

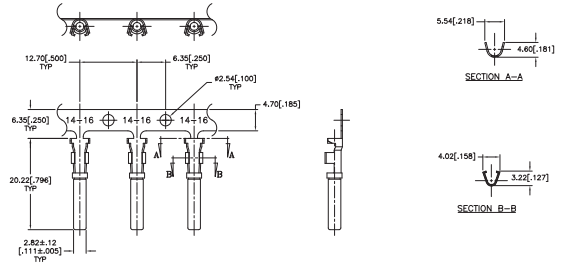
STAMPED AND FORMED CONTACTS, PG 1 of 2

Click on blue underlined part numbers to be taken to their spec sheets.

OPTIONS

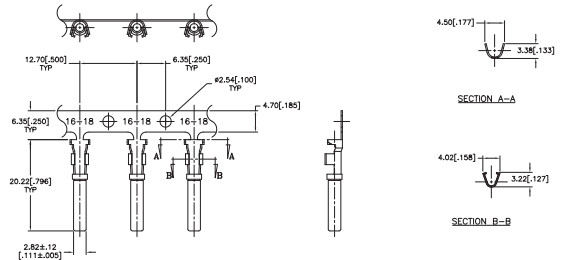
PART NUMBER: AT62-14-01XX
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

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)



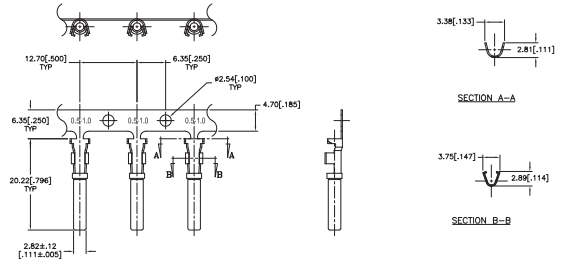
PART NUMBER: AT62-16-01XX
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

MATERIAL:
 CONTACT BODY: COPPER ALLOY
 HOOD: STAINLESS STEEL
PLATING SUFFIX CODE:
 XX=22 NICKEL PLATING
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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)



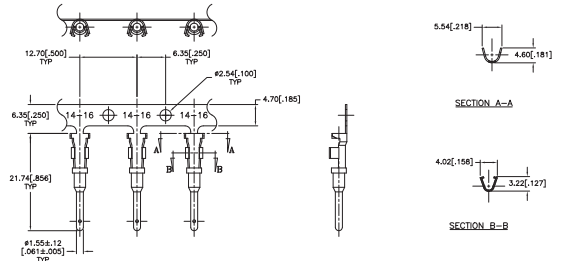
PART NUMBER: AT62-16-06XX
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

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

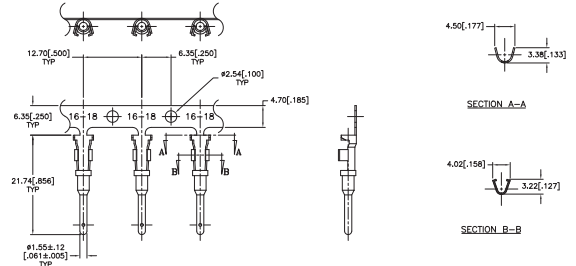
CONTACT GENERAL DATA SPECIFICATION: S2-15217

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

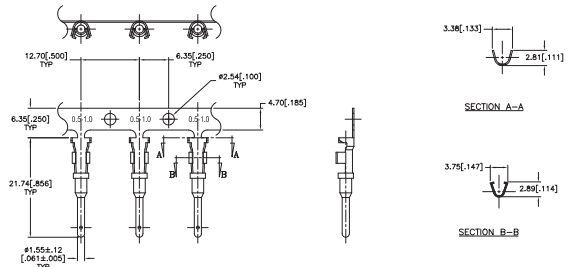
CONTACT GENERAL DATA SPECIFICATION: S2-15217

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)



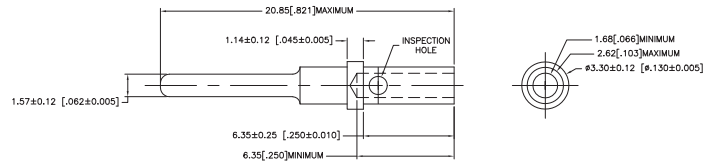
SOLID/MACHINED CONTACTS

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

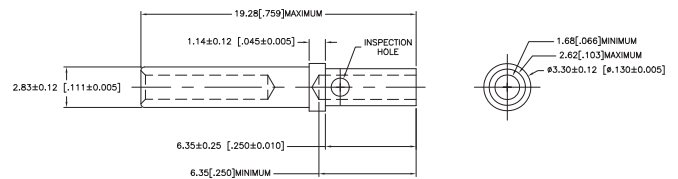
OPTIONS

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

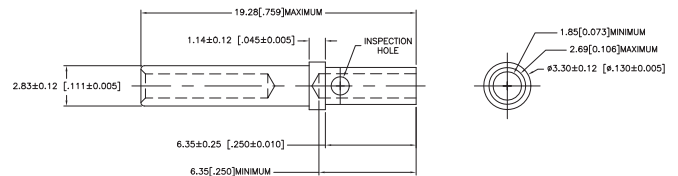


PART NUMBER: [AT62-201-16XX](#)
DESCRIPTION: CONTACT, SOCKET, SOLID MACHINED, SIZE 16
MATERIAL:
 CONTACT BODY: COPPER ALLOY
 HOOD: STAINLESS STEEL
PLATING SUFFIX CODE:
 XX=141 NICKEL PLATING
 XX=31 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER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

