFORMATION DRAWING: S2-15221 & S2-15222
CONTACTS PER REEL: APPROX. 4000 (PARTIAL REELS AVAILABLE)



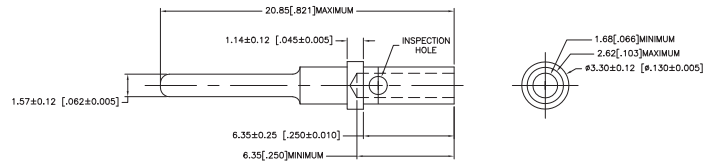
SOLID/MACHINED CONTACTS

Click on [blue underlined part numbers](#) to be taken to their spec sheets.

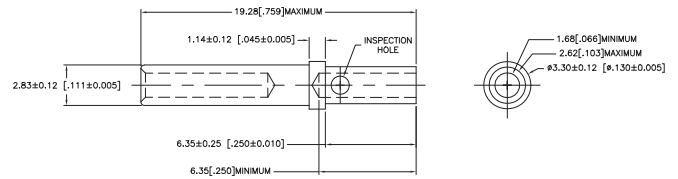
OPTIONS

MILITARY-STYLE

PART NUMBER: [AT60-202-16XX](#)
DESCRIPTION: CONTACT, PIN, SOLID MACHINED, SIZE 16
MATERIAL: COPPER ALLOY
PLATING SUFFIX CODE:
 XX=141 NICKEL PLATING
 XX=31 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218

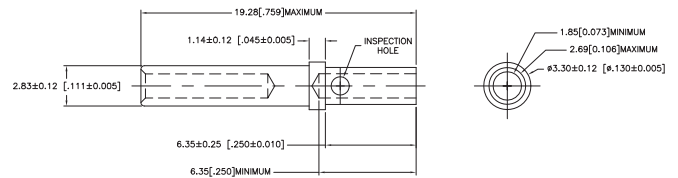


PART NUMBER: [AT62-201-16XX](#)
DESCRIPTION: CONTACT, SOCKET, SOLID MACHINED, SIZE 16
MATERIAL:
 CONTACT BODY: COPPER ALLOY
 HOOD: STAINLESS STEEL
PLATING SUFFIX CODE:
 XX=141 NICKEL PLATING
 XX=31 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218

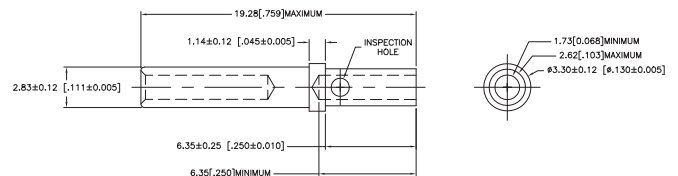


ROCKSOLID™ CONTACTS

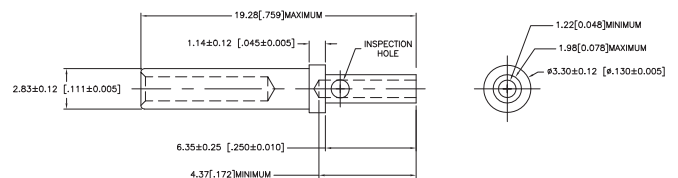
PART NUMBER: [65-54942-14](#)
DESCRIPTION: CONTACT, SOCKET, ROCKSOLID, SIZE 16
AWG RANGE: 14AWG
MATERIAL: COPPER ALLOY
PLATING: GOLD
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218



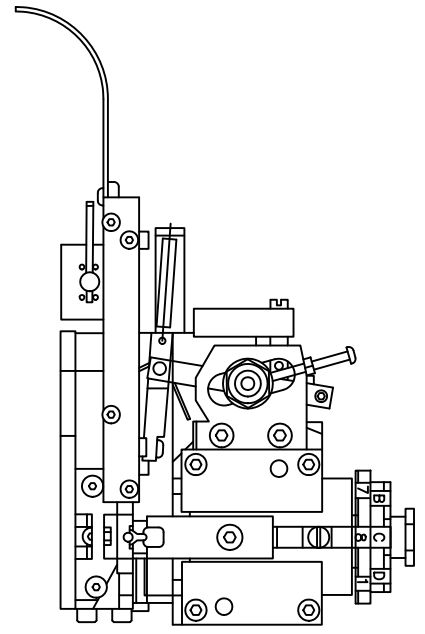
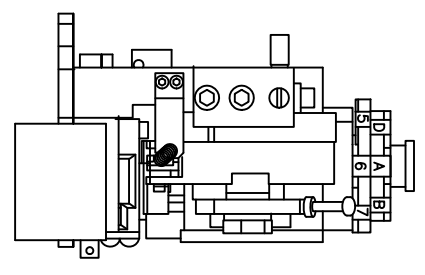
PART NUMBER: [65-54942-16](#)
DESCRIPTION: CONTACT, SOCKET, ROCKSOLID, SIZE 16
AWG RANGE: 16AWG
MATERIAL: COPPER ALLOY
PLATING: GOLD
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218



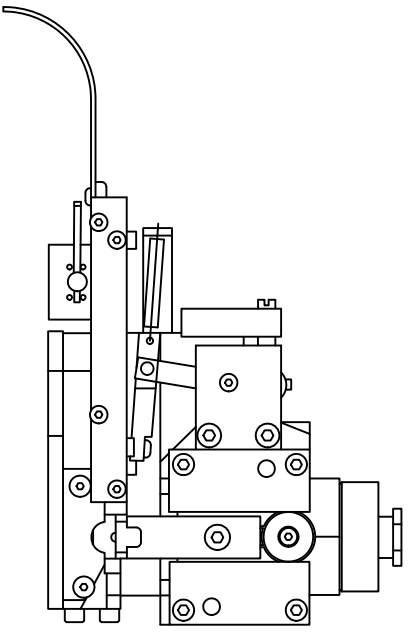
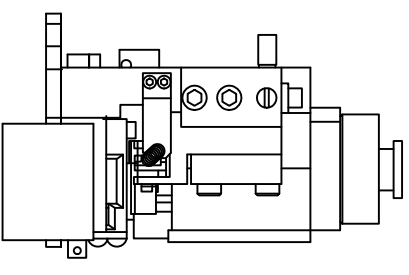
PART NUMBER: [65-54942-20](#)
DESCRIPTION: CONTACT, SOCKET, ROCKSOLID, SIZE 16
AWG RANGE: 20AWG
MATERIAL: COPPER ALLOY
PLATING: GOLD
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218



REVISIONS						
REV	ZONE	ECO	DESCRIPTION	DATE	BY	APPR
A1	-	-	RELEASE NUMBER 016571	6/12/08	B.D.B.	M.R.F.



