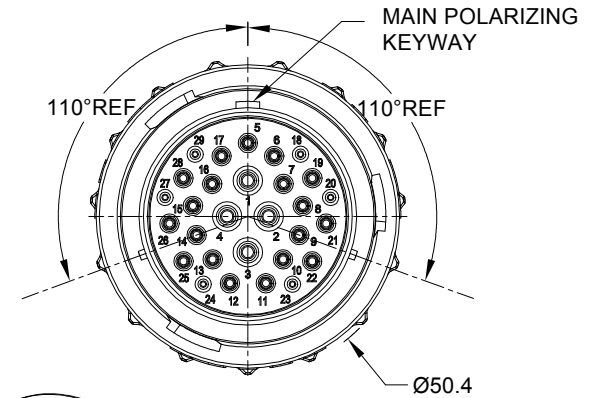
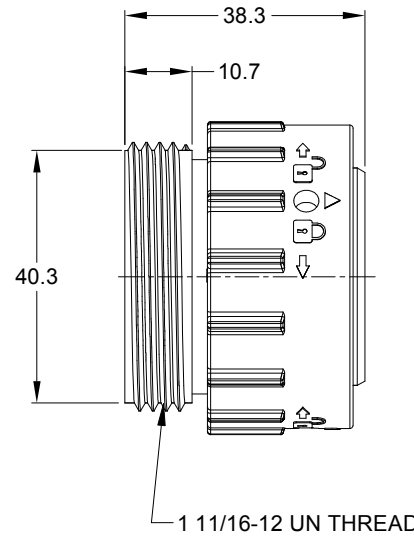
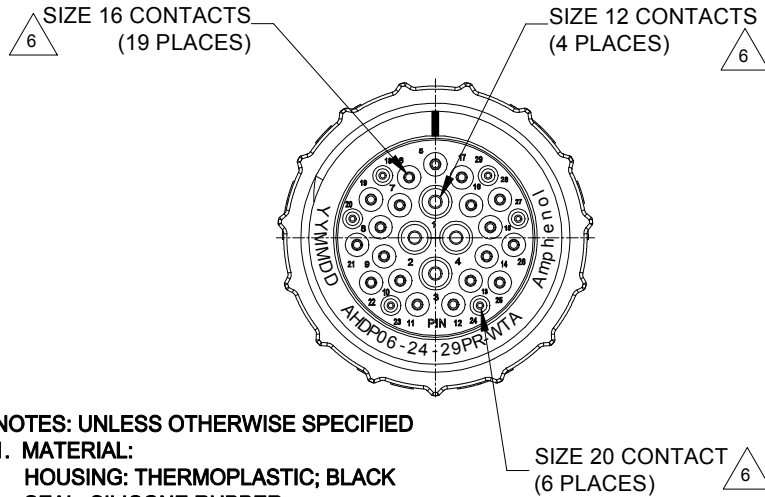


| REVISIONS |        |   |         |        |       |
|-----------|--------|---|---------|--------|-------|
| REV       | ECO    | DESCRIPTION                                 | DATE    | BY     | APPR  |
| A1        |        | RELEASE NEW DRAWING                         | 13NOV15 | SULLEN | TOMMY |
| A2        | C0765S | UPDATE SPECIFICATIONS                       | 23NOV17 | ROOKIE | TOMMY |
| A3        | C0870S | Change the appearance of the retaining ring | 26JUN18 | KASOON | TOMMY |
| A4        | C1001S | CHANGE THE WIRE SIZE                        | 28DEC18 | BROOK  | TOMMY |

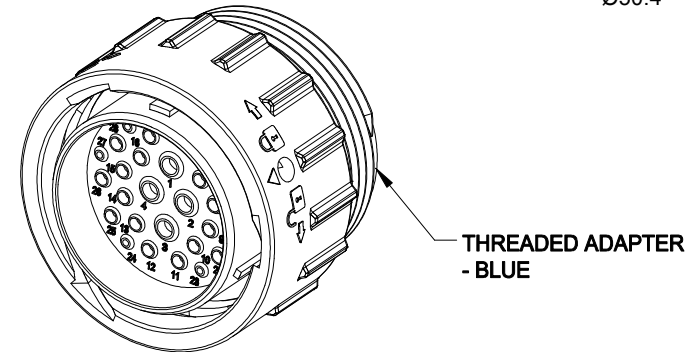


**NOTES: UNLESS OTHERWISE SPECIFIED**

- MATERIAL:**  
HOUSING: THERMOPLASTIC; BLACK  
SEAL: SILICONE RUBBER
- MODIFICATIONS:** THREADED ADAPTER;  
REDUCED DIA. WIRE SEAL
- SPECIFICATIONS:**
  - OPERATING TEMPERATURE: -55°C TO +125°C.
  - DIELECTRIC WITHSTANDING VOLTAGE: LESS THAN 2 MILLIAMPS CURRENT LEAKAGE @ 1500 VOLTS AC.
  - INSULATION RESISTANCE: 1000 MEGOHM MIN @ 25°C.
  - MOISTURE RESISTANCE: IP67&IP69K ( MATED CONDITION ).
  - MATING CYCLE DURABILITY: 100 CYCLES
  - RoHS COMPLIANT
- MATING PART:** AHDP04-24-29S\* (\* = SEAL TYPE)
- ALL DIMENSIONS ARE FOR REFERENCE USE ONLY.**

**CONTACT SIZE AND WIRE RANGE:**

| CONTACT SIZE | MIN. INSUL O.D.   | MAX. INSUL O.D.   | TYPICAL WIRE RANGE | CURRENT RATING |
|--------------|-------------------|-------------------|--------------------|----------------|
| 20           | 1.02 mm (.040 in) | 2.10 mm (.083 in) | 16-22 AWG          | 7.5 AMPS       |
| 16           | 1.35 mm (.053 in) | 2.62 mm (.103 in) | 14-20 AWG          | 13 AMPS        |
| 12           | 2.46 mm (.097 in) | 4.01 mm (.158 in) | 10-14 AWG          | 25 AMPS        |



TITLE: RECAP 24-29 POS, PIN CONTACT, REDUCED DIA. SEAL, AHDP  
DWG NO.: AHDP06-24-29PR-WTA  
REV: A4  
SH: 1  
OF: 1

| AHDP06-24-29PR-WTA                    |             | DESCRIPTION  |             | ITEM   |
|---------------------------------------|-------------|--|-------------|--|
| QUANTITY                              | PART NUMBER | DESCRIPTION  |             |  |
| <b>MATERIALS LIST</b>                 |             |  |             |  |
| <b>UNLESS OTHERWISE SPECIFIED</b>     |             | <b>SIGNATURES</b>  | <b>DATE</b> | <p>Sine Systems - www.amphenol-sine.com<br/>44724 Morley Drive<br/>Clinton Township, MI 48036</p> <p>PLUG, 24-29 POS, PIN CONTACT<br/>REDUCED DIA. SEAL, AHDP SERIES</p> |
| 1) All dimensions are in metric (mm). |             | DRAWN: BROOK   | 28DEC18     |  |
| 2) Tolerances are as follows:         |             | CHECKED: ORION   | 28DEC18     |  |
| 1 PL DEC ±0.30 Fractions ±1/64        |             | ENGINEER:  |             |  |
| 2 PL DEC ±0.15 Angles ±1°             |             | APPROVAL: TOMMY  | 28DEC18     |  |
| 3) Note reference =                   |             | CUSTOMER:  |             |  |
| MATERIAL SPECIFICATIONS:              |             | THIS DRAWING IS SUPPLIED FOR INFORMATION ONLY. DESIGN FEATURES, SPECIFICATIONS AND PERFORMANCE DATA SHOWN HEREON ARE THE PROPERTY OF THE AMPHENOL CORPORATION. NO RIGHTS OF REPRODUCTION ARE IMPLIED. ALL DIMENSIONS ARE SUBJECT TO NORMAL MANUFACTURING VARIATIONS. |             |  |
| PROCESS SPECIFICATIONS:               |             | SIZE: B  | TYPE: C-    | DWG NO.: AHDP06-24-29PR-WTA  |
| NEXT ASSY:                            |             | SCALE: NONE  |             | REVISION: A4   |
|                                       |             |  | SHEET 1     | OF 1   |

# ATM Series™ - Contact Size 20 Options

| Machined Contacts, Sockets & Pins |  |      |       |          |
|-----------------------------------|--|------|-------|----------|
| Part Number                       | Description                            | Size | AWG   | Type     |
| AT60-010-2031                     | Male Contact - Pin, Gold-plated        | 20   | 16-18 | Machined |
| AT62-005-20141                    | Female Contact - Socket, Gold-plated   | 20   | 16-18 | Machined |
| AT60-010-20141                    | Male Contact - Pin, Nickel-plated      | 20   | 16-18 | Machined |
| AT62-005-2031                     | Female Contact - Socket, Nickel-plated | 20   | 16-18 | Machined |
| AT60-202-2031                     | Male Contact - Pin, Gold-plated        | 20   | 20-22 | Machined |
| AT62-201-2031                     | Female Contact - Socket, Gold-plated   | 20   | 20-22 | Machined |
| AT60-202-20141                    | Male Contact - Pin, Nickel-plated      | 20   | 20-22 | Machined |
| AT62-201-20141                    | Female Contact - Socket, Nickel-plated | 20   | 20-22 | Machined |

| Tooling - Machined Contacts   |             |   |
|---|-------------|---|
| Part  | Part Number | Description   |
|  | CA-5D12     | Universal Hand Crimp Tool, Size 12/16/20 (Machined contacts only) |
|  | CA-5E12     | Pneumatic Crimp Tool, Size 12/16/20 (Machined contacts only)      |

| Contact Removal Tools   |               |   |
|---|---------------|---|
| Part  | Part Number   | Description   |
|  | ATRT-100      | Used for removal of contacts for A Series™ products |
|  | AT11-240-2005 | Contact Removal Tool, Plastic, Size 20              |
|  | AT13-204-2005 | Sealing Plug, Size 20, White                        |

| Stamped & Formed Contacts, Sockets & Pins |  |      |       |                  |
|---|--|------|-------|------------------|
| Part Number                               | Description                            | Size | AWG   | Type             |
| AT60-20-0144                              | Male Contact - Pin, Gold-plated        | 20   | 16-22 | Stamped & Formed |
| AT62-20-0144                              | Female Contact - Socket, Gold-plated   | 20   | 16-22 | Stamped & Formed |
| AT60-20-0244                              | Male Contact - Socket, Gold-plated     | 20   | 16-22 | Stamped & Formed |
| AT62-20-0244                              | Female Contact - Socket, Gold-plated   | 20   | 16-22 | Stamped & Formed |
| AT60-20-0122                              | Male Contact - Pin, Nickel-plated      | 20   | 16-22 | Stamped & Formed |
| AT62-20-0122                              | Female Contact - Socket, Nickel-plated | 20   | 16-22 | Stamped & Formed |
| AT60-20-0222                              | Male Contact - Socket, Nickel-plated   | 20   | 16-22 | Stamped & Formed |
| AT62-20-0222                              | Female Contact - Socket, Nickel-plated | 20   | 16-22 | Stamped & Formed |
| AT60-20-0277                              | Male Contact - Socket, Tin-plated      | 20   | 16-22 | Stamped & Formed |
| AT62-20-0277                              | Female Contact - Socket, Tin-plated    | 20   | 16-22 | Stamped & Formed |
| AT60-20-0422                              | Male Contact - Socket, Nickel-plated   | 20   | 20-22 | Stamped & Formed |
| AT62-20-0444                              | Female Contact - Socket, Gold-plated   | 20   | 20-22 | Stamped & Formed |

| Tooling - Stamped & Formed Contacts   |             |   |
|---|-------------|---|
| Part  | Part Number | Description   |
|  | MFX-3974    | Crimp Die - Size 20 (S&F contacts only)                       |
|   | MFX-3976    | Crimp Die - Size 20 (S&F contacts only) 20-22AWG -04XX Series |
|   | MFX-3978    | Crimp Die - Size 20 (S&F contacts only) 20-22AWG -02XX Series |
|  | ATT-20-00   | Hand Crimp Tool - Size 20, 20AWG (S&F contacts only)          |

**Amphenol Sine Systems**  
 44724 Morley Drive  
 Clinton Township, MI 48036 USA  
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# AT Series™ - Contact Size 16 Options

| Machined Contacts, Sockets & Pins |  |      |       |          |
|-----------------------------------|--|------|-------|----------|
| Part Number                       | Description                            | Size | AWG   | Type     |
| AT60-215-1631                     | Male Contact - Pin, Gold-plated        | 16   | 14    | Machined |
| AT62-209-1631                     | Female Contact - Socket, