

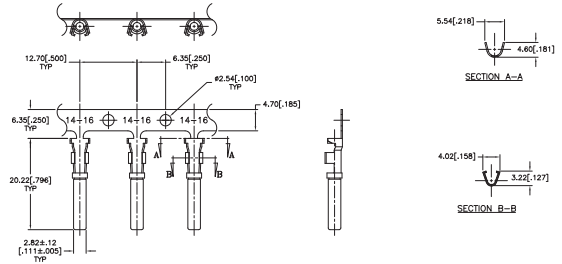
## STAMPED AND FORMED CONTACTS, PG 1 of 2

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

### OPTIONS

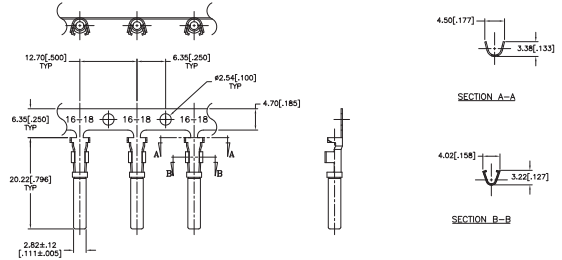
**PART NUMBER:** AT62-14-01XX  
**DESCRIPTION:** CONTACT, SOCKET, STAMPED, SIZE 16

**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)



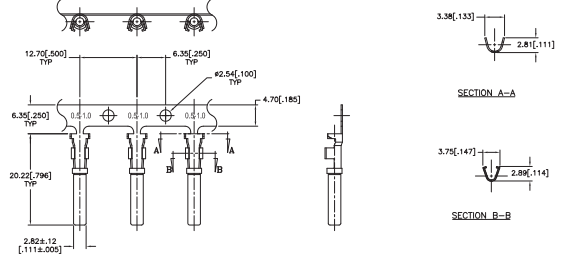
**PART NUMBER:** AT62-16-01XX  
**DESCRIPTION:** CONTACT, SOCKET, STAMPED, SIZE 16

**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)



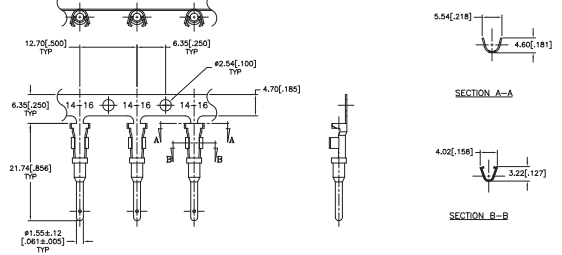
**PART NUMBER:** AT62-16-06XX  
**DESCRIPTION:** CONTACT, SOCKET, STAMPED, SIZE 16

