

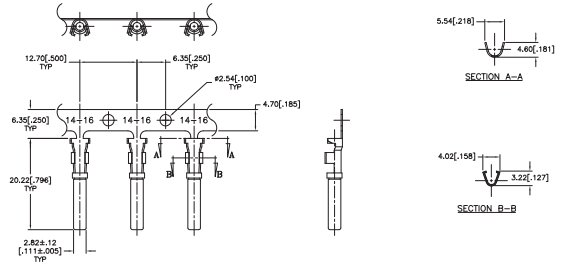
STAMPED AND FORMED CONTACTS, PG 1 of 2

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

OPTIONS

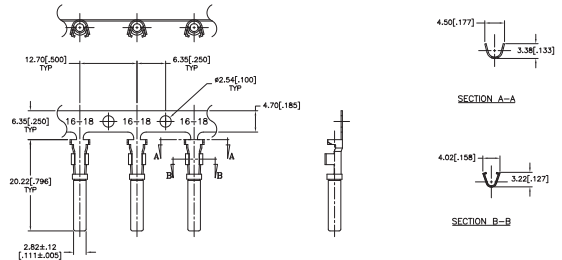
PART NUMBER: AT62-14-01XX
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

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)



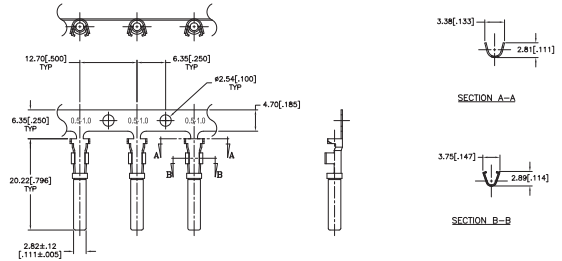
PART NUMBER: AT62-16-01XX
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

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)



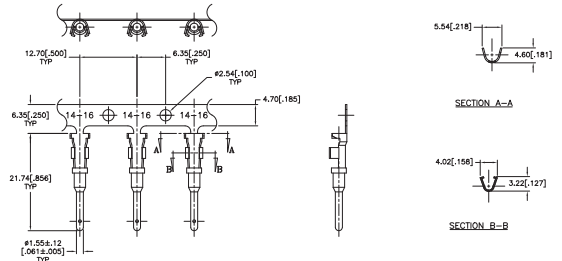
PART NUMBER: AT62-16-06XX
DESCRIPTION: CONTACT, SOCKET, STAMPED, SIZE 16

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

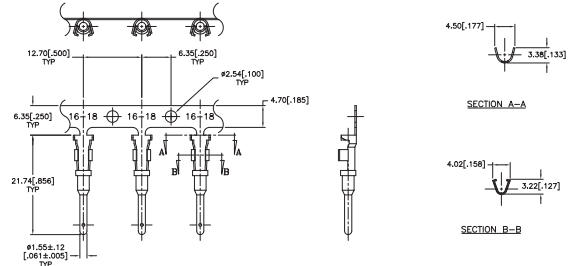
CONTACT GENERAL DATA SPECIFICATION: S2-15217

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

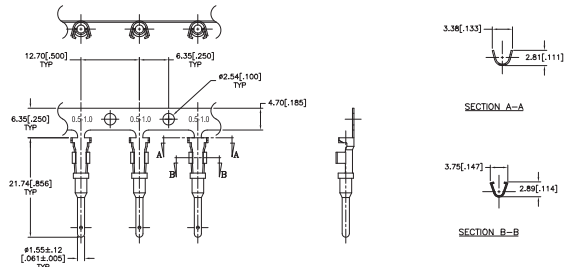
CONTACT GENERAL DATA SPECIFICATION: S2-15217

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)