SINE PART NUMBER	MFX-3950
DEUTSCH PART NUMBER	DCT16-02-00
TYCO PART NUMBER	1-3-1385344-1, 2, 3, 4, 5 & 7



SINE PART NUMBER	MFX-3953
DEUTSCH PART NUMBER	DCT1620-02-00

ALL REFERENCES TO DEUTSCH PRODUCTS OR SPECIFICATIONS ARE FOR COMPARISON PURPOSES ONLY, AND REFER TO DEUTSCH INDUSTRIAL PRODUCTS.

ALL REFERENCES TO TYCO PRODUCTS OR SPECIFICATIONS ARE FOR COMPARISON PURPOSES ONLY, AND REFER TO TYCO ELECTRONICS.

QUANTITY	PART NUMBER	DESCRIPTION	ITEM
----------	-------------	-------------	------

UNLESS OTHERWISE SPECIFIED		SIGNATURES		DATE		SINE SYSTEMS CORPORATION	
1) All dimensions are in inches.	1. FINISH: BERNUM	6/9/09	ENGINEER: BERNUM	6/9/09	A Subsidiary of Amphiphenol Corporation 44724 Moleky Drive Clinton Township, MI 48036		CRIMPER INFORMATION MFX-3950 & MFX-3953
2) Pt. DEC 20.00	2. TOLERANCE: +/- .005	6/9/09	ENGINEER: BERNUM	6/9/09			
3) Fabrication Standards Per: d) Note: SS-20020	3. APPROVAL: BERNUM	6/9/09	CUSTOMER: M/A				

THE USE OF THIS PRODUCT IS LIMITED TO THE SPECIFICATIONS, AND PERFORMANCE PRESENTED IN THIS DOCUMENT. DIMENSIONS ARE SUBJECT TO NORMAL DOCUMENTS REFERENCED HEREON. ANY OTHER RIGHTS RESERVED HEREON. M/A COMPANY LIMITED RIGHTS DATA.

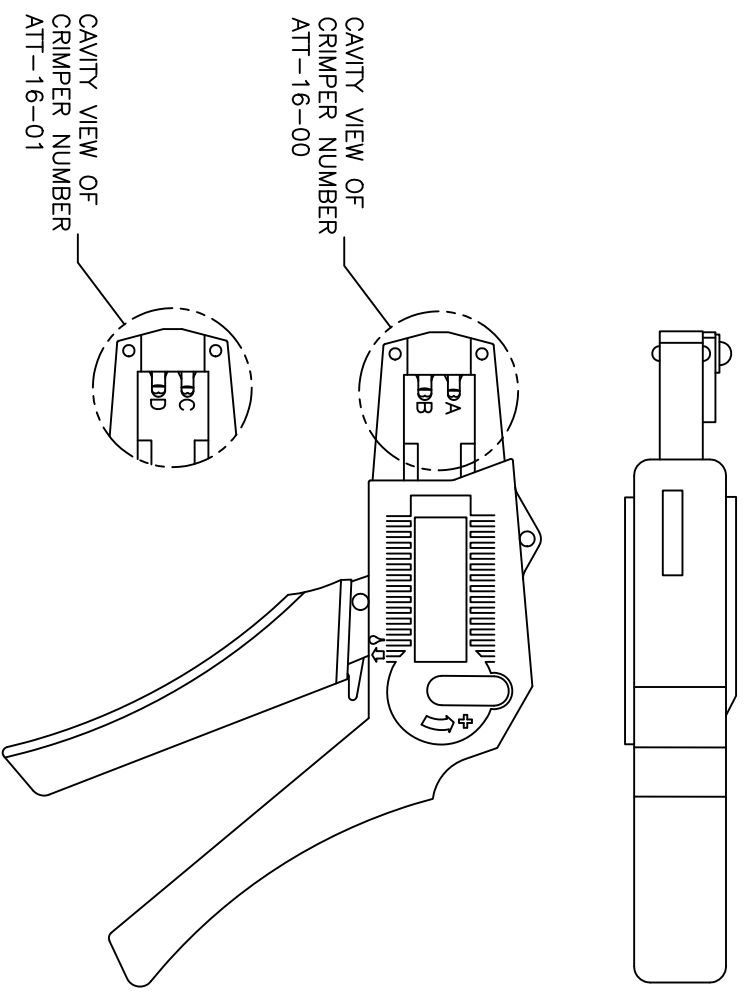
REVISIONS					
REV	ECO	DESCRIPTION	DATE	BY	APPR
A1	-	RELEASE NUMBER 016571	6/12/09	B.D.B.	M.R.F.

USE CRIMPER NUMBER:
ATT-16-00 WITH CAVITY A & B

CONTACT P/N:	INSULATION ϕ	CAVITY	WIRE SIZE
AT60-16-01**	.075 - .140	B	1.5mm ²
AT62-16-01**	[1.91 - 3.56]	A	16AWG
		A	1.0mm ²
AT60-14-01**	.095 - .150	B	14AWG
AT62-14-01**	[2.41 - 3.81]	B	2.0mm ²
		B	1.5mm ²
		A	1.5mm ²
		A	16AWG
		A	1.0mm ²
AT60-16-06**	.055 - .100	A	16AWG
AT62-16-06**	[1.40 - 2.54]	A	1.0mm ²

USE CRIMPER NUMBER:
ATT-16-01 WITH CAVITY C & D

CONTACT P/N:	INSULATION ϕ	CAVITY	WIRE SIZE
AT60-16-01**	.075 - .140	D	18AWG
AT62-16-01**	[1.91 - 3.56]	D	.75mm ²
AT60-16-06**	.055 - .100	D	18AWG
AT62-16-06**	[1.40 - 2.54]	D	.75mm ²
		C	.50mm ²



ALL REFERENCES TO DEUTSCH PRODUCTS OR SPECIFICATIONS ARE FOR COMPARISON PURPOSES ONLY, AND REFER TO DEUTSCH INDUSTRIAL PRODUCTS.