**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

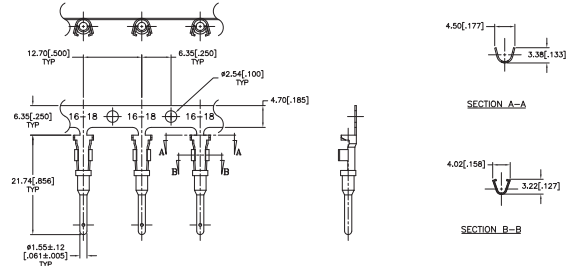
**CONTACT GENERAL DATA SPECIFICATION:** S2-15217

**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

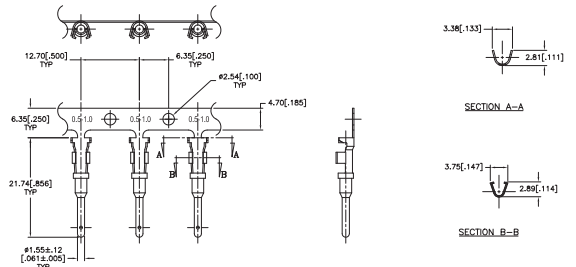
**CONTACT GENERAL DATA SPECIFICATION:** S2-15217

**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)



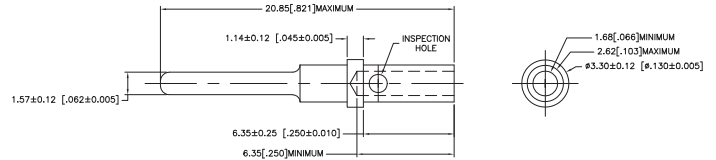
## SOLID/MACHINED CONTACTS

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

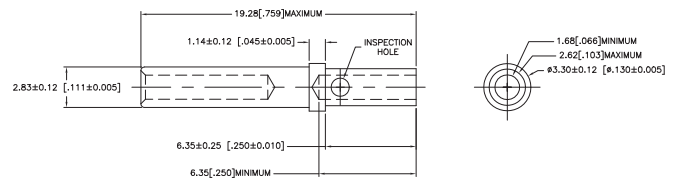
### OPTIONS

#### 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

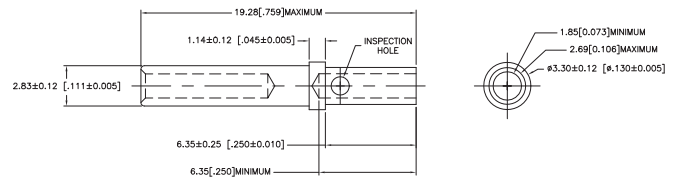


**PART NUMBER:** [AT62-201-16XX](#)  
**DESCRIPTION:** CONTACT, SOCKET, SOLID MACHINED, SIZE 16  
**MATERIAL:**  
 CONTACT BODY: COPPER ALLOY  
 HOOD: STAINLESS STEEL  
**PLATING SUFFIX CODE:**  
 XX=141 NICKEL PLATING  
 XX=31 GOLD PLATING  
**CONTACT GENERAL DATA SPECIFICATION:** S2-15217  
**AVAILABLE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

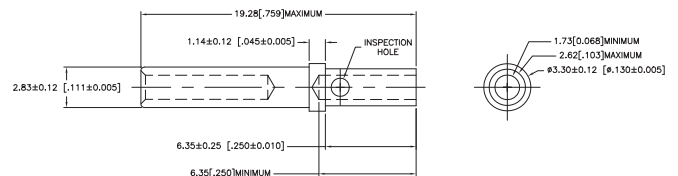


#### ROCKSOLID™ CONTACTS

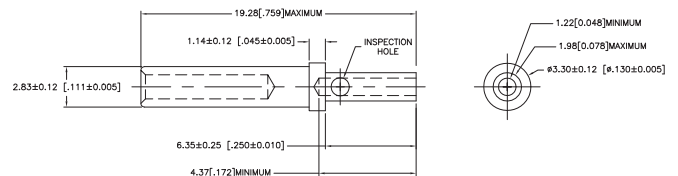
**PART NUMBER:** [65-54942-14](#)  
**DESCRIPTION:** CONTACT, SOCKET, ROCKSOLID, SIZE 16  
**AWG RANGE:** 14AWG  
**MATERIAL:** COPPER ALLOY  
**PLATING:** GOLD  
**CONTACT GENERAL DATA SPECIFICATION:** S2-15217  
**AVAILABLE CRIMPERS:** CA-5D12 & CA-5E12  
**CRIMPER SPECIFICATIONS:** S2-15219 & S2-15220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

