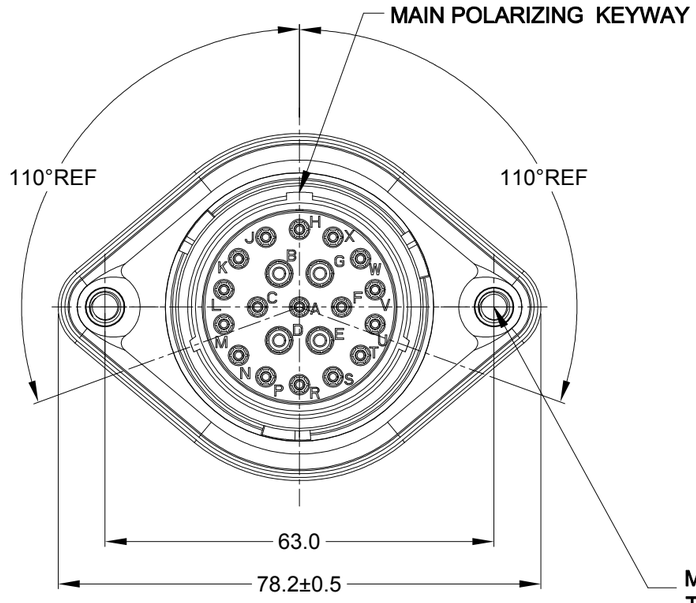
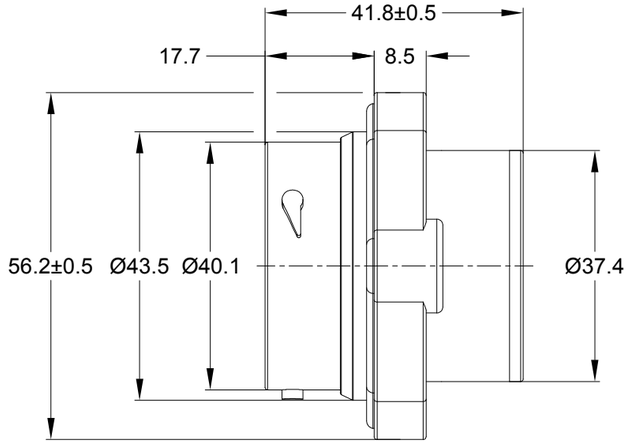
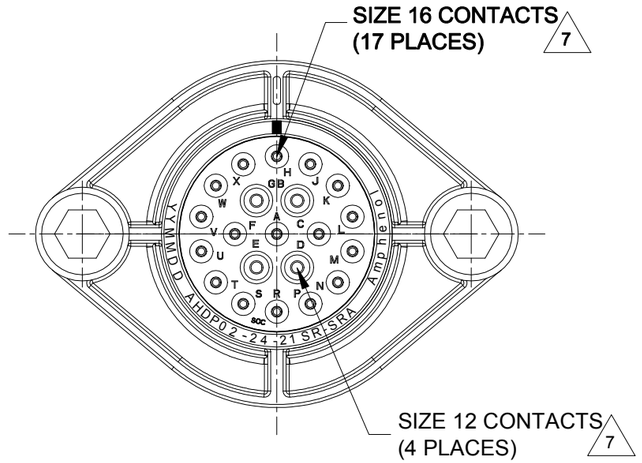
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| REV | ECO | DESCRIPTION | DATE | BY | APPR |
| A1 | -- | RELEASE NEW DRAWING | 01/SEP/20 | LOUIE | TOMMY |