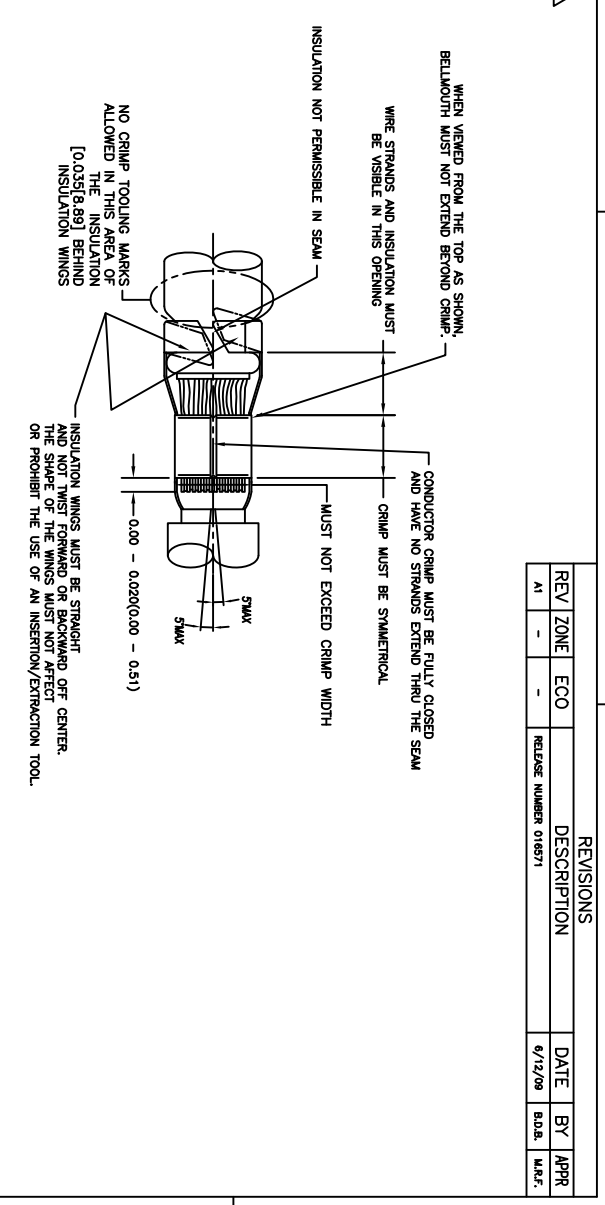
- NOTES (UNLESS OTHERWISE SPECIFIED):
- ALL DIMENSIONS IN INCHES [MILLIMETERS]
 - FOR PLATING CODES ** SEE CONTACT DATA DRAWINGS.
 - THIS TOOL IS FOR CRIMPING SIZE 16 CONTACTS ONLY TO WIRES LISTED IN THE CHARTS.
 - DEUTSCH IPD CROSS REFERENCE PART NUMBERS ARE DTT-16-00 AND DTT-16-01.

QUANTITY	PART NUMBER	DESCRIPTION	ITER#
MATERIALS LIST			
SINE Systems Corporation A Subsidiary of Amphenol Corporation 44724 Morley Drive Clifton Township, NJ 08036			
INSTRUCTIONS: ATT-16-00 & 01 CRIMPER, HAND, STAMPED CONTACTS			
SIZE	FCM NO/DWG NO	REV	REVISION
B	16K44	S2-15223	A1
SCALE	NONE	S2-15223	SHEET 1 OF 1

UNLESS OTHERWISE SPECIFIED			
1) All dimensions are in inches.	SIGNATURES	DATE	
2) Tolerances are as follows: 1/16 DEC .0006 3/16 DEC .0008 1/8 DEC .0010 1/4 DEC .0015 1/2 DEC .0020	ENGINEER: BERNIM	6/8/09	
3) Finish: SM .0002	APPROVAL: BERNIM	6/8/09	
4) Hole Reference = A	CUSTOMER:		
INTERNAL SPECIFICATIONS:			
M/A			
PROCESS SPECIFICATIONS:			
NOTE: ASST:			

REVISIONS			
REV	ZONE	ECO	DESCRIPTION
A1	-	-	RELEASE NUMBER 016871
			DATE 6/12/09
			BY B.O.B.
			APP M.F.F.

STAMPED CONTACT PART NUMBER 1062=PIN 1062=SOCKET	SIZE	CONDUCTOR WIRE SIZE	CRIMP HEIGHT	CRIMP WIDTH	CONDUCTOR PUNCH NUMBER	CONDUCTOR ANVIL NUMBER	CRIMP TENSILE REFERENCE
A780-14-011X A782-14-011X INSULATION RANGE 0.095-0.150(2.41-3.81)	16	14 AWG 2.00mm ² 1.50mm ² 16 AWG 1.00mm ² 18 AWG 0.75mm ²	0.055(1.40) 0.055(1.40) 0.055(1.39) 0.050(1.27) 0.049(1.24) 0.048(1.22)	0.094(2.39) 0.094(2.39) 0.094(2.39) 0.094(2.39) 0.094(2.39) 0.094(2.39)	AT17-002-0200	AT17-101-0200	28(111)
A780-16-011X A782-16-011X INSULATION RANGE 0.075-0.140(1.91-3.58)	16	16 AWG 1.00mm ² 18 AWG 0.75mm ² 20 AWG 0.50mm ²	0.050(1.27) 0.051(1.30) 0.050(1.27) 0.048(1.22) 0.048(1.22) 0.045(1.14)	0.094(2.39) 0.094(2.39) 0.094(2.39) 0.094(2.39) 0.094(2.39) 0.079(2.01)	AT17-003-0200	AT17-103-0200	28(111) 15(67)