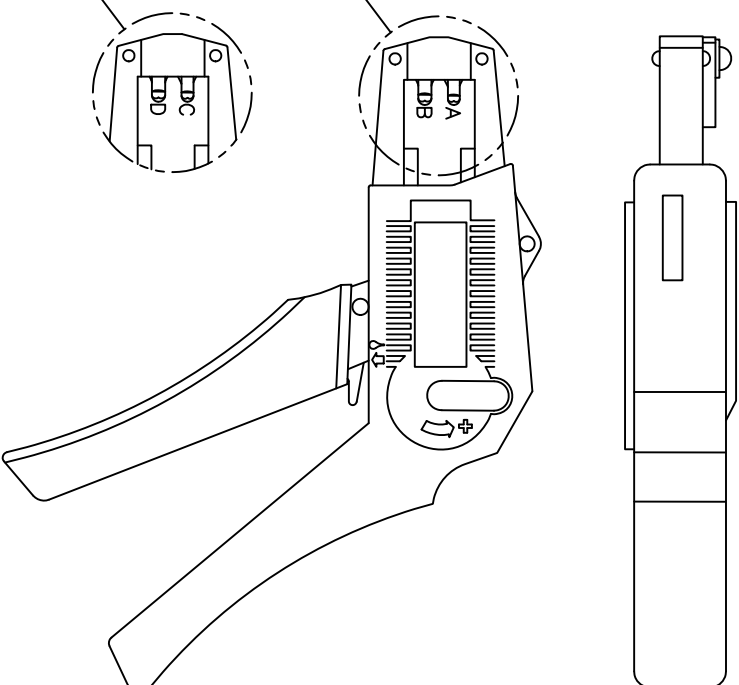




## ATT-16-00 WITH CAVITY A &amp; B

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

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 $\phi$ | CAVITY | WIRE SIZE          |
|--------------|-------------------|--------|--------------------|
| AT60-16-01** | .075 - .140       | D      | 18AWG              |
| AT62-16-01** | [.1.91 - 3.56]    | D      | .75mm <sup>2</sup> |
| AT60-16-06** | .055 - .100       | D      | 18AWG              |
| AT62-16-06** | [1.40 - 2.54]     | D      | .75mm <sup>2</sup> |
|              |                   | C      | .50mm <sup>2</sup> |

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.<br>M.R.F. |

## REVISIONS

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

| QUANTITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PART NUMBER | DESCRIPTION                                                                                                                                                                                 | REVISION |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <div><div><div>UNLESS OTHERWISE SPECIFIED</div><div>1) All dimensions are in inches.</div><div>2) Tolerances are as follows: ±1/64</div><div>3) Fit, DEC 50.000</div><div>4) Finish, SS-20020</div><div>5) Note Reference = A</div><div>MATERIAL SPECIFICATIONS:</div><div>N/A</div></div><div><div>SIGNATURES</div><div>DATE</div><div>DESIGNED: BENJAMIN</div><div>6/8/09</div><div>CHECKED: FORGE</div><div>6/8/09</div><div>DRAWN: BENJAMIN</div><div>APPROVAL: BENJAMIN</div><div>6/8/09</div></div></div> |             |                                                                                                                                                                                             |          |
| <div><div><div>MATERIALS LIST</div><div><div>SINE Systems Corporation</div><div>A Subsidiary of Amphend Corporation</div><div>44724 Mowley Drive</div><div>Clinton Township, MI 48036</div></div><div><div>INSTRUCTIONS, ATT-16-00 &amp; 01</div><div>CRIMPER, HAND, STAMPED CONTACTS</div></div></div></div>                                                                                                                                                                                                   |             |                                                                                                                                                                                             |          |
| PROCESS SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             | THE USE OF THIS DOCUMENT IS LIMITED TO THE SPECIFIC PARTS AND MATERIALS SHOWN HEREON AND THE USER SHALL BE RESPONSIBLE FOR THE PROPER USE OF THIS DOCUMENT IN ALL MANUFACTURING VARIATIONS. |          |
| N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             | DO NOT REPRODUCE OR TRANSMIT THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF SINE SYSTEMS CORPORATION. ALL RIGHTS RESERVED.                                                                 |          |
| SCALE: NONE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             | SIZE FROM MOLDING NO: 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.

