

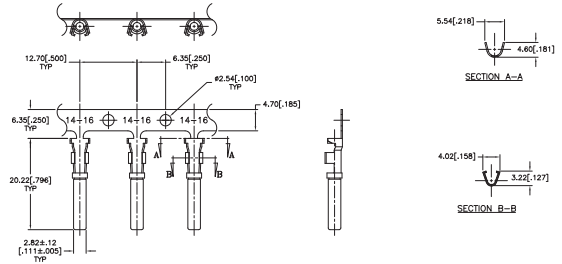
STAMPED AND FORMED CONTACTS, PG 1 of 2

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

OPTIONS

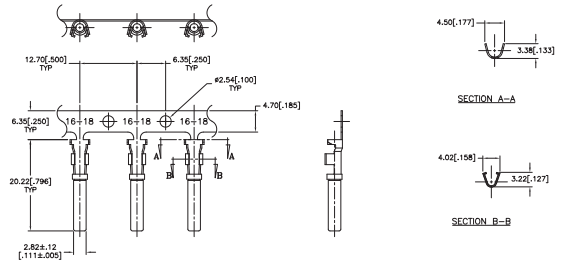
PART NUMBER: AT62-14-01XX
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

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)



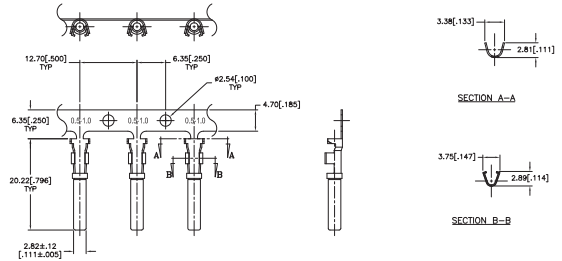
PART NUMBER: AT62-16-01XX
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

MATERIAL:
 CONTACT BODY: COPPER ALLOY
 HOOD: STAINLESS STEEL
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CONTACTS PER REEL: APPROX. 4000 (PARTIAL REELS AVAILABLE)



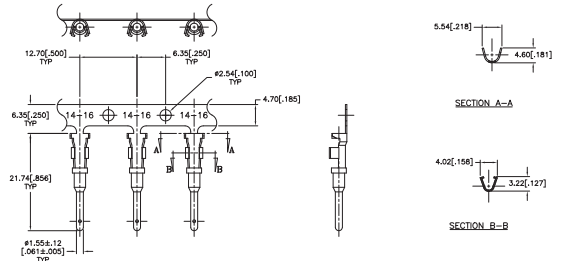
PART NUMBER: AT62-16-06XX
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

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

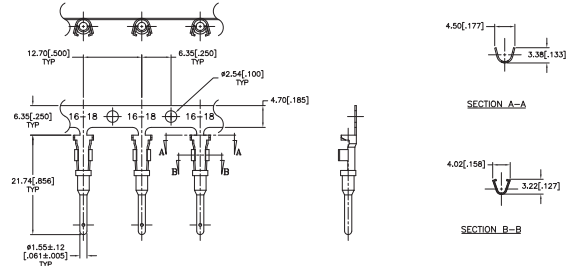
CONTACT GENERAL DATA SPECIFICATION: S2-15217

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

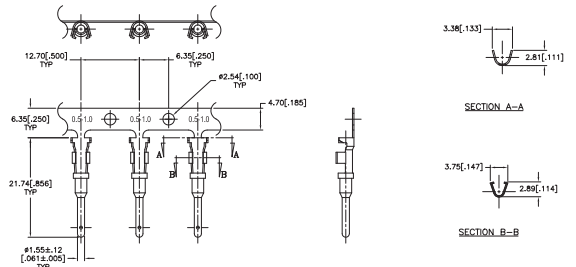
CONTACT GENERAL DATA SPECIFICATION: S2-15217

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)



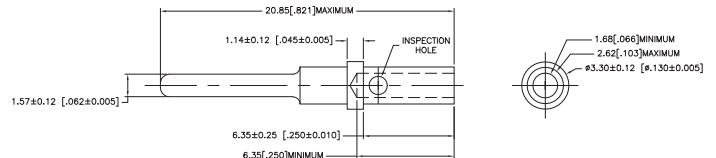
SOLID/MACHINED CONTACTS

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

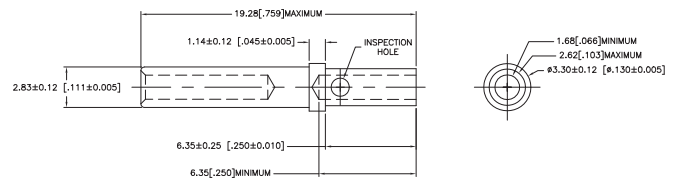
OPTIONS

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

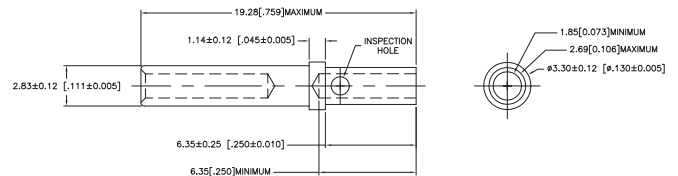


PART NUMBER: [AT62-201-16XX](#)
DESCRIPTION: CONTACT, SOCKET, SOLID MACHINED, SIZE 16
MATERIAL:
 CONTACT BODY: COPPER ALLOY
 HOOD: STAINLESS STEEL
PLATING SUFFIX CODE:
 XX=141 NICKEL PLATING
 XX=31 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER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

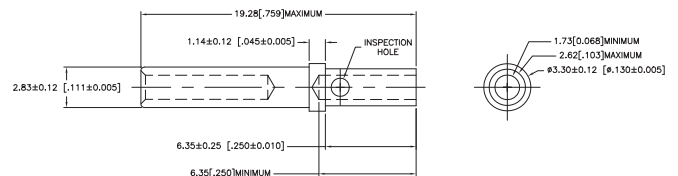


ROCKSOLID™ CONTACTS

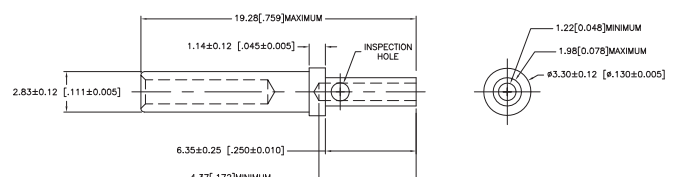
PART NUMBER: [65-54942-14](#)
DESCRIPTION: CONTACT, SOCKET, ROCKSOLID, SIZE 16
AWG RANGE: 14AWG
MATERIAL: COPPER ALLOY
PLATING: GOLD
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218



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



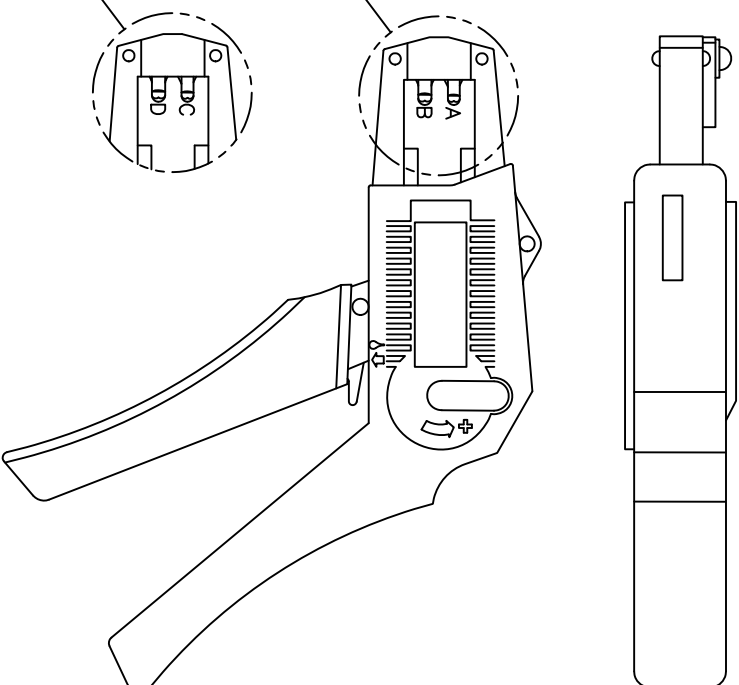
PART NUMBER: [65-54942-20](#)
DESCRIPTION: CONTACT, SOCKET, ROCKSOLID, SIZE 16
AWG RANGE: 20AWG
MATERIAL: COPPER ALLOY
PLATING: GOLD
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218



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**	[.191 - 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.

REVISIONS

QUANTITY	PART NUMBER	DESCRIPTION	UNIT
MATERIALS LIST			
UNLESS OTHERWISE SPECIFIED			
1) All dimensions are in inches. 2) Tolerances are as follows: ±1/64 3 PL DEC 5.001 1/16" ±.001 4) Finish: SS - 20020 5) Note Reference = 		SIGNATURES DATE	
DRAWN: BENJAM		6/8/09	
CHECKED: FORC		6/8/09	
DRAWN: BENJAM			
APPROVAL: BENJAM		6/8/09	
CUSTOMER:		THE USE OF THIS DOCUMENT IS LIMITED TO THE PROJECT AND THE DATA SHOWN HEREON ARE THE PROPERTY OF SINE SYSTEMS CORPORATION. NO REPRODUCTION, REUSE, OR DISTRIBUTION OF THIS DOCUMENT, INCLUDING RIGHTS MAY CONTAIN LIMITED RIGHTS DATA	
INSTRUCTIONS, ATT-16-00 & 01 CRIMPER, HAND, STAMPED CONTACTS		SIZE FROM WORKING NO: B 16K/44 S2-15223 REVISION: A	
PROCESS SPECIFICATIONS		SCALE: NONE S2-15223 SHEET 1 OF 1	
PART ASST:			

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.			

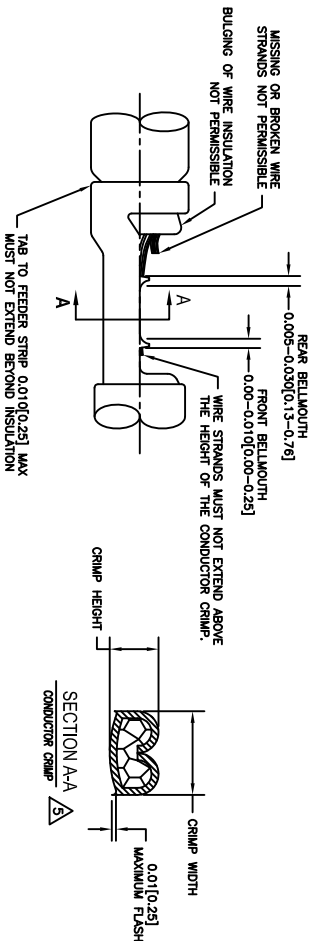
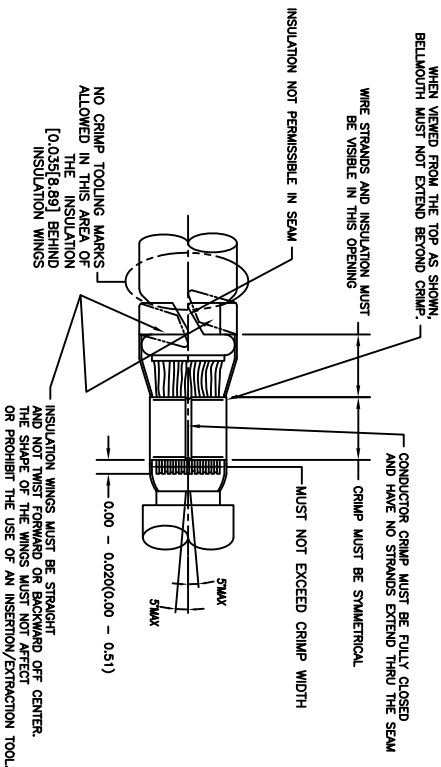
STAMPED CONTACT PART NUMBER 1005=PIN 1006=SOCKET	SIZE	CONDUCTOR WIRE SIZE	CRIMP HEIGHT	CRIMP WIDTH	CONDUCTOR PUNCH NUMBER	CONDUCTOR ANVIL NUMBER	CRIMP TENSILE REFERENCE
A780-14-011x A782-14-011x INSULATION RANGE 0.095-0.150(2.11-3.81)	16	14 AWG	0.055(1.40)	0.094(2.39)	A177-002-0200	A177-101-0200	28(111)
		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(1.22)	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)			
A780-16-060x A782-16-060x 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)			
A780-16-060x A782-16-060x 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)			
A780-16-060x A782-16-060x INSULATION RANGE 0.055-0.100(1.40-2.54)	16	16 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 MICROMETER (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 SAEJ1128(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.

PART NUMBER		DESCRIPTION		ITEM
MATERIALS LIST				
UNLESS OTHERWISE SPECIFIED				
1) All dimensions are in inches.				
2) Tolerances are as follows:				
3 Pl. DEC 50.00 10 Positions 51/4				
3 Pl. DEC 50.00 10 Positions 51/4				
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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 1000=PIN 1000=SOCKET	SIZE	CRIMP HEIGHT	CRIMP WIDTH	CONDUCTOR PUNCH NUMBER	CONDUCTOR ANVIL NUMBER	CRIMP TENSILE REFERENCE
A160-14-011x A162-14-011x INSULATION RANGE 0.095-0.150(2.41-3.81)	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)			
	16 AWG	0.050(1.27)	0.094(2.39)	A117-083-0200	A117-183-0200	25(111)
A160-16-011x A162-16-011x INSULATION RANGE 0.075-0.140(1.91-3.56)	16 AWG	0.050(1.27)	0.094(2.39)			
	1.00mm ²	0.050(1.27)	0.094(2.39)			
	18 AWG	0.049(1.24)	0.094(2.39)			
	0.75mm ²	0.049(1.24)	0.094(2.39)			
A160-16-065x A162-16-065x INSULATION RANGE 0.055-0.100(1.40-2.54)	16 AWG	0.050(1.27)	0.079(2.01)			
	1.00mm ²	0.050(1.27)	0.079(2.01)			
	18 AWG	0.049(1.24)	0.079(2.01)			
	20 AWG	0.048(1.22)	0.079(2.01)			

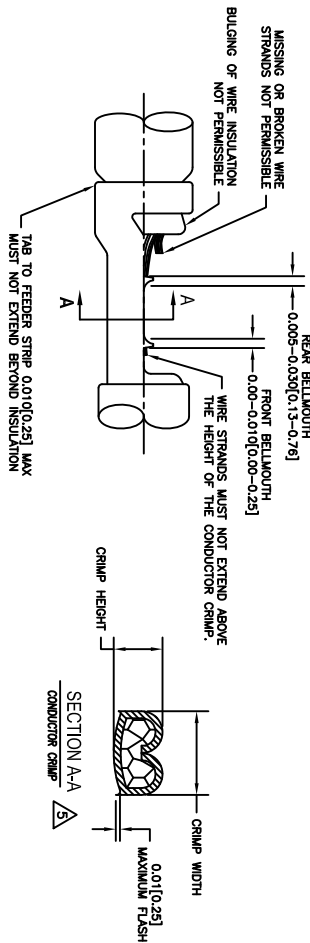
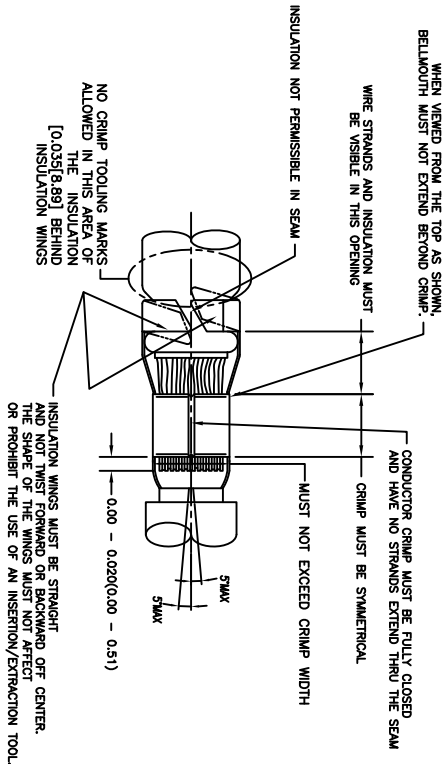
CROSS REFERENCE

INSULATION DIAMETER RANGE	INSULATION PUNCH NUMBER	INSULATION ANVIL NUMBER
0.120-0.150	A117-225-0200	A117-325-0200
0.105-0.125	A117-226-0200	A117-326-0200
0.085-0.111	A117-227-0200	A117-327-0200
0.075-0.105	A117-228-0200	A117-328-0200
0.063-0.094	A117-229-0200	A117-329-0200
0.050-0.075	A117-230-0200	A117-330-0200

SINE PART NUMBER	DEUTSCH PART NUMBER
MPX-3953	DCT1620-02-00
A117-083-0200	1017-083-0200
A117-082-0200	1017-082-0200
A117-183-0200	1017-183-0200
A117-182-0200	1017-182-0200
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 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 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(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 SAEJ1128(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.

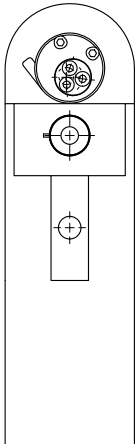


ALL REFERENCES TO DEUTSCH PRODUCTS OR SPECIFICATIONS ARE FOR COMPARISON PURPOSES ONLY, AND REFER TO DEUTSCH INDUSTRIAL PRODUCTS.

QUANTITY		PART NUMBER		DESCRIPTION		ITEM
MATERIALS LIST						
UNLESS OTHERWISE SPECIFIED		SIGNATURES		DATE		
1) All dimensions are in inches.		DRAFT		4/7/09		
2) 1 PL. DEC. 50.00		ORDER		6/8/09		
3) 1 PL. DEC. 50.00		ENGINEER		6/8/09		
4) 1 PL. DEC. 50.00		APPROVAL		6/8/09		
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198) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
199) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
200) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
201) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
202) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
203) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
204) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
205) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
206) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
207) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
208) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
209) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
210) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
211) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
212) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
213) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
214) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
215) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
216) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
217) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
218) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
219) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
220) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
221) 1 PL. DEC. 50.00		CUSTOMER		6/8/09		
222) 1 PL. DEC. 50.00						

REVISIONS				
REV	ZONE	ECO	DESCRIPTION	DATE
A1	-	-	RELEASE NUMBER 016571	6/12/09
BY	DATE	BY	DATE	BY

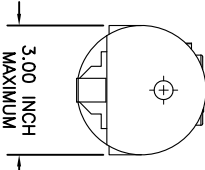
CONTACT LOCATOR "TURRET"
THREE POSITION FOR SIZE
12, 16 & 20 MALE AND
FEMALE CONTACTS