CROSS REFERENCE

SINE PART NUMBER	DEUTSCH PART NUMBER
MX-3950	DC116-02-00
AT17-002-0200	1017-002-0200
AT17-003-0200	1017-003-0200
AT17-101-0200	1017-101-0200
AT17-103-0200	1017-103-0200
AT17-210-0200	1017-210-0200
AT17-211-0200	1017-211-0200
AT17-213-0200	1017-213-0200
AT17-214-0200	1017-214-0200
AT17-217-0200	1017-217-0200
AT17-218-0200	1017-218-0200
AT17-310-0200	1017-310-0200
AT17-311-0200	1017-311-0200
AT17-313-0200	1017-313-0200
AT17-304-0200	1017-304-0200
AT17-317-0200	1017-317-0200

INSULATION DIAMETER RANGE	INSULATION PUNCH NUMBER	INSULATION ANVIL NUMBER
0.120-0.150 [3.05-3.81]	AT17-210-0200	AT17-310-0200
0.105-0.125 [2.67-3.18]	AT17-211-0200	AT17-311-0200
0.085-0.111 [2.16-2.82]	AT17-213-0200	AT17-313-0200
0.075-0.105 [1.91-2.67]	AT17-214-0200	AT17-304-0200
0.063-0.094 [1.62-2.39]	AT17-217-0200	AT17-317-0200
0.050-0.075 [1.27-1.91]	AT17-218-0200	AT17-318-0200

NOTES: UNLESS OTHERWISE SPECIFIED

- ALL DIMENSIONS ARE IN INCHES(mm).
- FORCES ARE IN POUNDS(LBS) AND NEWTONS(N).
- "X"= PLATING SUFFIX. SEE INDIVIDUAL CONTACT DRAWING.
- WIRE STRIP LENGTH: 0.775±0.029(4.45±0.54). BROKEN OR MISSING CONDUCTOR STRANDS ARE NOT ACCEPTABLE.
- USE A BLADE MICROMETER (0.100[2.54] MIN SPACING AND 0.060[0.010][1.50][0.040] ANVIL) TO MEASURE THE CONDUCTOR CRIMP. SEE SECTION AA.
- CRIMP TENSILE STRENGTH IS DETERMINED AT A PULL RATE SPEED OF 1.00 INCH(2.54) PER MINUTE. INSULATION WINGS ARE REMOVED FOR TEST. ACTUAL CRIMP TENSILE STRENGTH DEPENDS ON WIRE/CONDUCTOR SIZE. VALUES ON THIS SPECIFICATION ARE FOR REFERENCE ONLY.
- INSULATION DIAMETER RANGE IS DETERMINED BY CONNECTOR AND ITS WIRE SEAL SIZE. SEE CONNECTOR DRAWING FOR INSULATION RANGE.
- INSULATION CRIMP DIAMETER SHOULD BE THE EQUAL OR LESS THAN THE DIAMETER OF THE WIRE INSULATION (HARD OR TEFION INSULATION MAY BE AN EXCEPTION). INSULATION CRIMP SHALL NOT AFFECT REMOVAL TOOL PERFORMANCE AND SHALL NOT DAMAGE CONNECTOR GROMMET SEAL.
- CONDUCTOR TYPE ARE PER SAE J1128(AWG) AND ISO 6722(METRIC)
- FOR CONTACT MATERIAL AND PERFORMANCE DATA, SEE DRAWING S2-15217.
- REFER TO S2-15223 AND S2-15224 AND CROSS REFERENCE CHARTS FOR CRIMP TOOL DATA.

ALL REFERENCES TO DEUTSCH PRODUCTS OR SPECIFICATIONS ARE FOR COMPARISON PURPOSES ONLY, AND REFER TO DEUTSCH INDUSTRIAL PRODUCTS.

QUANTITY	PART NUMBER	MATERIALS LIST	DESCRIPTION	ITEM
UNLESS OTHERWISE SPECIFIED				
1) All dimensions are in inches.				
2) For SAE 30304 and 30404 use 31/64				
3) For SAE 30303 and 30403 use 3/16				
4) For SAE 30302 and 30402 use 3/16				
5) Reduction Standard Per: BERNEUM				
6) Mark: S2-20020				
APPROVAL: BERNEUM 6/8/09				
CUSTOMER: VNA				
PROCESS SPECIFICATIONS:				
THE USE OF THIS DRAWING IS SPECIFIC TO THE PART AND PERFORMANCE DATA. ANY CHANGES TO THIS DRAWING ARE SUBJECT TO REMOVAL OF DOCUMENTS RETIRED HERON MW DRAWING REVISED HERON MW				
NEXT ASSY:				
SIZE: (FSD) 10K/100K/1M/10M/100M/1G/10G/100G/1T/10T/100T/1000T/10000T/100000T/1000000T/10000000T/100000000T/1000000000T				
SCALE: NONE				
S2-15222				
SHEET 1 OF 1				

CRIMP DATA, STAMPED CONTACTS FOR CRIMPER MX-3950

A Subsidiary of Amphenol Corporation
44724 Moley Drive
Clinton Township, MI 48036

REVISIONS		DESCRIPTION	DATE	BY	APP
REV	ZONE	ECO	RELEASE NUMBER 016571	6/12/09	B.O.B.
AT	-	-			M.F.F.