INSTRUCTIONS, CRIMPER, HAND

**TITLE:**

DWG NO:

S2-15223

REV: A1

↓ 4

OF:

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

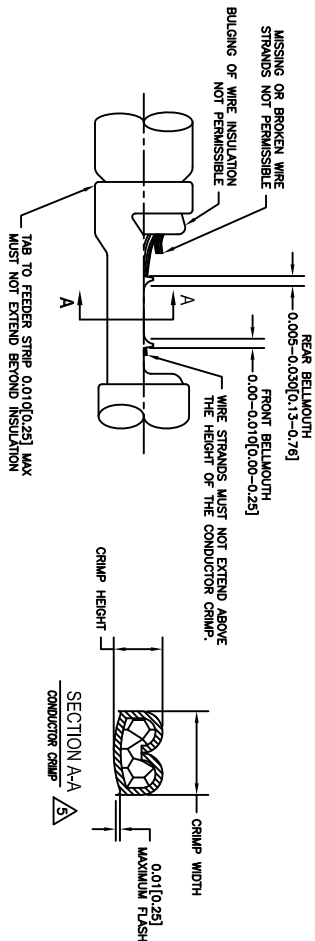
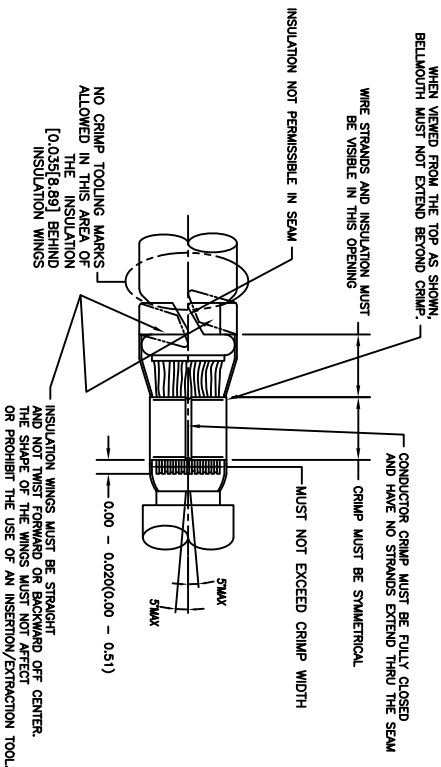
| STAMPED CONTACT PART NUMBER 1005=PIN 1006=SOCKET                  | SIZE | CONDUCTOR WIRE SIZE | CRIMP HEIGHT | CRIMP WIDTH | CONDUCTOR PUNCH NUMBER | CONDUCTOR ANVIL NUMBER | CRIMP TENSILE REFERENCE |
|-------------------------------------------------------------------|------|---------------------|--------------|-------------|------------------------|------------------------|-------------------------|
| 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 <sup>2</sup> | 0.055(1.40)  | 0.094(2.39) |                        |                        |                         |
|                                                                   |      | 1.50mm <sup>2</sup> | 0.055(1.35)  | 0.094(2.39) |                        |                        |                         |
|                                                                   |      | 16 AWG              | 0.050(1.27)  | 0.094(2.39) |                        |                        |                         |
|                                                                   |      | 1.00mm <sup>2</sup> | 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 <sup>2</sup> | 0.048(1.22)  | 0.094(2.39) |                        |                        |                         |
|                                                                   |      | 14 AWG              | 0.055(1.40)  | 0.094(2.39) |                        |                        |                         |
|                                                                   |      | 2.00mm <sup>2</sup> | 0.055(1.40)  | 0.094(2.39) |                        |                        |                         |
|                                                                   |      | 1.50mm <sup>2</sup> | 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 <sup>2</sup> | 0.050(1.27)  | 0.094(2.39) |                        |                        |                         |
|                                                                   |      | 0.75mm <sup>2</sup> | 0.048(1.22)  | 0.079(2.01) |                        |                        |                         |
|                                                                   |      | 20 AWG              | 0.048(1.22)  | 0.079(2.01) |                        |                        |                         |
|                                                                   |      | 0.50mm <sup>2</sup> | 0.045(1.14)  | 0.079(2.01) |                        |                        |                         |

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(4.43±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 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 |
|--------------------------------------|--|-----------------|--|-------------|--|------|
| 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   |  | CHECKED: RORR   |  | 6/8/09      |  |      |
| 3) Reduction Standards Per: A        |  | ENGINEER: BERMM |  | 6/8/09      |  |      |
| 4) 1 PL 005 50.00 0 Positions 31/4   |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 5) 1 PL 005 50.00 0 Positions 31/4   |  | CUSTOMER: BERMM |  | 6/8/09      |  |      |
| 6) 1 PL 005 50.00 0 Positions 31/4   |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 7) 1 PL 005 50.00 0 Positions 31/4   |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 8) 1 PL 005 50.00 0 Positions 31/4   |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 9) 1 PL 005 50.00 0 Positions 31/4   |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 10) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 11) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 12) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 13) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 14) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 15) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 16) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 17) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 18) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 19) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 20) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 21) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 22) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 23) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 24) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 25) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 26) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 27) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 28) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 29) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 30) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 31) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 32) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 33) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
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| 36) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
| 37) 1 PL 005 50.00 0 Positions 31/4  |  | APPROVAL: BERMM |  | 6/8/09      |  |      |
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| 181) 1 PL 005 50.00                  |  |                 |  |             |  |      |

| 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<br>A162-14-011x<br>INSULATION RANGE 0.095-0.150(2.41-3.81) | 14 AWG              | 0.055(1.40)  | 0.094(2.39) |                        |                        |                                 |
|                                                                         | 2.00mm <sup>2</sup> | 0.055(1.40)  | 0.094(2.39) |                        |                        |                                 |
|                                                                         | 1.50mm <sup>2</sup> | 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<br>A162-16-011x<br>INSULATION RANGE 0.075-0.140(1.91-3.56) | 16 AWG              | 0.050(1.27)  | 0.094(2.39) |                        |                        |                                 |
|                                                                         | 1.00mm <sup>2</sup> | 0.050(1.27)  | 0.094(2.39) |                        |                        |                                 |
|                                                                         | 18 AWG              | 0.049(1.24)  | 0.094(2.39) |                        |                        |                                 |
|                                                                         | 0.75mm <sup>2</sup> | 0.049(1.24)  | 0.094(2.39) |                        |                        |                                 |
| A160-16-065x<br>A162-16-065x<br>INSULATION RANGE 0.055-0.100(1.40-2.54) | 16 AWG              | 0.050(1.27)  | 0.079(2.01) |                        |                        |                                 |
|                                                                         | 1.00mm <sup>2</sup> | 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) |                        |                        |                                 |

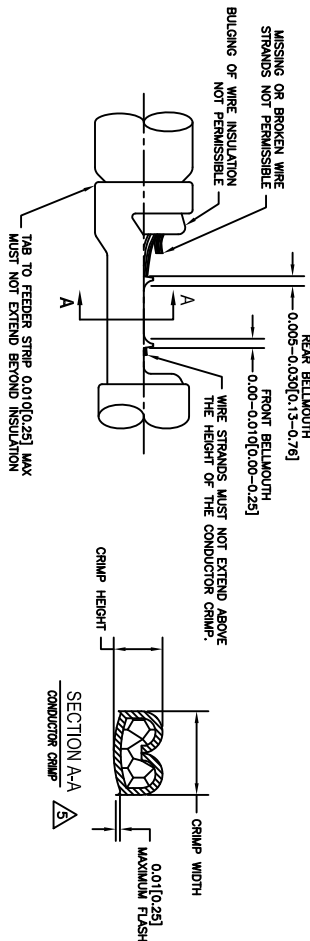
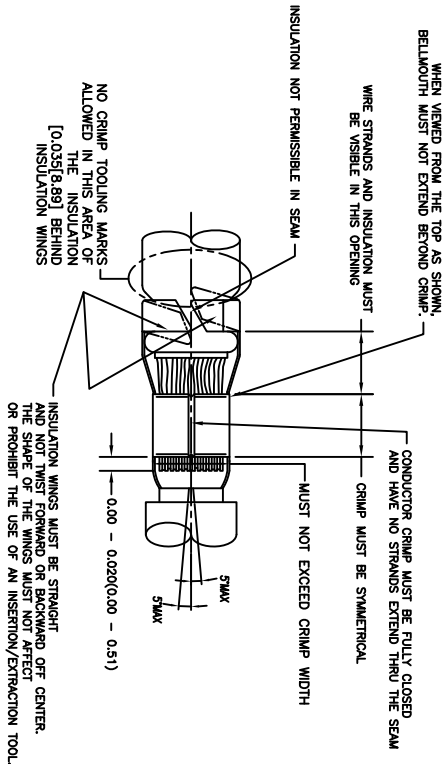
CROSS REFERENCE