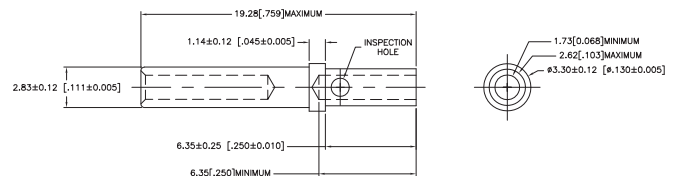


ROCKSOLID™ CONTACTS

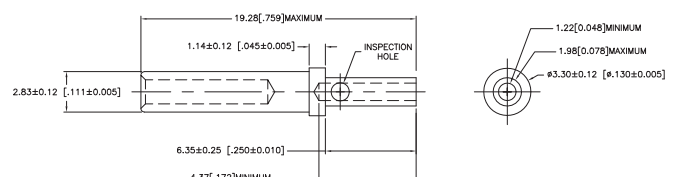
PART NUMBER: [65-54942-14](#)
DESCRIPTION: CONTACT, SOCKET, ROCKSOLID, SIZE 16
AWG RANGE: 14AWG
MATERIAL: COPPER ALLOY
PLATING: GOLD
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218



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



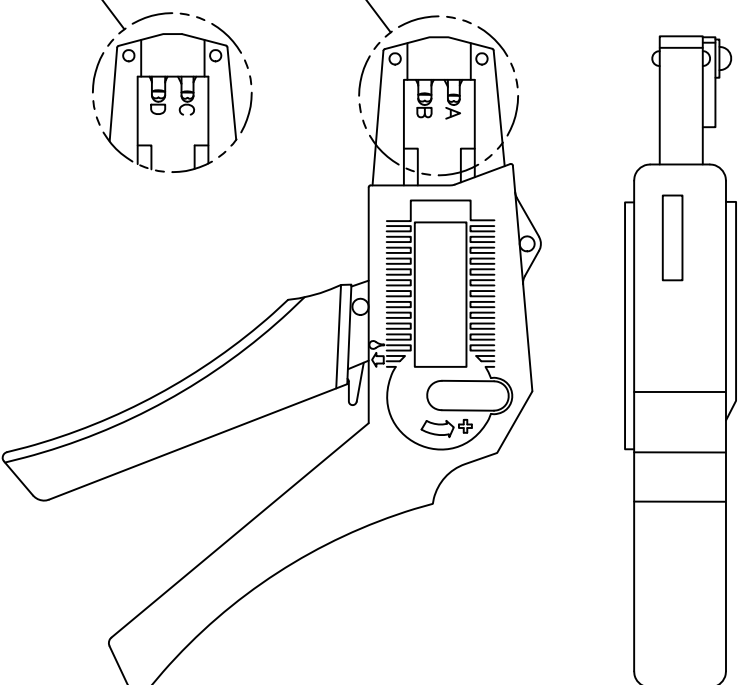
PART NUMBER: [65-54942-20](#)
DESCRIPTION: CONTACT, SOCKET, ROCKSOLID, SIZE 16
AWG RANGE: 20AWG
MATERIAL: COPPER ALLOY
PLATING: GOLD
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218



ATT-16-00 WITH CAVITY A & B

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

CAVITY VIEW OF
CRIMPER NUMBER
ATT-16-00



CAVITY VIEW OF
CRIMPER NUMBER
ATT-16-01

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

NOTES (UNLESS OTHERWISE SPECIFIED):

1. ALL DIMENSIONS IN INCHES [MILLIMETERS]
2. FOR PLATING CODES ** SEE CONTACT DATA DRAWINGS.
3. THIS TOOL IS FOR CRIMPING SIZE 16 CONTACTS ONLY TO WIRES LISTED IN THE CHARTS.
4. DEUTSCH IPD CROSS REFERENCE PART NUMBERS ARE DTT-16-00 AND DTT-16-01.

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

QUANTITY		PART NUMBER	DESCRIPTION	UNIT
MATERIALS LIST				
UNLESS OTHERWISE SPECIFIED				
1) All dimensions are in inches. 2) Tolerances are as follows: 1/4" DEC. ±0.005 1/2" DEC. ±0.005 3/4" DEC. ±0.005 1" DEC. ±0.005 1 1/4" DEC. ±0.005 1 1/2" DEC. ±0.005 2" DEC. ±0.005 3" DEC. ±0.005 4" DEC. ±0.005 5" DEC. ±0.005 6" DEC. ±0.005 7" DEC. ±0.005 8" DEC. ±0.005 9" DEC. ±0.005 10" DEC. ±0.005 11" DEC. ±0.005 12" DEC. ±0.005 13" DEC. ±0.005 14" DEC. ±0.005 15" DEC. ±0.005 16" DEC. ±0.005 17" DEC. ±0.005 18" DEC. ±0.005 19" DEC. ±0.005 20" DEC. ±0.005 21" DEC. ±0.005 22" DEC. ±0.005 23" DEC. ±0.005 24" DEC. ±0.005 25" DEC. ±0.005 26" DEC. ±0.005 27" DEC. ±0.005 28" DEC. ±0.005 29" DEC. ±0.005 30" DEC. ±0.005 31" DEC. ±0.005 32" DEC. ±0.005 33" DEC. ±0.005 34" DEC. ±0.005 35" DEC. ±0.005 36" DEC. ±0.005 37" DEC. ±0.005 38" DEC. ±0.005 39" DEC. ±0.005 40" DEC. ±0.005 41" DEC. ±0.005 42" DEC. ±0.005 43" DEC. ±0.005 44" DEC. ±0.005 45" DEC. ±0.005 46" DEC. ±0.005 47" DEC. ±0.005 48" DEC. ±0.005 49" DEC. ±0.005 50" DEC. ±0.005 51" DEC. ±0.005 52" DEC. ±0.005 53" DEC. ±0.005 54" DEC. ±0.005 55" DEC. ±0.005 56" DEC. ±0.005 57" DEC. ±0.005 58" DEC. ±0.005 59" DEC. ±0.005 60" DEC. ±0.005 61" DEC. ±0.005 62" DEC. ±0.005 63" DEC. ±0.005 64" DEC. ±0.005 65" DEC. ±0.005 66" DEC. ±0.005 67" DEC. ±0.005 68" DEC. ±0.005 69" DEC. ±0.005 70" DEC. ±0.005 71" DEC. ±0.005 72" DEC. ±0.005 73" DEC. ±0.005 74" DEC. ±0.005 75" DEC. ±0.005 76" DEC. ±0.005 77" DEC. ±0.005 78" DEC. ±0.005 79" DEC. ±0.005 80" DEC. ±0.005 81" DEC. ±0.005 82" DEC. ±0.005 83" DEC. ±0.005 84" DEC. ±0.005 85" DEC. ±0.005 86" DEC. ±0.005 87" DEC. ±0.005 88" DEC. ±0.005 89" DEC. ±0.005 90" DEC. ±0.005 91" DEC. ±0.005 92" DEC. ±0.005 93" DEC. ±0.005 94" DEC. ±0.005 95" DEC. ±0.005 96" DEC. ±0.005 97" DEC. ±0.005 98" DEC. ±0.005 99" DEC. ±0.005 100" DEC. ±0.005 101" DEC. ±0.005 102" DEC. ±0.005 103" DEC. ±0.005 104" DEC. ±0.005 105" DEC. ±0.005 106" DEC. ±0.005 107" DEC. ±0.005 108" DEC. ±0.005 109" DEC. ±0.005 110" DEC. ±0.005 111" DEC. ±0.005 112" DEC. ±0.005 113" DEC. ±0.005 114" DEC. ±0.005 115" DEC. ±0.005 116" DEC. ±0.005 117" DEC. ±0.005 118" DEC. ±0.005 119" DEC. ±0.005 120" DEC. ±0.005 121" DEC. ±0.005 122" DEC. ±0.005 123" DEC. ±0.005 124" DEC. ±0.005 125" DEC. ±0.005 126" DEC. ±0.005 127" DEC. ±0.005 128" DEC. ±0.005 129" DEC. ±0.005 130" DEC. ±0.005 131" DEC. ±0.005 132" DEC. ±0.005 133" DEC. ±0.005 134" DEC. ±0.005 135" DEC. ±0.005 136" DEC. ±0.005 137" DEC. ±0.005 138" DEC. ±0.005 139" DEC. ±0.005 140" DEC. ±0.005 141" DEC. ±0.005 142" DEC. ±0.005 143" DEC. ±0.005 144" DEC. ±0.005 145" DEC. ±0.005 146" DEC. ±0.005 147" DEC. ±0.005 148" DEC. ±0.005 149" DEC. ±0.005 150" DEC. ±0.005 151" DEC. ±0.005 152" DEC. ±0.005 153" DEC. ±0.005 154" DEC. ±0.005 155" DEC. ±0.005 156" DEC. ±0.005 157" DEC. ±0.005 158" DEC. ±0.005 159" DEC. ±0.005 160" DEC. ±0.005 161" DEC. ±0.005 162" DEC. ±0.005 163" DEC. ±0.005 164" DEC. ±0.005 165" DEC. ±0.005 166" DEC. ±0.005 167" DEC. ±0.005 168" DEC. ±0.005 169" DEC. ±0.005 170" DEC. ±0.005 171" DEC. ±0.005 172" DEC. ±0.005 173" DEC. ±0.005 174" DEC. ±0.005 175" DEC. ±0.005 176" DEC. ±0.005 177" DEC. ±0.005 178" DEC. ±0.005 179" DEC. ±0.005 180" DEC. ±0.005 181" DEC. ±0.005 182" DEC. ±0.005 183" DEC. ±0.005 184" DEC. ±0.005 185" DEC. ±0.005 186" DEC. ±0.005 187" DEC. ±0.005 188" DEC. ±0.005 189" DEC. ±0.005 190" DEC. ±0.005 191" DEC. ±0.005 192" DEC. ±0.005 193" DEC. ±0.005 194" DEC. ±0.005 195" DEC. ±0.005 196" DEC. ±0.005 197" DEC. ±0.005 198" DEC. ±0.005 199" DEC. ±0.005 200" DEC. ±0.005 201" DEC. ±0.005 202" DEC. ±0.005 203" DEC. ±0.005 204" DEC. ±0.005 205" DEC. ±0.005 206" DEC. ±0.005 207" DEC. ±0.005 208" DEC. ±0.005 209" DEC. ±0.005 210" DEC. ±0.005 211" DEC. ±0.005 212" DEC. ±0.005 213" DEC. ±0.005 214" DEC. ±0.005 215" DEC. ±0.005 216" DEC. ±0.005 217" DEC. ±0.005 218" DEC. ±0.005 219" DEC. ±0.005 220" DEC. ±0.005 221" DEC. ±0.005 222" DEC. ±0.005 223" DEC. ±0.005 224" DEC. ±0.005 225" DEC. ±0.005 226" DEC. ±0.005 227" DEC. ±0.005 228" DEC. ±0.005 229" DEC. ±0.005 230" DEC. ±0.005 231" DEC. ±0.005 232" DEC. ±0.005 233" DEC. ±0.005 234" DEC. ±0.005 235" DEC. ±0.005				