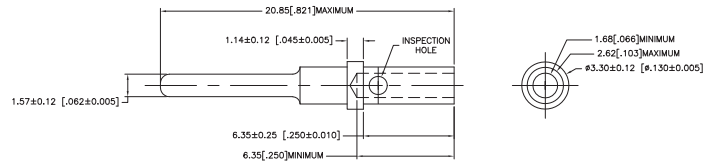
SOLID/MACHINED CONTACTS

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

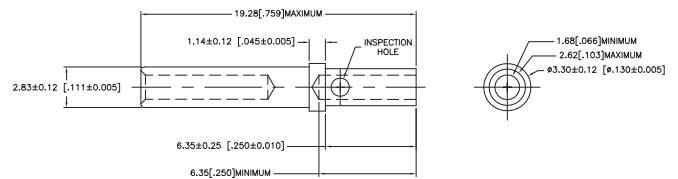
OPTIONS

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

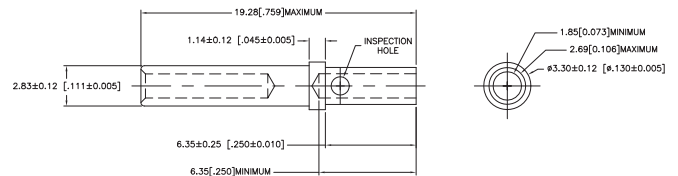


PART NUMBER: [AT62-201-16XX](#)
DESCRIPTION: CONTACT, SOCKET, SOLID MACHINED, SIZE 16
MATERIAL:
 CONTACT BODY: COPPER ALLOY
 HOOD: STAINLESS STEEL
PLATING SUFFIX CODE:
 XX=141 NICKEL PLATING
 XX=31 GOLD PLATING
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER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

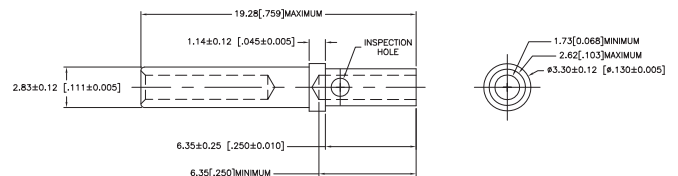


ROCKSOLID™ CONTACTS

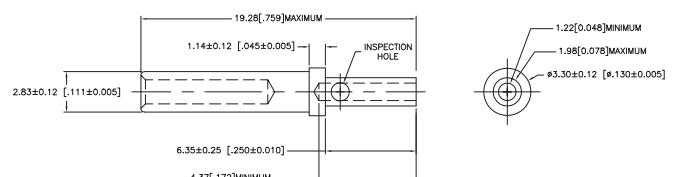
PART NUMBER: [65-54942-14](#)
DESCRIPTION: CONTACT, SOCKET, ROCKSOLID, SIZE 16
AWG RANGE: 14AWG
MATERIAL: COPPER ALLOY
PLATING: GOLD
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218



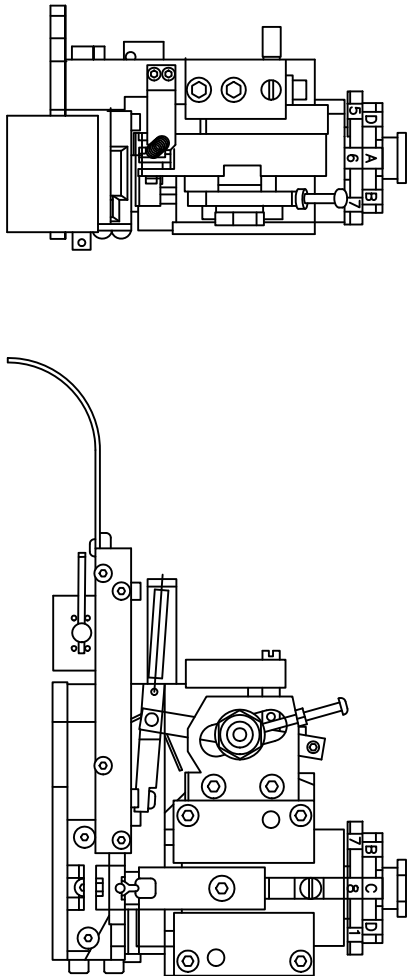
PART NUMBER: [65-54942-16](#)
DESCRIPTION: CONTACT, SOCKET, ROCKSOLID, SIZE 16
AWG RANGE: 16AWG
MATERIAL: COPPER ALLOY
PLATING: GOLD
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218



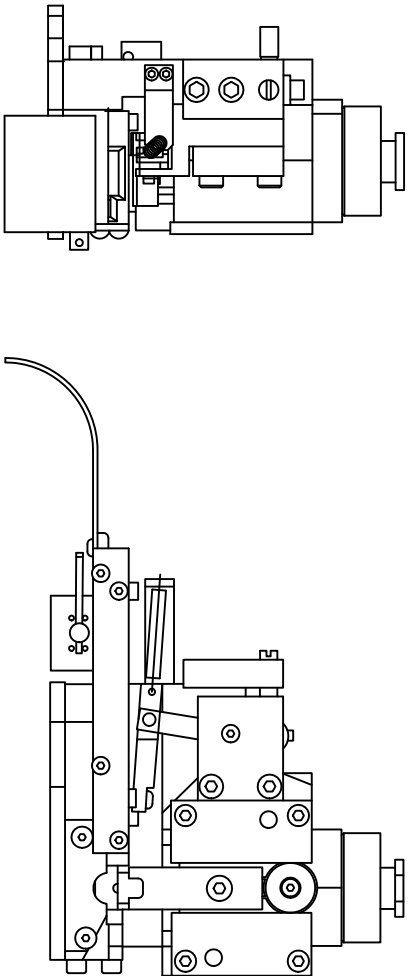
PART NUMBER: [65-54942-20](#)
DESCRIPTION: CONTACT, SOCKET, ROCKSOLID, SIZE 16
AWG RANGE: 20AWG
MATERIAL: COPPER ALLOY
PLATING: GOLD
CONTACT GENERAL DATA SPECIFICATION: S2-15217
AVAILABLE CRIMPERS: CA-5D12 & CA-5E12
CRIMPER SPECIFICATIONS: S2-15219 & S2-15220
CRIMP INFORMATION DRAWING: S2-15218



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

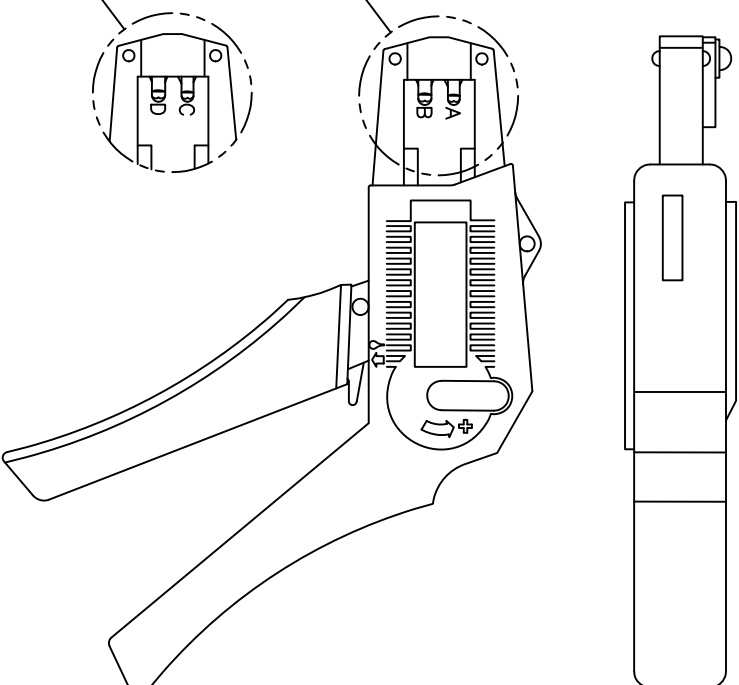
ALL REFERENCES TO TYCO PRODUCTS OR SPECIFICATIONS ARE FOR COMPARISON PURPOSES ONLY, AND REFER TO TYCO ELECTRONICS.

QUANTITY	PART NUMBER	DESCRIPTION	ITEM
MATERIALS LIST			
UNLESS OTHERWISE SPECIFIED			
1) All dimensions are in inches.			
2) Tolerances are as follows:			
1. HOLE .0015			
2. HOLE .0015			
3. HOLE .0015			
4) Finish Standards Per:			
SD-20020			
APPROVAL: ☒ U			
CUSTOMER: ☒ BERNUM			
DATE: 6/9/09			
ENGINEER: ☒ BERNUM			
APPROVAL: ☒ BERNUM			
DATE: 6/9/09			
CUSTOMER: ☒ BERNUM			
THE USE OF THIS DRAWING IS LIMITED TO THE SPECIFICATIONS AND PERFORMANCE OF THE PRODUCT. IT IS NOT TO BE USED FOR ANY OTHER PURPOSES. ALL DIMENSIONS ARE SUBJECT TO REVISION. DOCUMENTS RETAINED HEREON MAY CONTAIN LIMITED RIGHTS DATA.			
PROCESS SPECIFICATIONS:			
MKT ASSY:			
SIZE TYPICAL NUMBER: S2-15224			
SCALE: NONE			
SHEET 1 OF 1			

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.

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. H. DEC 5.001 4) Finish: 16 mils. max. Per SS-20020 5) Note Reference =  MATERIAL SPECIFICATIONS = 			
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 UNLIMITED. DESIGN FEATURES, SPEC DATA SHOWN HEREON ARE THE PROPERTY OF SINE SYSTEMS CORPORATION. NO REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT, INCLUDING VARIATIONS, MANUFACTURING VARIATIONS, AND DOCUMENT RIGHTS MAY BE CONTAINED LIMITED RIGHTS DRAWING			
SIZE FROM WORKING NO:		INSTRUCTIONS, ATT-16-00 & 01 CRIMPER, HAND, STAMPED CONTACTS	
B	16K/44	S2-15223	
SCALE: NONE		S2-15223	
SHEET 1	OF 1	REVISION: A	

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.			

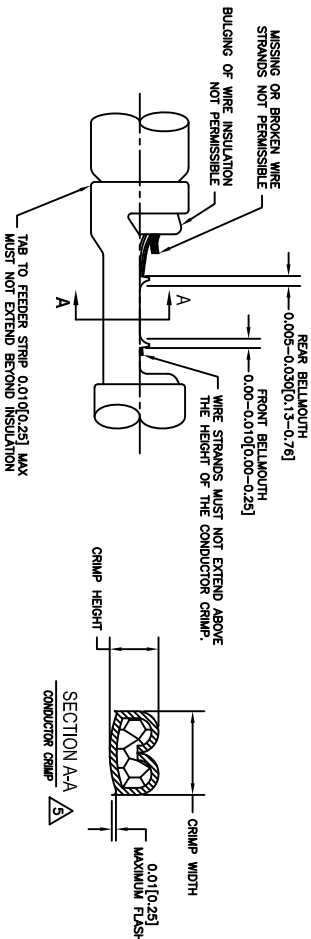
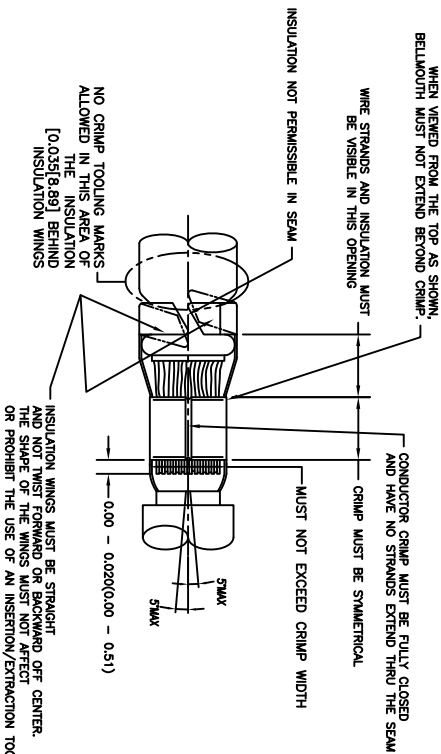
STAMPED CONTACT PART NUMBER 1005=PIN 1006=SOCKET	SIZE	CONDUCTOR WIRE SIZE	CRIMP HEIGHT	CRIMP WIDTH	CONDUCTOR PUNCH NUMBER	CONDUCTOR ANVIL NUMBER	CRIMP TENSILE REFERENCE
A780-14-011x A782-14-011x INSULATION RANGE 0.095-0.150(2.11-3.81)	16	14 AWG	0.055(1.40)	0.094(2.39)	A177-002-0200	A177-101-0200	28(111)
		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)			
A782-16-06x A782-16-06x INSULATION RANGE 0.055-0.100(1.40-2.54)	16	18 AWG	0.048(1.22)	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)			
		18 AWG	0.048(1.24)	0.094(2.39)			
		0.75mm ²	0.048(1.22)	0.094(2.39)			

CROSS REFERENCE

INSULATION DIAMETER RANGE	INSULATION PUNCH NUMBER	INSULATION ANVIL NUMBER
0.120-0.150	A177-210-0200	A177-316-0200
0.105-0.125	A177-211-0200	A177-311-0200
0.085-0.111	A177-213-0200	A177-313-0200
0.075-0.105	A177-214-0200	A177-304-0200
0.065-0.094	A177-217-0200	A177-317-0200
0.050-0.075	A177-218-0200	A177-318-0200

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(4.45±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 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: RORR		4/7/09		
2) 1 PL 005 50.00 0 Positions 31/4		ORDERED: RORR		6/8/09		
3) PL 005 50.00 0 Positions 31/4		ENGINEER: BERNU		6/8/09		
4) 1 PL 005 50.00 0 Positions 31/4		APPROVAL: BERNU		6/8/09		
5) Reduction Standards Per: S2-20020		CUSTOMER: BERNU		6/8/09		
6) Material Specifications: N/A		THE USE OF THIS DRAWING IS LIMITED TO THE SPECIFICATIONS, AND PERFORMANCE PROPERTY OF AMPHENOL CORP. ALL DIMENSIONS ARE SUBJECT TO REMOVAL. DIMENSIONS RETAINED HEREON MAY CONTRADICT UNITED STATES DATA.		CRIMP DATA, STAMPED CONTACTS FOR CRIMPER MFX-3950		
PROCESS SPECIFICATIONS:		SIZE FROM DRAWING NO:		S2-15222		
NEXT ASSY:		SCALE: NONE		SHEET 1 OF 1		

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 (LBSIN)
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)	A117-4083-0200	A117-183-0200	25(111)
	1.00mm ²	0.050(1.27)	0.094(2.39)			
A160-16-011x A162-16-011x INSULATION RANGE 0.075-0.140(1.91-3.56)	16 AWG	0.049(1.24)	0.094(2.39)			
	0.75mm ²	0.049(1.24)	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)			
A160-18-011x A162-18-011x INSULATION RANGE 0.055-0.100(1.40-2.54)	18 AWG	0.048(1.22)	0.079(2.01)			
	0.50mm ²	0.048(1.22)	0.079(2.01)			
	16 AWG	0.050(1.27)	0.079(2.01)			
	1.00mm ²	0.050(1.27)	0.079(2.01)			
	0.75mm ²	0.049(1.24)	0.079(2.01)			

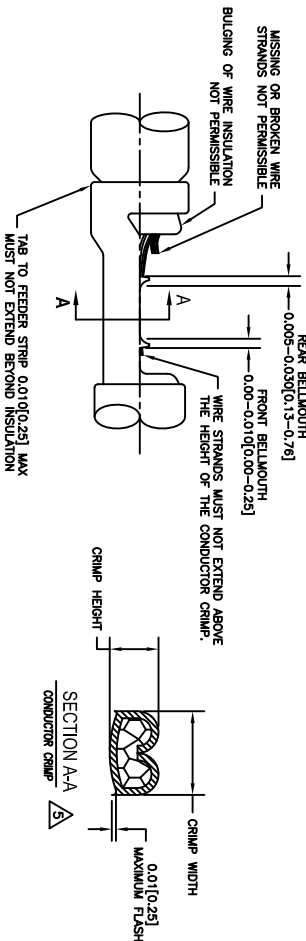
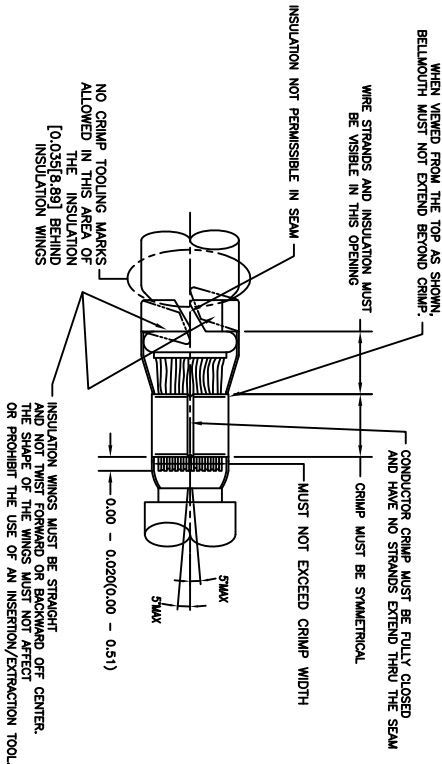
CROSS REFERENCE

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 MICRO-METER (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 SAE J128(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.

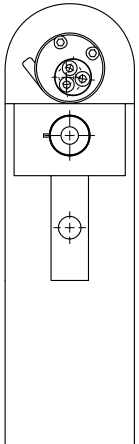


ALL REFERENCES TO DEUTSCH PRODUCTS OR SPECIFICATIONS ARE FOR COMPARISON PURPOSES ONLY, AND REFER TO DEUTSCH INDUSTRIAL PRODUCTS.

PART NUMBER		DESCRIPTION		ITEM
MATERIALS LIST				
QUANTITY				
UNLESS OTHERWISE SPECIFIED				
1) All dimensions are in inches.				
2) Pl. DEC 2000 to Provisions 31/4				
3) Pl. DEC 2000 to Provisions 31/4				
4) Pl. DEC 2000 to Provisions 31/4				
5) Reduction Standards Per:				
a) MIL-STD-20020				
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REVISIONS				DATE	BY	APP
REV	ZONE	ECO	DESCRIPTION	6/12/09	B.D.B.	M.F.F.
A1	-	-	RELEASE NUMBER 016571			

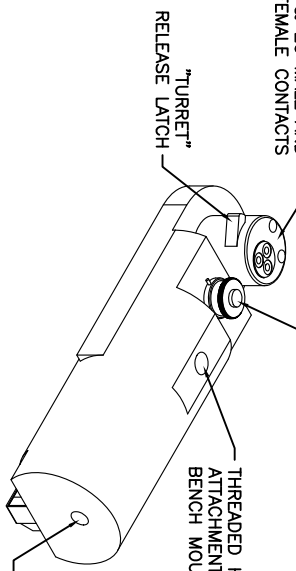
CONTACT LOCATOR "TURRET"
THREE POSITION FOR SIZE
12, 16 & 20 MALE AND
FEMALE CONTACTS



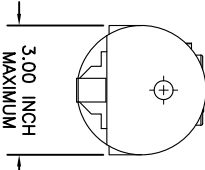
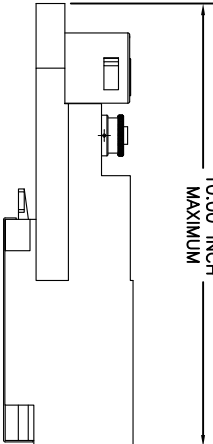
"TURRET"
RELEASE LATCH