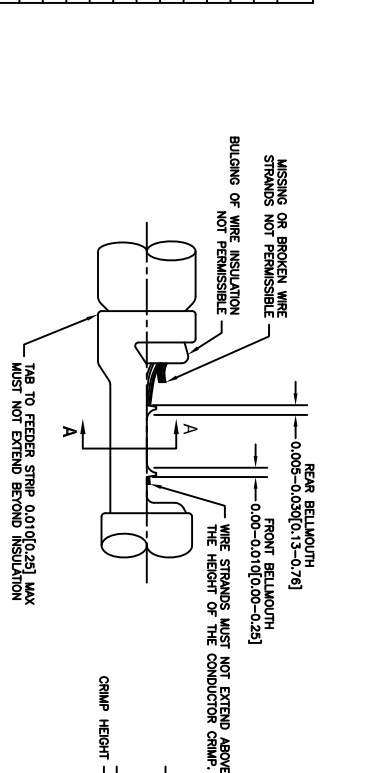
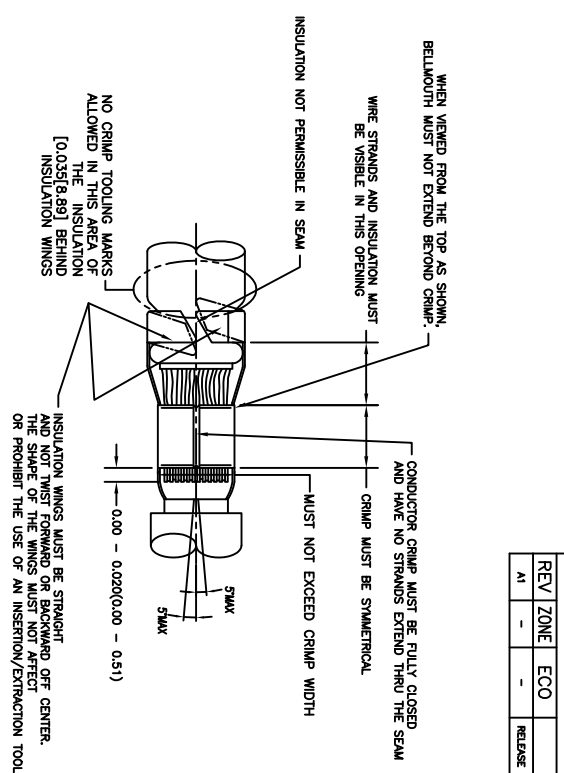
STAMPED CONTACT PART NUMBER (1008=PIN 1009=SOCKET)	SIZE	CONDUCTOR WIRE SIZE	CRIMP HEIGHT +0.001/-0.002 INCH (+0.025/-0.05 mm)	CRIMP WIDTH ±0.003 INCH (±0.08 mm)	CONDUCTOR PUNCH NUMBER	CONDUCTOR ANVIL NUMBER	CRIMP TENSILE REFERENCE (LBS/IN)
A160-14-011x A162-14-011x INSULATION RANGE 0.095-0.150(2.41-3.81)	16	14 AWG 2.00mm ² 1.50mm ² 16 AWG 1.00mm ² 18 AWG	0.055(1.40) 0.051(1.40) 0.051(1.30) 0.050(1.27) 0.049(1.24)	0.094(2.39) 0.094(2.39) 0.094(2.39) 0.094(2.39) 0.094(2.39)		A117-4083-0200 A117-183-0200	29(111)
A160-16-011x A162-16-011x INSULATION RANGE 0.075-0.140(1.91-3.56)	16	14 AWG 2.00mm ² 1.50mm ² 16 AWG 1.00mm ² 18 AWG	0.055(1.40) 0.051(1.40) 0.051(1.30) 0.050(1.27) 0.049(1.24)	0.094(2.39) 0.094(2.39) 0.094(2.39) 0.094(2.39) 0.094(2.39)		A117-4083-0200 A117-183-0200	29(111)
A160-16-066x A162-16-066x INSULATION RANGE 0.055-0.100(1.40-2.54)	16	16 AWG 1.00mm ² 0.75mm ² 20 AWG 0.50mm ²	0.050(1.27) 0.050(1.27) 0.048(1.22) 0.048(1.22) 0.046(1.14)	0.092(2.01) 0.079(2.01) 0.079(2.01) 0.079(2.01) 0.079(2.01)		A117-4082-0200 A117-182-0200	29(111) 19(67)

CROSS REFERENCE

INSULATION DIAMETER RANGE	INSULATION PUNCH NUMBER	INSULATION ANVIL NUMBER	SINE PART NUMBER	DEUTSCH PART NUMBER
0.120-0.150 [3.05-3.81]	A117-225-0200	A117-326-0200	MPX-3953	DCH1620-02-00
0.105-0.125 [2.67-3.18]	A117-226-0200	A117-326-0200	A117-083-0200	1017-083-0200
0.085-0.111 [2.16-2.82]	A117-227-0200	A117-327-0200	A117-082-0200	1017-082-0200
0.075-0.105 [1.91-2.67]	A117-228-0200	A117-328-0200	A117-183-0200	1017-183-0200
0.063-0.094 [1.62-2.39]	A117-229-0200	A117-329-0200	A117-182-0200	1017-182-0200
0.050-0.075 [1.27-1.91]	A117-230-0200	A117-330-0200	A117-225-0200	1017-225-0200
			A117-226-0200	1017-226-0200
			A117-227-0200	1017-227-0200
			A117-228-0200	1017-228-0200
			A117-229-0200	1017-229-0200
			A117-230-0200	1017-230-0200
			A117-325-0200	1017-325-0200
			A117-326-0200	1017-326-0200
			A117-327-0200	1017-327-0200
			A117-328-0200	1017-328-0200
			A117-329-0200	1017-329-0200
			A117-330-0200	1017-330-0200

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN INCHES(mm).
2. FORCES ARE IN POUNDS(LBS) AND NEWTONS(N).
3. "X"= PLATING SUFFIX. SEE INDIVIDUAL CONTACT DRAWING.
4. WIRE STRIP LENGTH: 0.175±0.02(4.45±0.54). BROKEN OR MISSING CONDUCTOR STRANDS ARE NOT ACCEPTABLE.
5. USE A BLADE MICROMETER (0.100[2.54] MIN SPINDLE AND 0.060[0.010][1.50][0.040] ANVIL) TO MEASURE THE CONDUCTOR CRIMP. SEE SECTION AA.
6. CRIMP TENSILE STRENGTH IS DETERMINED AT A PULL RATE SPEED OF 1.00 INCH(2.54) PER MINUTE. INSULATION WINGS ARE REMOVED FOR TEST. ACTUAL CRIMP TENSILE STRENGTH DEPENDS ON WIRE/CONDUCTOR SIZE. VALUES ON THIS SPECIFICATION ARE FOR REFERENCE ONLY.
7. INSULATION DIAMETER RANGE IS DETERMINED BY CONNECTOR AND ITS WIRE SEAL SIZE. SEE CONNECTOR DRAWING FOR INSULATION RANGE.
8. INSULATION CRIMP DIAMETER SHOULD BE THE EQUAL OR LESS THAN THE DIAMETER OF THE WIRE INSULATION (HARD OR TEFION INSULATION MAY BE AN EXCEPTION). INSULATION CRIMP SHALL NOT AFFECT REMOVAL TOOL PERFORMANCE AND SHALL NOT DAMAGE CONNECTOR GROMMET SEAL.
9. CONDUCTOR TYPE ARE PER SAE J1128(AWG) AND ISO 6122(METRIC)
10. FOR CONTACT MATERIAL AND PERFORMANCE DATA, SEE DRAWING S2-15217.
11. REFER TO S2-15223 AND S2-15224 AND CROSS REFERENCE CHARTS FOR CRIMP TOOL DATA.



ALL REFERENCES TO DEUTSCH PRODUCTS OR SPECIFICATIONS ARE FOR COMPARISON PURPOSES ONLY, AND REFER TO DEUTSCH INDUSTRIAL PRODUCTS.

QUANTITY	PART NUMBER	MATERIALS LIST	DESCRIPTION	ITEM
UNLESS OTHERWISE SPECIFIED				
1) All dimensions are in inches.				
2) Force is in pounds (lbs) and Newtons (N).				
3) Production Standard Part: Alpha S1*				
4) Part: S2-20020				
APPROVAL: [Signature] DATE: 6/8/09				
CUSTOMER: [Blank]				
THE USE OF THIS DRAWING IS SPECIFIC TO THE PART AND PERFORMANCE OF THE PART. ALL DIMENSIONS ARE SUBJECT TO NORMAL DOCUMENTS RETAINED HEREON. ANY DOCUMENTS RETAINED HEREON MAY CONTAIN LIMITED RIGHTS DATA.				
CRIMP DATA, STAMPED CONTACTS FOR CRIMPER MPX-3953				
SIZE: [Blank] SCALE: NONE				
S2-15221				
SHEET 1 OF 1				

REV ZONE		ECO		REVISIONS		DESCRIPTION	DATE	BY	APPR
AI	-	-	-	RELEASE NUMBER	016571		6/12/09	B.D.B.	M.R.F.

CONTACT LOCATOR
"TURRET"
THREE POSITIONS FOR
SIZE 12, 16 & 20 MALE
AND FEMALE CONTACTS

"TURRET" RELEASE LATCH

6.25 INCH
MAXIMUM
OPEN

2.30 INCH
MAXIMUM
CLOSED

SELECTOR FOR CRIMP
SETTING

1.125 INCH MAX.

9.75 INCH MAXIMUM

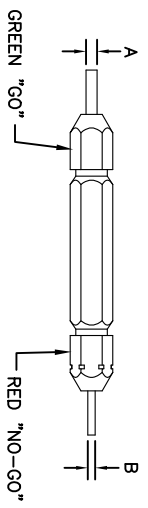
1.00 INCH MAX.

- NOTES:
- THE CA-5D12 IS A HAND OPERATED CRIMPER FOR ELECTRICAL CONTACTS. IT IS ADJUSTABLE TO 3 CONTACT SIZES (12, 16 & 20) AND 8 INDENTER CRIMP POSITIONS FOR DIFFERENT WIRE SIZES (12AWG THRU 26 AWG).
 - WEIGHT: 1.64 LBS
 - SELECTING CONTACT SIZE: PRESS THE RELEASE LATCH ON SIDE OF THE CONTACT LOCATOR "TURRET". ROTATE TO THE DESIRED CONTACT SIZE. THE TOP OF THE "TURRET" IS EMBOSSED WITH THE CONTACT SIZES.
 - SELECTING WIRE SIZE: REMOVE THE LOCKING CLIP. GRASP THE SELECTOR AND ROTATE TO THE DESIRED NUMBER.

GAGE PART NO.	A GO DIA.	B NO-GO DIA.	SELECTOR NUMBER
G125	.0390	.0440	4

GAGING INSTRUCTIONS

CAUTION!
DO NOT CRIMP GAGE!

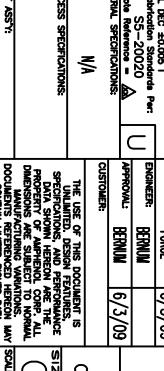


"GO" GAGING: OPERATE TOOL TO FULLY CLOSED POSITION. INSERT "GO" GAGE END AS SHOWN. GAGE MUST PASS FREELY BETWEEN INDENTER TIPS.

"NO-GO" GAGING: OPERATE TOOL TO FULLY CLOSED POSITION. INSERT "NO-GO" GAGE END AS SHOWN. THE "NO-GO" MAY PARTIALLY ENTER THE INDENTER OPENING, BUT MUST NOT PASS COMPLETELY THROUGH THE OPENING.

GAGING INSTRUCTIONS

CAUTION!
DO NOT CRIMP GAGE!



"GO" GAGING: OPERATE TOOL TO FULLY CLOSED POSITION. INSERT "GO" GAGE END AS SHOWN. GAGE MUST PASS FREELY BETWEEN INDENTER TIPS.

"NO-GO" GAGING: OPERATE TOOL TO FULLY CLOSED POSITION. INSERT "NO-GO" GAGE END AS SHOWN. THE "NO-GO" MAY PARTIALLY ENTER THE INDENTER OPENING, BUT MUST NOT PASS COMPLETELY THROUGH THE OPENING.