| 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 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------|--|-------------|--|------|
| UNLESS OTHERWISE SPECIFIED                                                                                                                                                                                                                                               |  | SIGNATURES      |  | DATE        |  |      |
| 1) All dimensions are in inches.                                                                                                                                                                                                                                         |  | DRAWN: POKR     |  | 4/7/09      |  |      |
| 2) 1/16 DEC 50.00 Precision 51/64                                                                                                                                                                                                                                        |  | CHECKED: POKR   |  | 6/8/09      |  |      |
| 3) 1/32 DEC 50.00 Precision 51/64                                                                                                                                                                                                                                        |  | APPROVED: BERNU |  | 6/8/09      |  |      |
| 4) 1/64 DEC 50.00 Precision 51/64                                                                                                                                                                                                                                        |  | APPROVED: BERNU |  | 6/8/09      |  |      |
| 5) Reduction Standards Per: ASME Y14.5-2002                                                                                                                                                                                                                              |  | CUSTOMER: BERNU |  | 6/8/09      |  |      |
| 6) Material Specification: N/A                                                                                                                                                                                                                                           |  | CUSTOMER: BERNU |  | 6/8/09      |  |      |
| 7) Process Specifications: N/A                                                                                                                                                                                                                                           |  | CUSTOMER: BERNU |  | 6/8/09      |  |      |
| 8) Next Assy: N/A                                                                                                                                                                                                                                                        |  | CUSTOMER: BERNU |  | 6/8/09      |  |      |
| 9) The use of this drawing is limited to the design and manufacture of the product and its components. It is not to be used for any other purpose. All dimensions are subject to change without notice. All documents referenced herein may contain limited rights data. |  | CUSTOMER: BERNU |  | 6/8/09      |  |      |
| 10) CRIMP DATA, STAMPED CONTACTS FOR CRIMPER MPX-3953                                                                                                                                                                                                                    |  | CUSTOMER: BERNU |  | 6/8/09      |  |      |
| 11) SIZE: 1/16 DEC 50.00 Precision 51/64                                                                                                                                                                                                                                 |  | CUSTOMER: BERNU |  | 6/8/09      |  |      |
| 12) SCALE: NONE                                                                                                                                                                                                                                                          |  | CUSTOMER: BERNU |  | 6/8/09      |  |      |
| 13) SHEET: 1 OF 1                                                                                                                                                                                                                                                        |  | CUSTOMER: BERNU |  | 6/8/09      |  |      |



| 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.

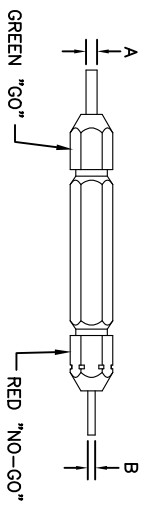
9.75 INCH MAXIMUM

1.00 INCH MAX.

| GAGE<br>PART NO. | A GO<br>DIA. | B NO-GO<br>DIA. | SELECTOR<br>NUMBER |
|------------------|--------------|-----------------|--------------------|
| G125             | .0390        | .0440           | 4                  |

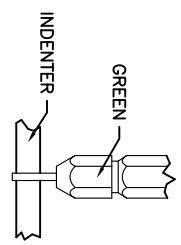
### GAGING INSTRUCTIONS

CAUTION!  
DO NOT CRIMP GAGE!