M5X0.8-6H 8mm(2X) DEEP
THREADED INSERT

RECOMMENDED TORQUE
VALUES: 1.9-2.2 N.m

NOTES: UNLESS OTHERWISE SPECIFIED

1. MATERIAL:
   HOUSING: THERMOPLASTIC; BLACK
   SEAL: SILICONE RUBBER
   THREADED INSERT: STAINLESS STEEL

2. MODIFICATIONS: SMOOTH RING ADAPTOR (SRA);
   REDUCED DIA. WIRE SEAL
   SEALED PANEL MOUNT

3. SPECIFICATIONS:
   3.1 OPERATING TEMPERATURE: -55℃ TO +125℃.
   3.2 DIELECTRIC WITHSTANDING VOLTAGE: LESS THAN 2 MILLIAMPS CURRENT LEAKAGE @ 1500 VOLTS AC.
   3.3 INSULATION RESISTANCE: 1000 MEGOHM MIN @ 25℃.
   3.4 MOISTURE RESISTANCE: IP67&IP69K ( MATED CONDITION ).
   3.5 MATING CYCLE DURABILITY: 100 CYCLES
   3.6 RoHS COMPLIANT

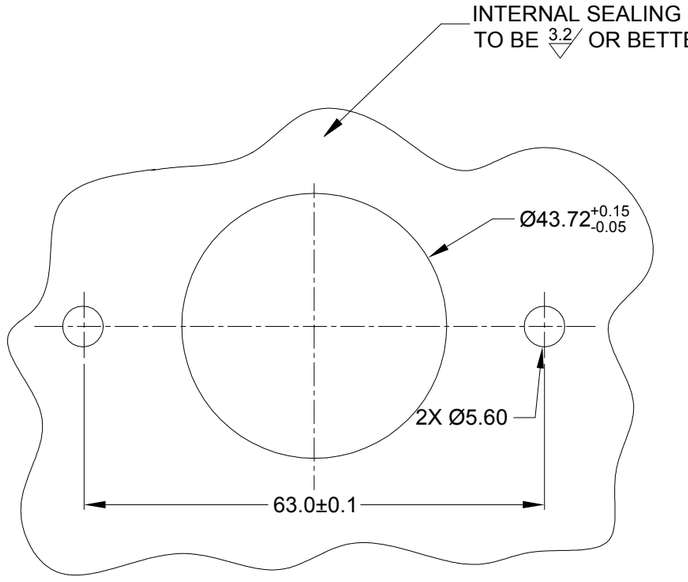
4. MATING PART: AHDP06-24-21P* ( * = SEAL TYPE )

5. ALL DIMENSIONS ARE FOR REFERENCE USE ONLY.

6. RECEPTACLE IS SUPPLIED WITH DUST CAP (NOT SHOW)

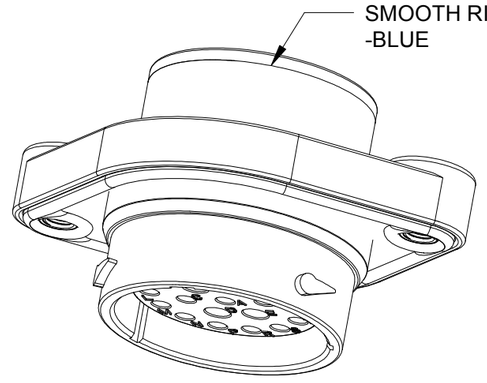
7 CONTACT SIZE AND WIRE RANGE:

| CONTACT SIZE | MIN. INSUL O.D. | MAX. INSUL O.D. | TYPICAL WIRE RANGE | CURRENT RATING |
|---|---|---|---|---|
| 12 | 2.46 mm (.097 in) | 4.01 mm (.158 in) | 10-14 AWG (6.0-2.0mm²) | 25 AMPS |
| 16 | 1.35 mm (.053in) | 3.05 mm (.120 in) | 14-20 AWG (2.0-0.5mm²) | 13 AMPS |




RECOMMENDED PANEL
MOUNTING HOLE

RECOMMENDED PANEL
THICKNESS:1.6 TO 4.7MM




| | AHDP02-24-21SR-SRA | | |
|---|---|---|---|
| | PART NUMBER | DESCRIPTION | ITEM |
| QUANTITY | MATERIALS LIST | | |

UNLESS OTHERWISE SPECIFIED
1) All dimensions are in metric(mm).
2) Tolerances are as follows:
1 PL DEC ±0.30 | Fractions ±1/64
2 PL DEC ±0.15 | Angles ±1°
3 PL DEC ±0.08
3) Note reference = X