CONTACT SIZE	LOCATOR POSITION	WIRE COLOR	1	2	3	4	5	6	7	8
20-20	RED	1	2	3	4					
16-22	BLUE	4	5	6						
16-20	BLUE	1	2	3	4					
16-16	BLUE	4	5	6						
12-16	YELLOW	4	5	6						
12-12	YELLOW								7	8

QUANTITY	PART NUMBER	DESCRIPTION	ITEM

SIGNATURES	DATE
DESIGN: BERNIM	6/3/09
CHECKED: NONE	6/3/09
ENGINEER: BERNIM	
APPROVAL: BERNIM	6/3/09

UNLESS OTHERWISE SPECIFIED
1) All dimensions are in inches.
2) HOLE DIMENSIONS ARE TO BE DRILLED.
3) HOLE DIMENSIONS ARE TO BE DRILLED.
4) HOLE DIMENSIONS ARE TO BE DRILLED.
5) HOLE DIMENSIONS ARE TO BE DRILLED.

PROCESS SPECIFICATIONS:
MATERIAL SPECIFICATIONS:
FINISH: NA

THE USE OF THIS DRAWING IS LIMITED TO THE SPECIFICATIONS AND REQUIREMENTS OF THE ORIGINAL DRAWING. ANY REVISIONS OR MODIFICATIONS MUST BE APPROVED BY THE ORIGINAL DESIGNER. ALL DIMENSIONS REFERENCED HEREON ARE UNLESS OTHERWISE SPECIFIED IN MILLIMETERS.

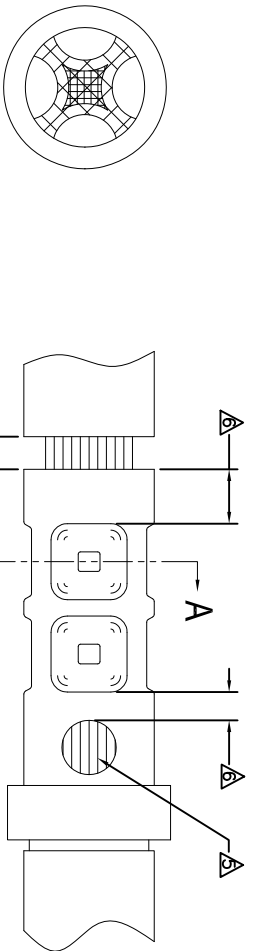
REVISIONS						
REV	ZONE	ECO	DESCRIPTION	DATE	BY	APPR
A1	-	-	RELEASE NUMBER 016571	6/12/09	B.D.B.	M.R.F.

CONTACT P/N	SIZE TYPE	WIRE SIZE	REF. ONLY TENSILE LBS[\bar{N}]
AT60-202-16XX	16PIN	1.5mm ² 16AWG	35[156]
AT62-201-16XX	16SOC	1.0mm ² 18AWG	25[111]
		0.75mm ² 20AWG	20[89]
		0.50mm ²	

RECOMMENDED STRIP LENGTH	
CONTACT SIZE	STRIP LENGTH INCH[MM]
16	0.250-0.312[6.35-7.92]

CRIMP TOOLING						
CONTACT SIZE	CRIMP TOOL PART NUMBER	CONTACT LOCATOR "TURRET" POSITION	WIRE SELECTOR NUMBER	GO GAGE INCH[MM]	"NOGO" GAGE INCH[MM]	REMARKS
16	CA-5D12 CA-5E12	BLUE	6	0.052[1.32]	0.057[1.45]	
16	CA-5D12 CA-5E12	BLUE	4	0.039[.991]	0.044[1.12]	SIZE 16 WITH 20 AWG WIRE

- NOTES: UNLESS OTHERWISE SPECIFIED
- 1. MINIMUM +/-0.0005 [0.013] TOLERANCE STEEL GAGE PINS. DO NOT CRIMP GAGE PINS. CLOSE DIE, THEN USE GAGE PINS.
 - 2. WHEN XX=31, CONTACT PLATING IS GOLD.
 - 3. WHEN XX=141, CONTACT PLATING IS NICKEL.
 - 4. PULL RATE OF 1.0 IN [25.4] PER MINUTE. ACTUAL STRENGTH DEPENDS ON WIRE SIZE.
 - 5. FOR CONTACT PERFORMANCE, MATERIAL SPECIFICATIONS AND APPLICATION DETAILS, SEE DRAWING S2-15217.
 - 6. CONDUCTOR STRANDS MUST BE VISIBLE THRU THE INSPECTION HOLE PRIOR TO CRIMP.
 - 7. PROPER CRIMP TOOLING WILL PRODUCE A CRIMP CENTERED BETWEEN THE INSPECTION HOLE AND CRIMP BARREL END.
 - 8. WIRE SIZES PER SAE J1128 AND J1560 [DIN 72551-6] REFERENCE INSTRUCTION MANUALS S2-15219 AND S2-15220 FOR CA-5D12 AND CA-5E12 HAND AND PNEUMATIC CRIMPER.
 - 9. THE CRIMP HEIGHT DIMENSION AFTER CRIMPING MAY VARY FROM THE VALUES LISTED FOR THE "GO-NOGO" PINS.