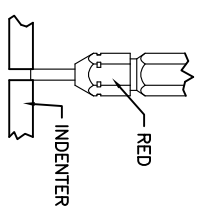


"GO" GAGING: OPERATE TOOL TO FULLY CLOSED POSITION. INSERT "GO" GAGE END AS SHOWN. GAGE MUST PASS FREELY BETWEEN INDENTER TIPS.

"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<br>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 |        |                 |    |    |    |    |    |    |    |
| COLOR             |        |                 |    |    |    |    |    |    |    |
| 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                     |  |             |  |             |  |      |  |  |  |  |
| UNLESS OTHERWISE SPECIFIED         |  |             |  |             |  |      |  |  |  |  |
| 1) All dimensions are in inches.   |  |             |  |             |  |      |  |  |  |  |
| 2) All tolerances are in inches.   |  |             |  |             |  |      |  |  |  |  |
| 3) All dimensions are in inches.   |  |             |  |             |  |      |  |  |  |  |
| 4) All dimensions are in inches.   |  |             |  |             |  |      |  |  |  |  |
| 5) Production Standards Per:       |  |             |  |             |  |      |  |  |  |  |
| 6) All dimensions are in inches.   |  |             |  |             |  |      |  |  |  |  |
| 7) All dimensions are in inches.   |  |             |  |             |  |      |  |  |  |  |
| 8) All dimensions are in inches.   |  |             |  |             |  |      |  |  |  |  |
| 9) All dimensions are in inches.   |  |             |  |             |  |      |  |  |  |  |
| 10) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 11) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 12) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 13) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 14) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 15) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 16) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 17) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 18) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 19) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 20) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 21) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 22) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 23) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 24) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 25) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 26) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 27) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 28) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 29) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 30) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 31) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 32) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 33) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 34) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 35) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 36) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 37) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 38) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 39) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 40) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 41) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 42) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 43) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 44) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 45) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 46) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 47) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 48) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 49) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 50) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 51) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 52) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 53) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 54) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 55) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 56) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 57) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 58) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 59) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 60) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 61) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 62) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 63) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 64) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 65) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 66) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 67) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 68) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 69) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 70) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 71) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 72) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 73) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 74) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 75) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 76) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 77) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 78) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 79) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 80) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 81) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 82) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 83) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 84) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 85) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 86) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 87) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 88) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 89) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 90) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 91) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 92) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 93) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 94) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 95) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 96) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 97) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 98) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 99) All dimensions are in inches.  |  |             |  |             |  |      |  |  |  |  |
| 100) All dimensions are in inches. |  |             |  |             |  |      |  |  |  |  |

SINE Systems Corporation

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

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

SIZE TYPICAL DIMENSIONS  
C 10K44 S2-15219 A1

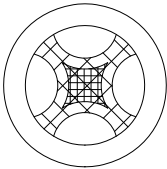
| REVISIONS |        |        |                       |  |
|-----------|--------|--------|-----------------------|--|
| REV       | ZONE   | ECO    | DESCRIPTION           |  |
| 1         |        |        | RELEASE NUMBER 016571 |  |
| DATE      | BY     | APPR   |                       |  |
| 6/12/09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

| CONTACT P/N   | SIZE TYPE | WIRE SIZE                    | REF. ONLY TENSILE LBS[N] |
|---------------|-----------|------------------------------|--------------------------|
| AT60-202-16XX | 16PIN     | 1.5mm <sup>2</sup><br>16AWG  | 35[156]                  |
| AT62-201-16XX | 16SOC     | 1.0mm <sup>2</sup><br>18AWG  | 25[111]                  |
| A             |           | 0.75mm <sup>2</sup><br>20AWG | 20[89]                   |
|               |           | 0.50mm <sup>2</sup>          |                          |