MATERIAL SPECIFICATIONS:

PROCESS SPECIFICATIONS:

NEXT ASS'Y:

| SIGNATURES | | DATE |
|---|---|---|
| DRAWN: | LOUIE | 01/SEP/20 |
| CHECKED: | ORION | 02/SEP/20 |
| ENGINEER: | | |
| APPROVAL: | TOMMY | 03/SEP/20 |
| CUSTOMER: | | |

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Amphenol

Sine Systems - www.amphenol-sine.com
44724 Morley Drive
Clinton Township, MI 48036

21 POS, RECEPTACLE, SOCKET, PANELMATE
AHDP SIZE 24, RD SEAL, SRA

| SIZE | TYPE | DWG NO: | REVISION |
|---|---|---|---|
| B | C- | AHDP02-24-21SR-SRA | A1 |

SCALE: NONE | DURAMATE | SHEET 1 OF 1

TITLE: 21 POS, RECEPTACLE, SOCKET, PANELMATE AHDP SIZE 24, RD SEAL, SRA
DWG NO: AHDP02-24-21SR-SRA
REV: A1
SH: 1
OF: 1

# AHD, ARB, ATP, ATHD, DuraMate™ and PanelMate™ Series

## Size 12 Contact & Tooling Options

Contacts - Machined

| Part Number | Type | Style | Contact Size | Amp | Wire Range (AWG) | Wire Range ($mm^2$) | Insulation OD (mm) | Plating | Reel Size | Packaging |
|---|---|---|---|---|---|---|---|---|---|---|
| AT60-204-12141-10 | Pin | Machined | Size 12 | 25A | 10-12AWG | - | - | Nickel-Plated | - | - |
| AT60-204-12141 | Pin | Machined | Size 12 | 25A | 12-14AWG | - | - | Nickel-Plated | - | - |
| AT60-220-1231 | Pin | Machined | Size 12 | 25A | 12-14AWG | - | - | Gold-Plated | - | - |
| AT60-204-12NKIT | Pin | Machined | Size 12 | 25A | 12-14AWG | - | - | Nickel-Plated | - | - |
| AT60-220-1231-1618 | Pin | Machined | Size 12 | 25A | 16-18AWG | - | - | Gold-Plated | - | - |
| AT60-220-1231-1820 | Pin | Machined | Size 12 | 25A | 18-20AWG | - | - | Gold-Plated | - | - |
| AT62-203-12141-10 | Socket | Machined | Size 12 | 25A | 10-12AWG | - | - | Nickel-Plated | - | - |
| AT62-203-12141 | Socket | Machined | Size 12 | 25A | 12-14AWG | - | - | Nickel-Plated | - | - |
| AT62-203-12NKIT | Socket | Machined | Size 12 | 25A | 12-14AWG | - | - | Nickel-Plated | - | - |
| AT62-210-1231 | Socket | Machined | Size 12 | 25A | 12-14AWG | - | - | Gold-Plated | - | - |
| AT62-210-1231-1618 | Socket | Machined | Size 12 | 25A | 16-18AWG | - | - | Gold-Plated | - | - |
| AT62-210-1231-1820 | Socket | Machined | Size 12 | 25A | 18-20AWG | - | - | Gold-Plated | - | - |
| | | | | | | | | | | |