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

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

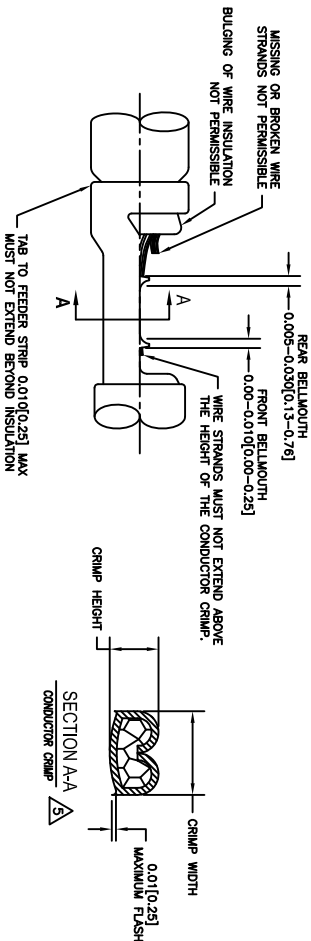
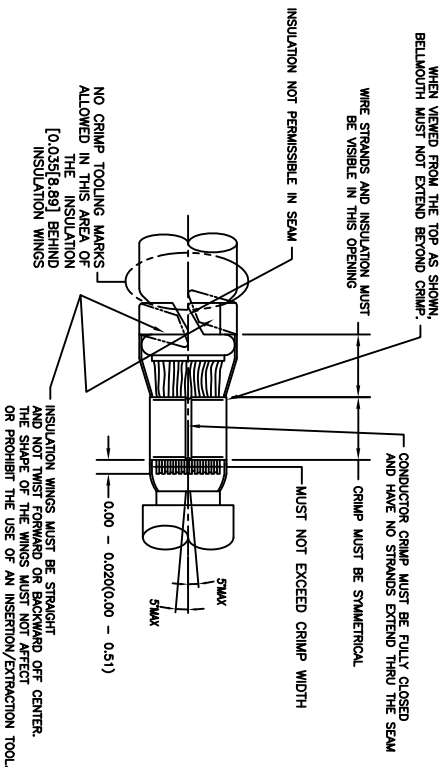
STAMPED CONTACT PART NUMBER 1005=PIN 1006=SOCKET	SIZE	CONDUCTOR WIRE SIZE	CRIMP HEIGHT	CRIMP WIDTH	CONDUCTOR PUNCH NUMBER	CONDUCTOR ANVIL NUMBER	CRIMP TENSILE REFERENCE
A780-14-011x A782-14-011x INSULATION RANGE 0.095-0.150(2.11-3.81)	16	14 AWG	0.055(1.40)	0.094(2.39)	A177-002-0200	A177-101-0200	28(111)
		2.00mm ²	0.055(1.40)	0.094(2.39)			
		1.50mm ²	0.055(1.35)	0.094(2.39)			
		16 AWG	0.050(1.27)	0.094(2.39)			
		1.00mm ²	0.050(1.27)	0.094(2.39)			
A780-16-011x A782-16-011x INSULATION RANGE 0.075-0.140(1.91-3.56)	16	18 AWG	0.048(1.24)	0.094(2.39)	A177-002-0200	A177-101-0200	28(111)
		0.75mm ²	0.048(1.22)	0.094(2.39)			
		14 AWG	0.055(1.40)	0.094(2.39)			
		2.00mm ²	0.055(1.40)	0.094(2.39)			
		1.50mm ²	0.053(1.35)	0.094(2.39)			
A782-16-06x A782-16-06x INSULATION RANGE 0.055-0.100(1.40-2.54)	16	18 AWG	0.048(1.24)	0.094(2.39)	A177-003-0200	A177-103-0200	28(111)
		1.00mm ²	0.050(1.27)	0.094(2.39)			
		16 AWG	0.050(1.27)	0.094(2.39)			
		1.00mm ²	0.050(1.27)	0.094(2.39)			
		18 AWG	0.048(1.24)	0.094(2.39)			
A780-16-06x A782-16-06x INSULATION RANGE 0.055-0.100(1.40-2.54)	16	16 AWG	0.050(1.27)	0.094(2.39)	A177-003-0200	A177-103-0200	28(111)
		1.00mm ²	0.050(1.27)	0.094(2.39)			
		18 AWG	0.048(1.24)	0.094(2.39)			
		1.00mm ²	0.050(1.27)	0.094(2.39)			
		20 AWG	0.048(1.22)	0.079(2.01)			
A780-16-06x A782-16-06x INSULATION RANGE 0.055-0.100(1.40-2.54)	16	18 AWG	0.050(1.27)	0.079(2.01)	A177-003-0200	A177-103-0200	28(111)
		1.00mm ²	0.050(1.27)	0.079(2.01)			
		18 AWG	0.048(1.24)	0.079(2.01)			
		1.00mm ²	0.048(1.22)	0.079(2.01)			
		20 AWG	0.048(1.22)	0.079(2.01)			