"TURRET"
RELEASE LATCH

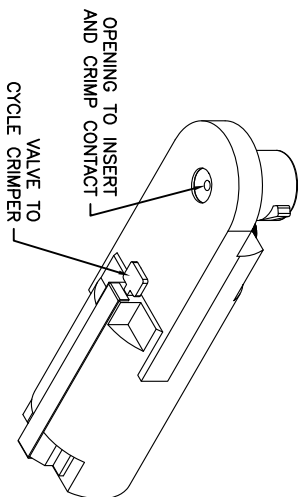
SELECTOR FOR
CRIMP SETTING

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.



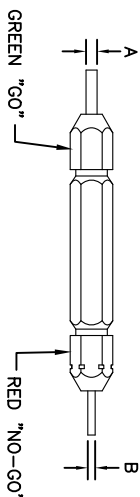
OPENING TO INSERT
AND CRIMP CONTACT

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!

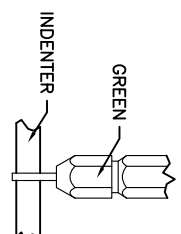


GREEN "GO"

RED "NO-GO"

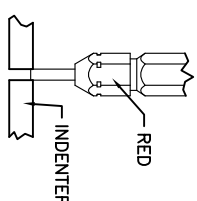
"GO" GAGING: OPERATE TOOL TO FULLY CLOSED POSITION. INSERT "GO" GAGE END AS SHOWN. GAGE MUST PASS FREELY BETWEEN INDENTER TIPS.

"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) Tolerances are as follows:			
3) Holes: .0005 to .0010			
4) Fits: .0005 to .0010			
5) Radii: .0005 to .0010			
6) Threads: Standard Per: ASME B1.1			
7) Surface Finish: Per: ASME A13.1			
8) Material: Per: ASME A13.1			
9) Heat Treatment: Per: ASME A13.1			
10) Painting: Per: ASME A13.1			
11) Marking: Per: ASME A13.1			
12) Assembly: Per: ASME A13.1			
13) Inspection: Per: ASME A13.1			
14) Shipping: Per: ASME A13.1			
15) Storage: Per: ASME A13.1			
16) Disposal: Per: ASME A13.1			
17) Maintenance: Per: ASME A13.1			
18) Repair: Per: ASME A13.1			
19) Replacement: Per: ASME A13.1			
20) Other: Per: ASME A13.1			
21) Notes: Per: ASME A13.1			
22) Comments: Per: ASME A13.1			
23) Revision: Per: ASME A13.1			
24) Drawing: Per: ASME A13.1			
25) Specification: Per: ASME A13.1			
26) Standard: Per: ASME A13.1			
27) Code: Per: ASME A13.1			
28) Title: Per: ASME A13.1			
29) Author: Per: ASME A13.1			
30) Date: Per: ASME A13.1			
31) Status: Per: ASME A13.1			
32) Version: Per: ASME A13.1			
33) Release: Per: ASME A13.1			
34) Approval: Per: ASME A13.1			
35) Signature: Per: ASME A13.1			
36) Stamp: Per: ASME A13.1			
37) Mark: Per: ASME A13.1			
38) Label: Per: ASME A13.1			
39) Tag: Per: ASME A13.1			
40) Other: Per: ASME A13.1			
41) Notes: Per: ASME A13.1			
42) Comments: Per: ASME A13.1			
43) Revision: Per: ASME A13.1			
44) Drawing: Per: ASME A13.1			
45) Specification: Per: ASME A13.1			
46) Standard: Per: ASME A13.1			
47) Code: Per: ASME A13.1			
48) Title: Per: ASME A13.1			
49) Author: Per: ASME A13.1			
50) Date: Per: ASME A13.1			
51) Status: Per: ASME A13.1			
52) Version: Per: ASME A13.1			
53) Release: Per: ASME A13.1			
54) Approval: Per: ASME A13.1			
55) Signature: Per: ASME A13.1			
56) Stamp: Per: ASME A13.1			
57) Mark: Per: ASME A13.1			
58) Label: Per: ASME A13.1			
59) Tag: Per: ASME A13.1			
60) Other: Per: ASME A13.1			
61) Notes: Per: ASME A13.1			
62) Comments: Per: ASME A13.1			
63) Revision: Per: ASME A13.1			
64) Drawing: Per: ASME A13.1			
65) Specification: Per: ASME A13.1			
66) Standard: Per: ASME A13.1			
67) Code: Per: ASME A13.1			
68) Title: Per: ASME A13.1			
69) Author: Per: ASME A13.1			
70) Date: Per: ASME A13.1			
71) Status: Per: ASME A13.1			
72) Version: Per: ASME A13.1			
73) Release: Per: ASME A13.1			
74) Approval: Per: ASME A13.1			
75) Signature: Per: ASME A13.1			
76) Stamp: Per: ASME A13.1			
77) Mark: Per: ASME A13.1			
78) Label: Per: ASME A13.1			
79) Tag: Per: ASME A13.1			
80) Other: Per: ASME A13.1			
81) Notes: Per: ASME A13.1			
82) Comments: Per: ASME A13.1			
83) Revision: Per: ASME A13.1			
84) Drawing: Per: ASME A13.1			
85) Specification: Per: ASME A13.1			
86) Standard: Per: ASME A13.1			
87) Code: Per: ASME A13.1			
88) Title: Per: ASME A13.1			
89) Author: Per: ASME A13.1			
90) Date: Per: ASME A13.1			
91) Status: Per: ASME A13.1			
92) Version: Per: ASME A13.1			
93) Release: Per: ASME A13.1			
94) Approval: Per: ASME A13.1			
95) Signature: Per: ASME A13.1			
96) Stamp: Per: ASME A13.1			
97) Mark: Per: ASME A13.1			
98) Label: Per: ASME A13.1			
99) Tag: Per: ASME A13.1			
100) Other: Per: ASME A13.1			