QUANTITY	PART NUMBER	DESCRIPTION	ITEM
		MATERIALS LIST	

UNLESS OTHERWISE SPECIFIED		SIGNATURES		DATE	
1) All dimensions are in inches.	2) All dimensions are in millimeters.	DRAWN: BERNIM	6/3/09	CHECKED: RONE	6/3/09
3) Pl. SEE 30.00	4) Pl. SEE 31.00	ENGINEER: BERNIM	6/3/09	APPROVAL: BERNIM	6/3/09
5) Fabrication Standards Per: SS-20020	6) Pl. SEE 32.00	CUSTOMER: MA			

PROCESS SPECIFICATIONS		THE USE OF THIS DRAWING IS LIMITED TO THE SPECIFIC APPLICATIONS AND PERFORMANCE SPECIFICATIONS AND PERFORMANCE PRESENTED ON THIS DRAWING. ALL DIMENSIONS ARE SUBJECT TO NORMAL DOCUMENTS REFERENCED HEREON UNLESS OTHERWISE SPECIFIED.	
SIZE [PSIA NOT DIMS]	S2-15218	SCALE	NONE
REV	A1	SHEET	1 OF 1

REVOLUTIONS		DESCRIPTION	DATE	BY	APPR
REV	ZONE	ECO	6/12/08	B.D.B.	M.R.F.
AT	-	-	RELEASE NUMBER 016871		

SOLID CONTACT SIZE	SOLID CONTACT PART NUMBERS		WIRE SIZE AVG (mm ²)	RECOMMENDED STRIP LENGTH INCH (mm)	MIN CONTACT RETENTION LBS (N)	REF CRIMP TENSILE LBS (N)	MAX RATED AMPS @ 125°C CONTINUOUS
	PN	SOCKET					
16	AT60-202-16**	AT62-201-16**	16-20 [1.5-0.5]	0.25-0.31 [6.35-7.92]	25 [1111]	35-20 [156-89]	13

S&P CONTACT SIZE	STAMPED CONTACT PART NUMBERS		WIRE SIZE AVG (mm ²)	WIRE INSULATION O.D. RANGE	RECOMMENDED STRIP LENGTH INCH (mm)	MIN CONTACT RETENTION LBS (N)	REF CRIMP TENSILE LBS (N)	MAX RATED AMPS @ 125°C CONTINUOUS
	PN	SOCKET						
16	AT60-14-01**	AT62-14-01**	14-16 [2.0-1.0]	.100 - .150 [2.54 - 3.81]	0.150-0.200 [3.81-5.08]	25 [1111]	25 [1111]	13
16	AT60-16-01**	AT62-16-01**	16-18 [1.0-0.75]	.075 - .100 [1.90 - 2.54]	0.150-0.200 [3.81-5.08]	25 [1111]	25 [1111]	13
16	AT60-16-06**	AT62-16-06**	18-20 [0.75-0.50]	.055 - .095 [1.40 - 2.41]	0.150-0.200 [3.81-5.08]	25 [1111]	25-15 [111+67]	13

WIRE AWG	CONTACT RESISTANCE STRENGTH (LESS DROP THROUGH WIRE)		
	TEST CURRENT	MILLIVOLT DROP SOLID	MILLIVOLT DROP S&P
14	18	60	100
16	13	60	100
18	10	60	100
20	7.5	60	100

MATERIAL SPECIFICATION AND PLATING ** CODES	
PN: COPPER ALLOY	
SOCKET: COPPER ALLOY WITH STAINLESS STEEL SLEEVE	
SOLID MACHINED CONTACT PLATING OPTIONS: Δ	31= GOLD*
	141= NICKEL
STAMPED CONTACT PLATING OPTIONS: Δ	22= NICKEL
	44= GOLD*
	89= SELECTIVE GOLD*
GOLD* = PLATING IS AVAILABLE (RECOMMENDED) FOR ONLY (<5V) CIRCUIT APPLICATIONS	
MATERIALS AND PLATINGS ARE ROHS COMPLIANT	

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE INCHES (MM).
2. ALL FORCES ARE IN LBS (POUNDS) AND "N" (NEWTONS).
3. CONTACT RETENTION TEST PULL RATE SHALL BE 1.0 INCH/25.4 PER MINUTE MAXIMUM. WIRE SIZE WILL AFFECT THE TRUE STRENGTH OF THE CRIMP.
4. WIRE SIZES AND INSULATION RANGES ARE FOR REFERENCE ONLY. THE ACTUAL INSULATION RANGE DEPENDS ON CONNECTOR GROMMET SEALING SIZE.

SEE SPECIFICATIONS LISTED BELOW FOR INDIVIDUAL CRIMP INFORMATION:

"SOLID" CONTACTS	SIZE	"STAMPED" CONTACTS	SIZE
	S2-15218	S2-15222	16
		S2-15221	16/20

- Δ MAXIMUM RATED CURRENT IN CHART DEPENDS ON CONTACT SIZE. ACTUAL RATED CURRENT DEPENDS ON WIRE SIZE.
- Δ CONTACT FACTORY FOR ALL AVAILABLE PLATING ON SPECIFIC CONTACTS.
- Δ AMPHENOL SINE PERFORMANCE SPECIFICATIONS REQUIRE THE USE OF AMPHENOL SINE APPROVED TOOLING.

QUANTITY		PART NUMBER		DESCRIPTION		ITEM
MATERIALS LIST						
UNLESS OTHERWISE SPECIFIED		SIGNATURES		DATE		
1) All dimensions are in inches.		DRAWN: POTER		4/5/09		
2) All tolerances are as shown.		CHECKED: RONE		6/3/09		
3) Pl. DEC 2000		ENGINEER: BERNU		6/3/09		
4) Fabrication Standards Per: SS-20020		APPROVAL: BERNU		6/3/09		
5) Material: SS-20020		CUSTOMER: AMPHENOL				
6) Heat: NA		APPROVAL: NA				
7) Process Specifications:		THE USE OF THIS DRAWING IS LIMITED TO THE SPECIFIC PARTS, MATERIALS, AND PERFORMANCE SPECIFICATIONS AND PERFORMANCE INDICATED THEREON. ANY OTHER USE IS AT THE USER'S RISK. ALL DIMENSIONS ARE SUBJECT TO NORMAL MANUFACTURING VARIATIONS UNLESS OTHERWISE SPECIFIED. AMPHENOL, THE AMPHENOL LOGO AND AMPHENOL LIMITED RIGHTS DATA.		SIZE: P304		SCALE: NONE
8) Next Ass'y:		STAMPED AND FORMED / MACHINED		S2-15217		REVISION: A1

GENERAL DATA, CONTACTS

STAMPED AND FORMED / MACHINED

REVISION: A1

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- 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).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: ocean@oceanchips.ru

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А