SELECTOR FOR
CRIMP SETTING

THREADED HOLE FOR
ATTACHMENT OF
BENCH MOUNT FIXTURE



10.00 INCH
MAXIMUM

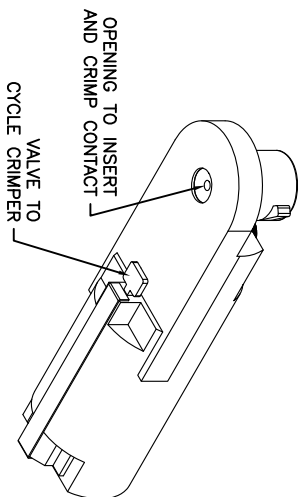


3.00 INCH
MAXIMUM

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.



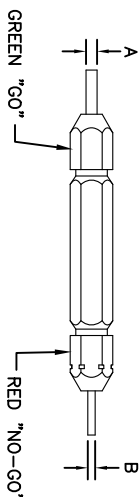
OPENING TO INSERT
AND CRIMP CONTACT

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!

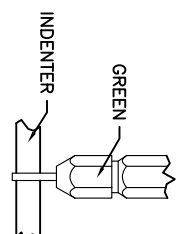


GREEN "GO"

RED "NO-GO"

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

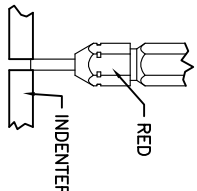
"NO-GO" GAGING: OPERATE TOOL TO FULLY CLOSED POSITION. INSERT "NO-GO" GAGE END AS SHOWN. THE "NO-GO" MAY PARTIALLY ENTER THE INDENTER OPENING, BUT MUST NOT PASS COMPLETELY THROUGH THE OPENING.



GREEN

INDENTER

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							
CONTACT SIZE	LOCATOR "TURRET" POSITION	26	24	22	20	18	16	14	12
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		SIGNATURES		DATE		
1) All dimensions are in inches.		DESIGNER	BERNUM	6/2/09		
2) All dimensions are to be held to ±.0005 inches.		CHECKED	POCE	6/3/09		
3) All dimensions are to be held to ±.001 inches.		ENGINEER	BERNUM			
4) Fabrication Standards Per: SS-20020		APPROVAL	BERNUM	6/3/09		
5) Non-Reference: A						
MATERIAL SPECIFICATIONS:						
N/A						
PROCESS SPECIFICATIONS:						
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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.

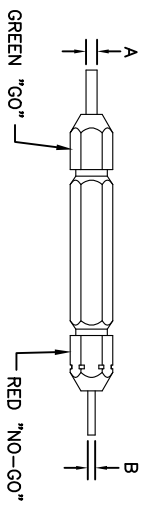
9.75 INCH MAXIMUM

1.00 INCH MAX.

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

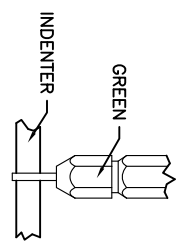
GAGING INSTRUCTIONS

CAUTION!
DO NOT CRIMP GAGE!

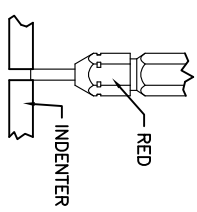


"GO" GAGING: OPERATE TOOL TO FULLY CLOSED POSITION. INSERT "GO" GAGE END AS SHOWN. GAGE MUST PASS FREELY BETWEEN INDENTER TIPS.