CROSS REFERENCE

SINE PART NUMBER	DEUTSCH PART NUMBER
MFX-3950	DC16-02-00
A177-002-0200	1017-002-0200
A177-003-0200	1017-003-0200
A177-101-0200	1017-101-0200
A177-103-0200	1017-103-0200
A177-210-0200	1017-210-0200
A177-211-0200	1017-211-0200
A177-213-0200	1017-213-0200
A177-214-0200	1017-214-0200
A177-217-0200	1017-217-0200
A177-218-0200	1017-218-0200
A177-310-0200	1017-310-0200
A177-311-0200	1017-311-0200
A177-313-0200	1017-313-0200
A177-304-0200	1017-304-0200
A177-317-0200	1017-317-0200
A177-318-0200	1017-318-0200

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN INCHES(mm).
2. FORCES ARE IN POUNDS(LBS) AND NEWTONS(N).
3. "X"= PLATING SUFFX. SEE INDIVIDUAL CONTACT DRAWING.
4. WIRE STRIP LENGTH: 0.175±0.029(4.43±0.64). BROKEN OR MISSING CONDUCTOR STRANDS ARE NOT ACCEPTABLE.
5. USE A BLADE MICRO-METER (0.0002-54) 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(25.4) 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 TEFLON INSULATION MAY BE AN EXCEPTION). INSULATION CRIMP SHALL NOT AFFECT REMOVAL TOOL PERFORMANCE AND SHALL NOT DAMAGE CONNECTOR CROMMET SEAL.
9. CONDUCTOR TYPE ARE PER SAE J128(AWG) AND ISO 6722(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		DESCRIPTION		ITEM
UNLESS OTHERWISE SPECIFIED		SIGNATURES		DATE		
1) All dimensions are in inches.		DRAWN: ROTH		4/7/09		
2) 1 PL. DEC. 50.00 10 Positions 51/74		ORDERED: ROTH		6/8/09		
3) PL. DEC. 50.00 10 Positions 51/74		ENGINEER: BERNIM		6/8/09		
4) 100% S2-20020		APPROVAL: BERNIM		6/8/09		
MATERIAL SPECIFICATIONS:		CUSTOMER:				
N/A						
PROCESS SPECIFICATIONS:		THE USE OF THIS DRAWING IS LIMITED TO THE SPECIFICATIONS, AND PERFORMANCE PROPERTY OF AMPHENOL CORP. ALL DIMENSIONS ARE SUBJECT TO REMOVAL. DIMENSIONS NOTED OTHERWISE ARE CONSIDERED REVISION DATA.				
NEXT ASSY:		SIZE FROM DRAWING NO:		SCALE: NONE		
		C 10K44		S2-15222		
		S2-15222		SHEET 1 OF 1		

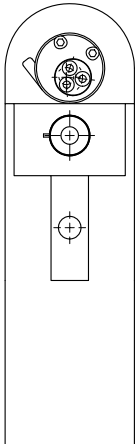
SINE Systems Corporation

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

CRIMP DATA, STAMPED CONTACTS
FOR CRIMPER MFX-3950

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

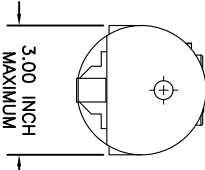
CONTACT LOCATOR "TURRET"
THREE POSITION FOR SIZE
12, 16 & 20 MALE AND
FEMALE CONTACTS



"TURRET"
RELEASE LATCH

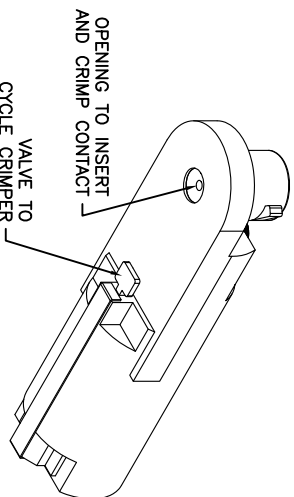
SELECTOR FOR
CRIMP SETTING

THREADED HOLE FOR
ATTACHMENT OF
BENCH MOUNT FIXTURE



THREADED OPENING
FOR COMPRESSED
AIR FITTING

- NOTES:
1. THE CA-5E12 IS A COMPRESSED AIR OPERATED HAND 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).
 2. 80-120 PSI COMPRESSED AIR.
 3. WEIGHT: 3.1 LBS
 4. 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.
 5. SELECTING WIRE SIZE: GRASP THE SELECTOR AND ROTATE TO THE DESIRED NUMBER.



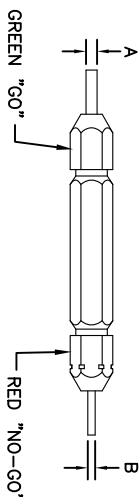
OPENING TO INSERT
AND CRIMP CONTACT

VALVE TO
CYCLE CRIMPER

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

GAGING INSTRUCTIONS

CAUTION!
DO NOT CRIMP GAGE!

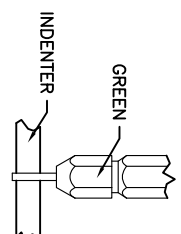


GREEN "GO"

RED "NO-GO"

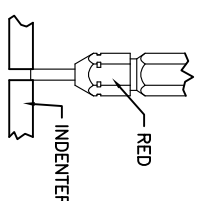
"GO" GAGING: OPERATE TOOL TO FULLY CLOSED POSITION. INSERT "GO" GAGE END AS SHOWN. GAGE MUST PASS FREELY BETWEEN INDENTER TIPS.

"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.



GREEN

SELECTOR NUMBER	A GO DIA.	B NO-GO DIA.
1	.0280	.0330
2	.0320	.0370
3	.0360	.0410
4	.0390	.0440
5	.0450	.0500
6	.0520	.0570
7	.0590	.0640
8	.0680	.0730



RED

INDENTER

CONTACT SIZE		SELECTOR NUMBER							
LOCATOR POSITION	26 WIRE	24 WIRE	22 WIRE	20 WIRE	18 WIRE	16 WIRE	14 WIRE	12 WIRE	
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
MATERIALS LIST			
UNLESS OTHERWISE SPECIFIED			
1) All dimensions are in inches.			
2) Dimensions in parentheses are for reference only.			
3) Part .005 .0005 .001 Angles 3:1/4"			
4) Part .005 .0005 .001 Angles 3:1/4"			
5) Part .005 .0005 .001 Angles 3:1/4"			
6) Part .005 .0005 .001 Angles 3:1/4"			
7) Part .005 .0005 .001 Angles 3:1/4"			
8) Part .005 .0005 .001 Angles 3:1/4"			
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97) Part .005 .0005 .001 Angles 3:1/4"			
98) Part .005 .0005 .001 Angles 3:1/4"			
99) Part .005 .0005 .001 Angles 3:1/4"			
100) Part .005 .0005 .001 Angles 3:1/4"			

SINE Systems Corporation

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

INSTRUCTIONS FOR CA-5E12
CRIMPER, PNEUMATIC

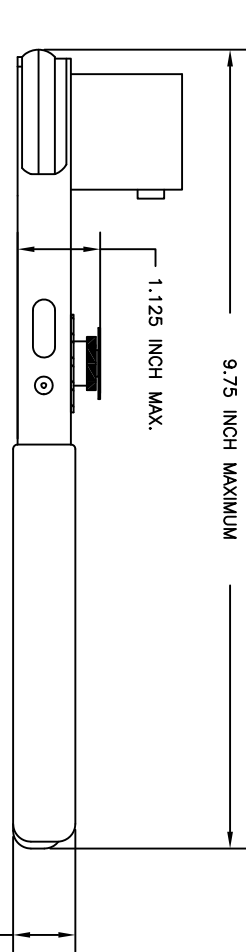
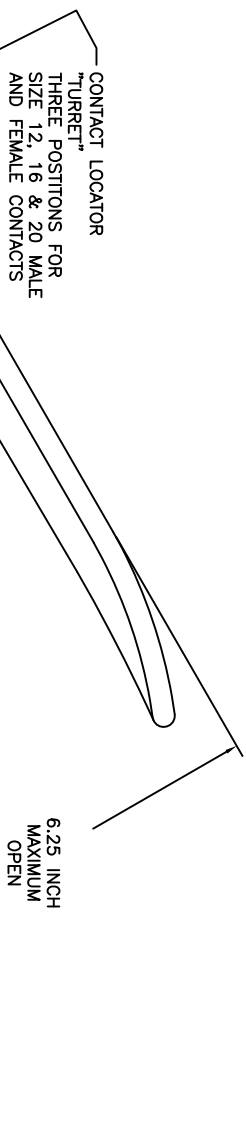
SIZE 1/2" DIA. 1/2" DIA. 1/2" DIA.

SCALE NONE

S2-15220

SHEET 1 OF 1

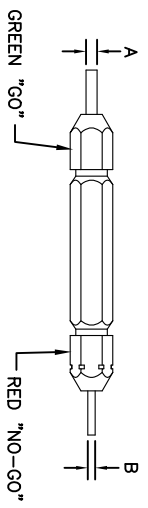
REVISIONS			
REV	ZONE	ECO	DESCRIPTION
1	-	-	RELEASE NUMBER 016571
			DATE
			BY
			APPR
			M.R.F.



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

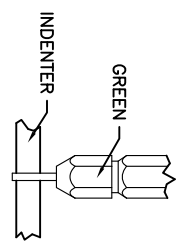
GAGING INSTRUCTIONS

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.