Contacts - Stamped & Formed

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AT60-12-0222 | Pin | S&F | Size 12 | 25A | 10-12AWG | 6.0-4.0$mm^2$ | 3.56 - 5.18mm | Nickel-Plated | - | - |
| AT60-12-0222-LP | Pin | S&F | Size 12 | 25A | 10-12AWG | 6.0-4.0$mm^2$ | 3.56 - 5.18mm | Nickel-Plated | - | Loose Piece |
| AT60-12-0244 | Pin | S&F | Size 12 | 25A | 10-12AWG | 6.0-4.0$mm^2$ | 3.56 - 5.18mm | Gold-Plated | - | - |
| AT60-12-0244-LP | Pin | S&F | Size 12 | 25A | 10-12AWG | 6.0-4.0$mm^2$ | 3.56 - 5.18mm | Gold-Plated | - | Loose Piece |
| AT60-12-0144 | Pin | S&F | Size 12 | 25A | 12-14AWG | 4.0-2.0$mm^2$ | 2.87 - 4.47mm | Gold-Plated | - | - |
| AT60-12-0144-LP | Pin | S&F | Size 12 | 25A | 12-14AWG | 4.0-2.0$mm^2$ | 2.87 - 4.47mm | Gold-Plated | - | Loose Piece |
| AT60-12-0166 | Pin | S&F | Size 12 | 25A | 12-14AWG | 4.0-2.0$mm^2$ | 2.87 - 4.47mm | Nickel-Plated | - | - |
| AT60-12-0166-LP | Pin | S&F | Size 12 | 25A | 12-14AWG | 4.0-2.0$mm^2$ | 2.87 - 4.47mm | Nickel-Plated | - | Loose Piece |
| AT62-12-0222 | Socket | S&F | Size 12 | 25A | 10-12AWG | 6.0-4.0$mm^2$ | 3.56 - 5.18mm | Nickel-Plated | - | - |
| AT62-12-0222-LP | Socket | S&F | Size 12 | 25A | 10-12AWG | 6.0-4.0$mm^2$ | 3.56 - 5.18mm | Nickel-Plated | - | Loose Piece |
| AT62-12-0244 | Socket | S&F | Size 12 | 25A | 10-12AWG | 6.0-4.0$mm^2$ | 3.56 - 5.18mm | Gold-Plated | - | - |
| AT62-12-0244-LP | Socket | S&F | Size 12 | 25A | 10-12AWG | 6.0-4.0$mm^2$ | 3.56 - 5.18mm | Gold-Plated | - | Loose Piece |
| AT62-12-0144 | Socket | S&F | Size 12 | 25A | 12-14AWG | 4.0-2.0$mm^2$ | 2.87 - 4.47mm | Gold-Plated | - | - |
| AT62-12-0144-LP | Socket | S&F | Size 12 | 25A | 12-14AWG | 4.0-2.0$mm^2$ | 2.87 - 4.47mm | Gold-Plated | - | Loose Piece |
| AT62-12-0166 | Socket | S&F | Size 12 | 25A | 12-14AWG | 4.0-2.0$mm^2$ | 2.87 - 4.47mm | Nickel-Plated | - | - |
| AT62-12-0166-LP | Socket | S&F | Size 12 | 25A | 12-14AWG | 4.0-2.0$mm^2$ | 2.87 - 4.47mm | Nickel-Plated | - | Loose Piece |
| | | | | | | | | | | |

Tooling

| Part Number | Tool Name | Style | Contact Size | Wire Range (AWG) | Material | Color |
|---|---|---|---|---|---|---|
| MFX-3966 | Contact Locator for Hand Crimp Tool M300-25A | Machined | Size 12 | 10AWG | - | - |
| AUTK-12 | Hand Crimp Tool | Machined | Size 12 | 10-18AWG | - | - |
| M300-25A | Hand Crimp Tool w MFX-3966 Locator | Machined | Size 12 | 10-18AWG | - | - |
| CA-5E12 | Pneumatic Crimp Tool | Machined | Size 12/16/20 | 12-26AWG | - | - |
| CA-5D12 | Universal Hand Crimp Tool | Machined | Size 12/16/20 | 12-26AWG | - | - |
| AUTK-100 | Universal Heavy Duty Contact Crimping Tool Kit | Machined | Size 12/16/20 | 12-26AWG | - | - |

# AHD, ARB, ATP, ATHD, DuraMate™ and PanelMate™ Series

## Size 12 Contact & Tooling Options, cont.

Tooling, cont.