"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							
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				
MATERIALS LIST										
SIGNATURES										
DRAWN: BERLIN		DATE: 6/3/09		SINE Systems Corporation A Subsidiary of Amphenol Corporation 44724 Moley Drive Canton Township, MI 48036						
CHECKED: FINCE		DATE: 6/3/09								
APPROVED: BERLIN		DATE: 6/3/09								
INSTRUCTIONS FOR CA-5D12 CRIMPER, HAND, MACHINED CONTACTS										
SIZE FROM DRAWING NO:		C 10K44		S2-15219		REVISION A1				
SCALE: NONE		S2-15219		SHEET 1 OF 1						

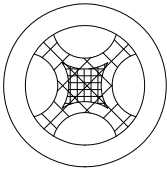
REVISIONS				
REV	ZONE	ECO	DESCRIPTION	
1			RELEASE NUMBER 016571	
DATE	6/12/09	BY	B.D.B.	APPR
M.F.F.				

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]
		0.75mm ² 20AWG	20[89]

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

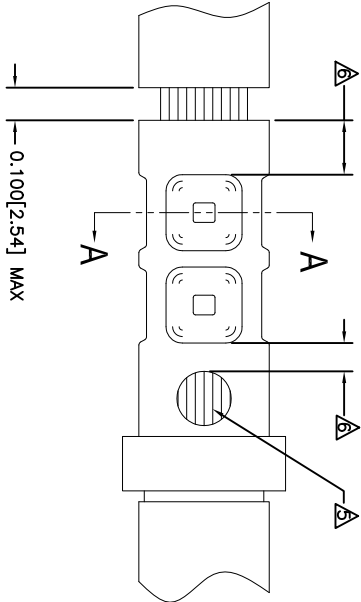
CRIMP TOOLING					
CONTACT SIZE	CRIMP TOOL PART NUMBER	CONTACT LOCATOR "TURRET" POSITION	WIRE SELECTOR NUMBER	GO GAGE INCH[MM]	"NOGO" GAGE INCH[MM]
16	CA-5D12 CA-5E12	BLUE	6	0.052[1.32]	0.057[1.45]
16	CA-5D12 CA-5E12	BLUE	4	0.039[.991]	0.044[1.12]

- 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.	SIGNATURES	DATE	
2) All dimensions are in millimeters.	DRAWN: BERNIM	6/3/09	
3) All dimensions are in both inches and millimeters.	CHECKED: TROCK	6/3/09	
4) All dimensions are in both inches and millimeters.	ENGINEER: BERNIM		
5) Fabrication Standards Per: SD-20020	APPROVAL: BERNIM	6/3/09	
6) All dimensions are in both inches and millimeters.	CUSTOMER:		
7) All dimensions are in both inches and millimeters.	CRIMP INFORMATION		
8) All dimensions are in both inches and millimeters.	SOLID MACHINED CONTACTS		
9) All dimensions are in both inches and millimeters.	SIZE FROM INCHING NO: S2-15218		
10) All dimensions are in both inches and millimeters.	SCALE: NONE		
11) All dimensions are in both inches and millimeters.	SHEET 1 OF 1		

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 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 [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 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 [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]	.055 - .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.

QUANTITY	PART NUMBER	DESCRIPTION	ITEM
MATERIALS LIST			
UNLESS OTHERWISE SPECIFIED			
1) All dimensions are in inches.		SIGNATURES	
2) All dimensions are in millimeters.		DATE	
3) Plating is standard unless otherwise specified.		DRAWN: POKR 4/5/09	
4) Plating is standard unless otherwise specified.		CHECKED: POKR 6/3/09	
5) Plating is standard unless otherwise specified.		ENGINEER: BERNIM 6/3/09	
6) Plating is standard unless otherwise specified.		APPROVAL: BERNIM 6/3/09	
7) Plating is standard unless otherwise specified.		CUSTOMER: BERNIM 6/3/09	
8) Plating is standard unless otherwise specified.		GENERAL DATA, CONTACTS	
9) Plating is standard unless otherwise specified.		STAMPED AND FORMED / MACHINED	
10) Plating is standard unless otherwise specified.		SIZE FROM HOLDING NO. S2-15217	
11) Plating is standard unless otherwise specified.		SCALE NONE	
12) Plating is standard unless otherwise specified.		SHEET 1 OF 1	
13) Plating is standard unless otherwise specified.		REVISION A1	

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru

www.lifeelectronics.ru