SELECTOR NUMBER	A $\pm .0001$ GO DIA.	B $\pm .0001$ NO-GO DIA.
1	.0280	.0330
2	.0320	.0370
3	.0360	.0410
4	.0390	.0440
5	.0450	.0500
6	.0520	.0570
7	.0590	.0640
8	.0680	.0730

CONTACT SIZE	LOCATOR "TURRET" POSITION COLOR	26 RED	24 BLUE	22 BLUE	20 BLUE	18 BLUE	16 BLUE	14 BLUE	12 BLUE
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		

- 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.

QUANTITY	PART NUMBER	DESCRIPTION	ITEM
MATERIALS LIST			
SIGNATURES DATE			
DRAWN: BERLIN 6/3/09			
CHECKED: FINCK 6/3/09			
ENGINEER: BERLIN			
APPROVAL: BERLIN 6/3/09			
CUSTOMER:			
THE USE OF THIS DOCUMENT IS SPECIFIC TO THE PROJECT AND NOT TO BE REPRODUCED OR COPIED WITHOUT THE WRITTEN PERMISSION OF AMPHENOL CORP. ALL DOCUMENTS RETURNED HEREON MAY CONTAIN UNCLASSIFIED INFORMATION.			
INSTRUCTIONS FOR CA-5D12 CRIMPER, HAND, MACHINED CONTACTS			
SIZE: 1/2" DIA. 1/2" DIA. 1/2" DIA.			
SCALE: NONE			
SHEET 1 OF 1			

SINE Systems Corporation
A Subsidiary of Amphenol Corporation
44724 Moley Drive
Canton Township, MI 48036

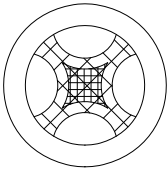
REVISIONS				
REV	ZONE	ECO	DESCRIPTION	
1			RELEASE NUMBER 016571	
DATE	BY	APPR		
6/12/09	B.D.B.	M.R.F.		

CONTACT P/N	SIZE TYPE	WIRE SIZE	REF. ONLY TENSILE LBS[N]
AT60-202-16XX	16PIN	1.5mm ² 16AWG	35[156]
AT62-201-16XX	16SOC	1.0mm ² 18AWG	25[111]
A		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]

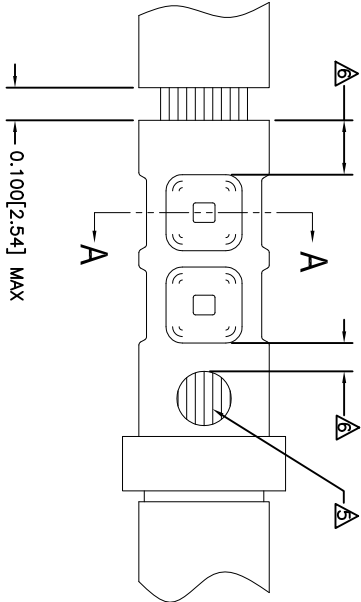
CRIMP TOOLING					
CONTACT SIZE	CRIMP TOOL PART NUMBER	CONTACT LOCATOR "TURRET" POSITION	WIRE SELECTOR NUMBER	GO GAGE INCH[MM]	"NOGO" GAGE INCH[MM]
16	CA-5D12 CA-5E12	BLUE	6	0.052[1.32]	0.057[1.45]
16	CA-5D12 CA-5E12	BLUE	4	0.039[.991]	0.044[1.12]

- NOTES: UNLESS OTHERWISE SPECIFIED
- MINIMUM +/-0.0005 [0.013] TOLERANCE STEEL GAGE PINS. DO NOT CRIMP GAGE PINS. CLOSE DIE, THEN USE GAGE PINS.
 - WHEN XX=31, CONTACT PLATING IS GOLD WHEN XX=141, CONTACT PLATING IS NICKEL
 - PULL RATE OF 1.0 IN [25.4] PER MINUTE. ACTUAL STRENGTH DEPENDS ON WIRE SIZE.
 - FOR CONTACT PERFORMANCE, MATERIAL SPECIFICATIONS AND APPLICATION DETAILS, SEE DRAWING S2-15217.
 - CONDUCTOR STRANDS MUST BE VISIBLE THRU THE INSPECTION HOLE PRIOR TO CRIMP.
 - PROPER CRIMP TOOLING WILL PRODUCE A CRIMP CENTERED BETWEEN THE INSPECTION HOLE AND CRIMP BARREL END.
 - 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.
 - THE CRIMP HEIGHT DIMENSION AFTER CRIMPING MAY VARY FROM THE VALUES LISTED FOR THE "GO-NOGO" PINS.



SECTION A-A
CRIMP CROSS-SECTION

0.100[2.54] MAX





QUANTITY	PART NUMBER	DESCRIPTION	ITEM
MATERIALS LIST			
UNLESS OTHERWISE SPECIFIED			
1) All dimensions are in inches.			
2) Dimensions in parentheses are for reference only.			
3) Pl. DEC 10.00 [10.00] Precision 31/64			
4) Pl. DEC 10.00 [10.00] Precision 31/64			
5) Production Standards Per: A			
6) Rev: SD-20020			
MATERIAL SPECIFICATIONS:			
N/A			
PROCESS SPECIFICATIONS:			
N/A			
NEXT ASSY:			
S2-15218			

REVISIONS				
REV	ZONE	ECO	DESCRIPTION	DATE
A1	-	-	RELEASE NUMBER 016371	6/12/09
BY	APP			
B.D.B.	M.R.F.			