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

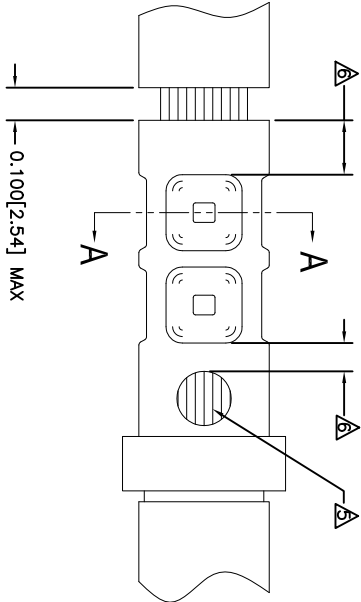
| CRIMP TOOLING |                        |                                   |                      |                  |                      |
|---------------|------------------------|-----------------------------------|----------------------|------------------|----------------------|
| CONTACT SIZE  | CRIMP TOOL PART NUMBER | CONTACT LOCATOR "TURRET" POSITION | WIRE SELECTOR NUMBER | GO GAGE INCH[MM] | "NOGO" GAGE INCH[MM] |
| 16            | CA-5D12<br>CA-5E12     | BLUE                              | 6                    | 0.052[1.32]      | 0.057[1.45]          |
| 16            | CA-5D12<br>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: BERNU                   | 6/3/09      |      |
| 3) All dimensions are in both inches and millimeters.  | CHECKED: RNOCE                 | 6/3/09      |      |
| 4) All dimensions are in both inches and millimeters.  | ENGINEER: BERNU                |             |      |
| 5) Fabrication Standards Per: SD-20020                 | APPROVAL: BERNU                | 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. |     |                       |         |

4

3

2

1

| SOLID CONTACT SIZE | SOLID CONTACT PART NUMBERS |               | WIRE SIZE<br>AWG(mm <sup>2</sup> ) | RECOMMENDED<br>STRIP LENGTH<br>INCH (mm) | MIN CONTACT<br>RETENTION<br>LBS (N) | REF CRIMP<br>RETENTION<br>LBS (N) | MAX RATED<br>AMPS@125°C<br>CONTINUOUS |
|--------------------|----------------------------|---------------|------------------------------------|------------------------------------------|-------------------------------------|-----------------------------------|---------------------------------------|
|                    | PN                         | SOCKET        |                                    |                                          |                                     |                                   |                                       |
| 16                 | AT60-202-16**              | AT62-201-16** | 16-20 [1.5-0.5]                    | 0.25-0.31<br>[6.35-7.92]                 | 25 [111]                            | 35-20 [156-89]                    | 13                                    |

| S&F<br>CONTACT<br>SIZE | STAMPED CONTACT PART NUMBERS |              | WIRE SIZE<br>AWG (mm <sup>2</sup> ) | WIRE<br>INSULATION<br>O.D. RANGE | RECOMMENDED<br>STRIP LENGTH<br>INCH (mm) | MIN CONTACT<br>RETENTION<br>LBS (N) | REF CRIMP<br>RETENTION<br>LBS (N) | MAX RATED<br>AMPS@125°C<br>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                                    |

MATERIAL SPECIFICATION  
AND PLATING \*\* CODES

| WIRE<br>AWG | TEST<br>CURRENT | MILLIVOLT<br>DROP SOLID | MILLIVOLT<br>DROP S&F |
|-------------|-----------------|-------------------------|-----------------------|
| 14          | 18              | 60                      | 100                   |
| 16          | 13              | 60                      | 100                   |
| 18          | 10              | 60                      | 100                   |
| 20          | 7.5             | 60                      | 100                   |

NOTES: UNLESS OTHERWISE SPECIFIED

- ALL DIMENSIONS ARE INCHES(MM).
- 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 | SIZE | "STAMPED" CONTACTS | 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.                     |             |             |      |
| 2) Plating is standard unless otherwise specified.   |             |             |      |
| 3) Plating is standard unless otherwise specified.   |             |             |      |
| 4) Plating is standard unless otherwise specified.   |             |             |      |
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| 100) Plating is standard unless otherwise specified. |             |             |      |

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.



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