SINE Systems Corporation

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

INSTRUCTIONS FOR CA-5E12
CRIMPER, PNEUMATIC

S2-15220

A1

REVISIONS			
REV	ZONE	ECO	DESCRIPTION
1	-	-	RELEASE NUMBER 016571
DATE	6/12/09	BY	M.S.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.

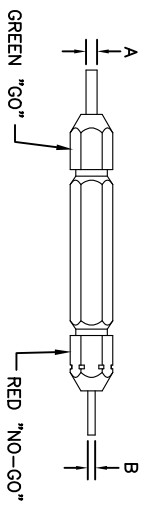
9.75 INCH MAXIMUM

1.00 INCH MAX.

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

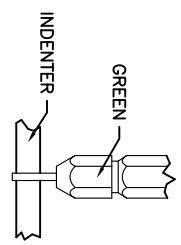
GAGING INSTRUCTIONS

CAUTION!
DO NOT CRIMP GAGE!

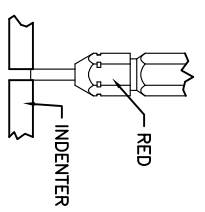


"GO" GAGING: OPERATE TOOL TO FULLY CLOSED POSITION. INSERT "GO" GAGE END AS SHOWN. GAGE MUST PASS FREELY BETWEEN INDENTER TIPS.

"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.



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



CONTACT SIZE		SELECTOR NUMBER							
CONTACT SIZE		26	24	22	20	18	16	14	12
"TURRET" POSITION		1	2	3	4				
COLOR		RED	BLUE	BLUE	BLUE	BLUE	BLUE	BLUE	BLUE
20-20		RED	1	2	3	4			
16-22		BLUE	4	5	6	4			
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
UNLESS OTHERWISE SPECIFIED		SIGNATURES		DATE		
1) All dimensions are in inches.		DRAWN: BERLIN		6/3/09		
2) Tolerance is .0005 inches.		CHECKED: FINCE		6/3/09		
3) Holes are .0005 inches.		ENGINEER: BERLIN		6/3/09		
4) Holes are .0005 inches.		APPROVAL: BERLIN		6/3/09		
MATERIAL SPECIFICATIONS:		CUSTOMER:		S2-15219		
N/A		THE USE OF THIS DRAWING IS SPECIFIC TO THE PART AND NOT TO BE REPRODUCED OR USED FOR ANY OTHER PURPOSE. ALL DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. DRAWING IS NOT TO BE USED FOR PRODUCTION OF PARTS.		S2-15219		
PROCESS SPECIFICATIONS:		SIZE TYPED IN LOWER CASE		S2-15219		
N/A		SCALE: NONE		S2-15219		
NEXT ASSY:		SHEET 1 OF 1		S2-15219		

SINE Systems Corporation

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

INSTRUCTIONS FOR CA-5D12 CRIMPER, HAND, MACHINED CONTACTS

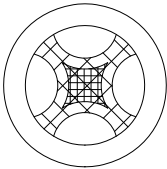
REVISIONS				
REV	ZONE	ECO	DESCRIPTION	
1			RELEASE NUMBER 016571	
DATE	BY	APPR		
6/12/09	B.D.B.	M.R.F.		

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]

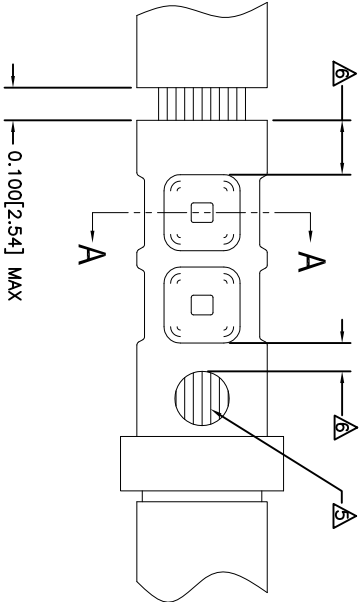
CRIMP TOOLING					
CONTACT SIZE	CRIMP TOOL PART NUMBER	CONTACT LOCATOR "TURRET" POSITION	WIRE SELECTOR NUMBER	GO GAGE INCH[MM]	"NOGO" GAGE INCH[MM]
16	CA-5D12 CA-5E12	BLUE	6	0.052[1.32]	0.057[1.45]
16	CA-5D12 CA-5E12	BLUE	4	0.039[.991]	0.044[1.12]

- 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



QUANTITY		PART NUMBER		DESCRIPTION		ITEM
		MATERIALS LIST		SINE Systems Corporation		
		SIGNATURES		DATE		
		DRAWN: BERNIM		6/3/09		
		CHECKED: TROCE		6/3/09		
		ENGINEER: BERNIM		APPROVAL: BERNIM		
		CUSTOMER: BERNIM		6/3/09		
		THE USE OF THIS DRAWING IS LIMITED TO THE SPECIFICATIONS AND PERFORMANCE OF THE PARTS AND MATERIALS SHOWN HEREON. NO OTHER USES ARE PERMITTED WITHOUT THE WRITTEN PERMISSION OF SINE SYSTEMS CORPORATION. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED. DIMENSIONS ARE SHOWN TO NOMINAL UNLESS OTHERWISE SPECIFIED. DIMENSIONS RETAINED HEREON MAY CONTRADICT LIMITED RIGHTS DATA.		SIZE FROM DRAWING NO: S2-15218		REVISION A1
		CRIMP INFORMATION		SOLID MACHINED CONTACTS		
		SCALE: NONE		SHEET 1 OF 1		