| Part Number | Tool Name | Style | Contact Size | Wire Range (AWG) | Material | Color |
|---|---|---|---|---|---|---|
| MFX-3973-G or K | Crimp Die Press Applicator | S&F | Size 12 | 12AWG | - | - |
| MFX-3985-G or K | Crimp Die Press Applicator | S&F | Size 12 | 10-12AWG | - | - |
| ATT-12-00 | Hand Crimp Tool | S&F | Size 12 | 12-14AWG | - | - |
| ATT-12-01 | Hand Crimp Tool | S&F | Size 12 | 10AWG | - | - |
| ATRT-100 | Contact and Wedgelock Extraction Tool | Universal | Universal | - | Steel | Silver |
| AT11-337-1205 | Contact Extraction Tool | Universal | Size 12 | - | Plastic | Orange |
| A114017 | Seal Plug | Universal | Size 12/16 | - | Thermoplastic | White |
| | | | | | | |

# AT, ATV, AHD, ARB, ARC, DuraMate™ and PanelMate™ Series

## Size 16 Contact & Tooling Options

Contacts - Machined

| Part Number | Type | Style | Contact Size | Amp | Wire Range (AWG) | Wire Range ($mm^2$) | Insulation OD (mm) | Plating | Reel Size | Packaging |
|---|---|---|---|---|---|---|---|---|---|---|
| AT60-215-16141 | Pin | Machined | Size 16 | 13A | 14AWG | - | - | Nickel-Plated | - | - |
| AT60-215-1631 | Pin | Machined | Size 16 | 13A | 14AWG | - | - | Gold-Plated | - | - |
| AT60-202-16NKIT | Pin | Machined | Size 16 | 13A | 16-20AWG | - | - | Nickel-Plated | - | - |
| AT60-202-16141 | Pin | Machined | Size 16 | 13A | 16-20AWG | - | - | Nickel-Plated | - | - |
| AT60-202-1631 | Pin | Machined | Size 16 | 13A | 16-20AWG | - | - | Gold-Plated | - | - |
| AT60-202-16141-22 | Pin | Machined | Size 16 | 13A | 22-24AWG | - | - | Nickel-Plated | - | - |
| AT60-202-1631-22 | Pin | Machined | Size 16 | 13A | 22-24AWG | - | - | Gold-Plated | - | - |
| AT62-209-16141 | Socket | Machined | Size 16 | 13A | 14AWG | - | - | Nickel-Plated | - | - |
| AT62-209-1631 | Socket | Machined | Size 16 | 13A | 14AWG | - | - | Gold-Plated | - | - |
| AT62-201-16NKIT | Socket | Machined | Size 16 | 13A | 16-20AWG | - | - | Nickel-Plated | - | - |
| AT62-201-16141 | Socket | Machined | Size 16 | 13A | 16-20AWG | - | - | Nickel-Plated | - | - |
| AT62-201-1631 | Socket | Machined | Size 16 | 13A | 16-20AWG | - | - | Gold-Plated | - | - |
| AT62-201-16141-22 | Socket | Machined | Size 16 | 13A | 22-24AWG | - | - | Nickel-Plated | - | - |
| AT62-201-1631-22 | Socket | Machined | Size 16 | 13A | 22-24AWG | - | - | Gold-Plated | - | - |
| | | | | | | | | | | |

Contacts - Stamped & Formed

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AT60-14-0122 | Pin | S&F | Size 16 | 13A | 14-18AWG | 2.0-0.75$mm^2$ | 2.40 - 3.81mm | Nickel-Plated | - | - |
| AT60-14-0122-LP | Pin | S&F | Size 16 | 13A | 14-18AWG | 2.0-0.75$mm^2$ | 2.40 - 3.81mm | Nickel-Plated | - | Loose Piece |
| AT60-14-0144 | Pin | S&F | Size 16 | 13A | 14-18AWG | 2.0-0.75$mm^2$ | 2.40 - 3.81mm | Gold-Plated | - | - |
| AT60-14-0144-LP | Pin | S&F | Size 16 | 13A | 14-18AWG | 2.0-0.75$mm^2$ | 2.40 - 3.81mm | Gold-Plated | - | Loose Piece |
| AT60-16-0122 | Pin | S&F | Size 16 | 13A | 16-18AWG | 1.5-0.75$mm^2$ | 1.91 - 3.55mm | Nickel-Plated | - | - |
| AT60-16-0122-LP | Pin | S&F | Size 16 | 13A | 16-18AWG | 1.5-0.75$mm^2$ | 1.91 - 3.55mm | Nickel-Plated | - | Loose Piece |
| AT60-16-0144 | Pin | S&F | Size 16 | 13A | 16-18AWG | 1.5-0.75$mm^2$ | 1.91 - 3.55mm | Gold-Plated | - | - |
| AT60-16-0144-LP | Pin | S&F | Size 16 | 13A | 16-18AWG | 1.5-0.75$mm^2$ | 1.91 - 3.55mm | Gold-Plated | - | Loose Piece |
| AT60-16-0622 | Pin | S&F | Size 16 | 13A | 16-20AWG | 1.0-0.5$mm^2$ | 1.40 - 2.54mm | Nickel-Plated | - | - |
| AT60-16-0622-LP | Pin | S&F | Size 16 | 13A | 16-20AWG | 1.0-0.5$mm^2$ | 1.40 - 2.54mm | Nickel-Plated | - | Loose Piece |
| AT60-16-0644 | Pin | S&F | Size 16 | 13A | 16-20AWG | 1.0-0.5$mm^2$ | 1.40 - 2.54mm | Gold-Plated | - | - |
| AT60-16-0644-LP | Pin | S&F | Size 16 | 13A | 16-20AWG | 1.0-0.5$mm^2$ | 1.40 - 2.54mm | Gold-Plated | - | Loose Piece |
| AT60-16-0322 | Pin | S&F | Size 16 | 13A | 20-22AWG | 0.5-0.35$mm^2$ | 1.31 - 1.50mm | Nickel-Plated | - | - |
| AT60-16-0344 | Pin | S&F | Size 16 | 13A | 20-22AWG | 0.5-0.35$mm^2$ | 1.31 - 1.50mm | Gold-Plated | - | - |
| AT60-16-0377 | Pin | S&F | Size 16 | 13A | 20-22AWG | 0.5-0.35$mm^2$ | 1.31 - 1.50mm | Tin-Plated | - | - |
| AT60-16-0822 | Pin | S&F | Size 16 | 13A | 20-22AWG | 0.5-0.35$mm^2$ | 1.31 - 1.50mm | Nickel-Plated | 4,000 | - |
| AT60-16-0844 | Pin | S&F | Size 16 | 13A | 20-22AWG | 0.5-0.35$mm^2$ | 1.31 - 1.50mm | Gold-Plated | 4,000 | - |
| AT62-14-0122 | Socket | S&F | Size 16 | 13A | 14-18AWG | 2.0-0.75$mm^2$ | 2.40 - 3.81mm | Nickel-Plated | - | - |
| AT62-14-0122-LP | Socket | S&F | Size 16 | 13A | 14-18AWG | 2.0-0.75$mm^2$ | 2.40 - 3.81mm | Nickel-Plated | - | Loose Piece |
| AT62-14-0144 | Socket | S&F | Size 16 | 13A | 14-18AWG | 2.0-0.75$mm^2$ | 2.40 - 3.81mm | Gold-Plated | - | - |
| AT62-14-0144-LP | Socket | S&F | Size 16 | 13A | 14-18AWG | 2.0-0.75$mm^2$ | 2.40 - 3.81mm | Gold-Plated | - | Loose Piece |
| AT62-16-0122 | Socket | S&F | Size 16 | 13A | 16-18AWG | 1.5-0.75$mm^2$ | 1.91 - 3.55mm | Nickel-Plated | - | - |
| AT62-16-0122-LP | Socket | S&F | Size 16 | 13A | 16-18AWG | 1.5-0.75$mm^2$ | 1.91 - 3.55mm | Nickel-Plated | - | Loose Piece |
| AT62-16-0144 | Socket | S&F | Size 16 | 13A | 16-18AWG | 1.5-0.75$mm^2$ | 1.91 - 3.55mm | Gold-Plated | - | - |

# AT, ATV, AHD, ARB, ARC, DuraMate™ and PanelMate™ Series

## Size 16 Contact & Tooling Options, cont.

Contacts - Stamped & Formed, cont.

| Part Number | Type | Style | Contact Size | Amp | Wire Range (AWG) | Wire Range ($mm^2$) | Insulation OD (mm) | Plating | Reel Size | Packaging |
|---|---|---|---|---|---|---|---|---|---|---|
| AT62-16-0144-LP | Socket | S&F | Size 16 | 13A | 16-18AWG | 1.5-0.75$mm^2$ | 1.91 - 3.55mm | Gold-Plated | - | Loose Piece |
| AT62-16-0622 | Socket | S&F | Size 16 | 13A | 16-20AWG | 1.0-0.5$mm^2$ | 1.40 - 2.54mm | Nickel-Plated | - | - |
| AT62-16-0622-LP | Socket | S&F | Size 16 | 13A | 16-20AWG | 1.0-0.5$mm^2$ | 1.40 - 2.54mm | Nickel-Plated | - | Loose Piece |
| AT62-16-0644 | Socket | S&F | Size 16 | 13A | 18-20AWG | 1.0-0.5$mm^2$ | 1.40 - 2.54mm | Gold-Plated | - | - |
| AT62-16-0644-LP | Socket | S&F | Size 16 | 13A | 18-20AWG | 1.0-0.5$mm^2$ | 1.40 - 2.54mm | Gold-Plated | - | Loose Piece |
| AT62-16-0822 | Socket | S&F | Size 16 | 13A | 20-22AWG | 0.5-0.35$mm^2$ | 1.31 - 1.50mm | Nickel-Plated | 4,000 | - |
| AT62-16-0844 | Socket | S&F | Size 16 | 13A | 20-22AWG | 0.5-0.35$mm^2$ | 1.31 - 1.50mm | Gold-Plated | 4,000 | - |
| | | | | | | | | | | |

Tooling

| Part Number | Tool Name | Style | Contact Size | Wire Range (AWG) | Material | Color |
|---|---|---|---|---|---|---|
| AUTK-16 | Hand Crimp Tool | Machined | Size 16 | - | - | - |
| AUTK-100 | Universal Heavy Duty Contact Crimping Tool Kit | Machined | Size 12/16/20 | 12-26AWG | - | - |
| CA-5D12 | Universal Hand Crimp Tool | Machined | Size 12/16/20 | 12-26AWG | - | - |
| CA-5E12 | Pneumatic Crimp Tool | Machined | Size 12/16/20 | 12-26AWG | - | - |
| MFX-3950-G or K | Crimp Die Press Applicator | S&F | Size 16 | 18-20AWG | - | - |
| MFX-3953-G or K | Crimp Die Press Applicator | S&F | Size 16 | 16-18AWG | - | - |
| MFX-3975-G or K | Crimp Die Press Applicator | S&F | Size 16 | 14-16AWG | - | - |
| MFX-3990 | Crimp Die | S&F | Size 16 | 20-22AWG | - | - |
| ATT-16-00 | Hand Crimp Tool | S&F | Size 16 | 14-16AWG | - | - |
| ATT-16-01 | Hand Crimp Tool | S&F | Size 16 | 18-20AWG | - | - |
| ATT-1612-03 | Hand Crimp Tool | S&F | Size 12/16 | 20-22AWG | - | - |
| ATRT-100 | Contact and Wedgelock Extraction Tool | Universal | Universal | - | Steel | Silver |
| AT11-310-1605 | Contact Extraction Tool | Universal | Size 16 | - | Plastic | Lt Blue |
| A114017 | Seal Plug | Universal | Size 12/16 | - | Thermoplastic | White |
| A114017-SR | Seal Plug | Universal | Size 16 | - | Thermoplastic | Black |
| AT13-217-1605 | Locking Seal Plug | Universal | Size 16 | - | Thermoplastic | Grey |
| AT13-217-1605-SR | Locking Seal Plug | Universal | Size 16 | - | Thermoplastic | Red |
| | | | | | | |