SOLID CONTACT SIZE	SOLID CONTACT PART NUMBERS		WIRE SIZE AWG(mm ²)	RECOMMENDED STRIP LENGTH INCH (mm)	MIN CONTACT RETENTION LBS (N)	REF CRIMP RETENTION 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 [111]	35-20 [156-89]	13

S&F CONTACT SIZE	STAMPED CONTACT PART NUMBERS		WIRE SIZE AWG (mm ²)	WIRE INSULATION O.D. RANGE	RECOMMENDED STRIP LENGTH INCH (mm)	MIN CONTACT RETENTION LBS (N)	REF CRIMP RETENTION 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 [111]	25 [111]	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 [111]	25 [111]	13
16	AT60-16-06**	AT62-16-06**	18-20 [0.75-0.50]	.065 - .095 [1.40 - 2.41]	0.150-0.200 [3.81-5.08]	25 [111]	25-15 [111+67]	13


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


MATERIAL SPECIFICATION AND PLATING ** CODES	
PIN: COPPER ALLOY SOCKET: COPPER ALLOY WITH STAINLESS STEEL SLEEVE	
SOLID MACHINED CONTACT PLATING OPTIONS: 	
31= GOLD* 141= NICKEL	
STAMPED CONTACT PLATING OPTIONS: 	
22= NICKEL 44= GOLD* 88= 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).

 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.

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

 MAXIMUM RATED CURRENT IN CHART DEPENDS ON CONTACT SIZE. ACTUAL RATED CURRENT DEPENDS ON WIRE SIZE.

 CONTACT FACTORY FOR ALL AVAILABLE PLATING ON SPECIFIC CONTACTS.

 AMPHENOL SINE PERFORMANCE SPECIFICATIONS REQUIRE THE USE OF AMPHENOL SINE APPROVED TOOLING.

PART NUMBER		DESCRIPTION		ITEM
QUANTITY		MATERIALS LIST		
UNLESS OTHERWISE SPECIFIED				
1) All dimensions are in inches.		SIGNATURES		DATE
2) All drawings are to be made to the following tolerances:		DRAWN: POKR		4/5/09
3) Holes are to be drilled to the following tolerances:		CHECKED: POKR		6/3/09
4) Holes are to be drilled to the following tolerances:		ENGINEER: BERNIM		BERNIM
5) Production Standards Per:		APPROVAL: BERNIM		6/3/09
6) Material: SS-20020		CUSTOMER:		
7) Material: SS-20020		CUSTOMER:		
8) Material: SS-20020		CUSTOMER:		
9) Material: SS-20020		CUSTOMER:		
10) Material: SS-20020		CUSTOMER:		
11) Material: SS-20020		CUSTOMER:		
12) Material: SS-20020		CUSTOMER:		
13) Material: SS-20020		CUSTOMER:		
14) Material: SS-20020		CUSTOMER:		
15) Material: SS-20020		CUSTOMER:		
16) Material: SS-20020		CUSTOMER:		
17) Material: SS-20020		CUSTOMER:		
18) Material: SS-20020		CUSTOMER:		
19) Material: SS-20020		CUSTOMER:		
20) Material: SS-20020		CUSTOMER:		
21) Material: SS-20020		CUSTOMER:		
22) Material: SS-20020		CUSTOMER:		
23) Material: SS-20020		CUSTOMER:		
24) Material: SS-20020		CUSTOMER:		
25) Material: SS-20020		CUSTOMER:		
26) Material: SS-20020		CUSTOMER:		
27) Material: SS-20020		CUSTOMER:		
28) Material: SS-20020		CUSTOMER:		
29) Material: SS-20020		CUSTOMER:		
30) Material: SS-20020		CUSTOMER:		
31) Material: SS-20020		CUSTOMER:		
32) Material: SS-20020		CUSTOMER:		
33) Material: SS-20020		CUSTOMER:		
34) Material: SS-20020		CUSTOMER:		
35) Material: SS-20020		CUSTOMER:		
36) Material: SS-20020		CUSTOMER:		
37) Material: SS-20020		CUSTOMER:		
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39) Material: SS-20020		CUSTOMER:		
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42) Material: SS-20020		CUSTOMER:		
43) Material: SS-20020		CUSTOMER:		
44) Material: SS-20020		CUSTOMER:		
45) Material: SS-20020		CUSTOMER:		
46) Material: SS-20020		CUSTOMER:		
47) Material: SS-20020		CUSTOMER:		
48) Material: SS-20020		CUSTOMER:		
49) Material: SS-20020		CUSTOMER:		
50) Material: SS-20020		CUSTOMER:		
51) Material: SS-20020		CUSTOMER:		
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53) Material: SS-20020		CUSTOMER:		
54) Material: SS-20020		CUSTOMER:		
55) Material: SS-20020		CUSTOMER:		
56) Material: SS-20020		CUSTOMER:		
57) Material: SS-20020		CUSTOMER:		
58) Material: SS-20020		CUSTOMER:		
59) Material: SS-20020		CUSTOMER:		
60) Material: SS-20020		CUSTOMER:		
61) Material: SS-20020		CUSTOMER:		
62) Material: SS-20020		CUSTOMER:		
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64) Material: SS-20020		CUSTOMER:		
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69) Material: SS-20020		CUSTOMER:		
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71) Material: SS-20020		CUSTOMER:		
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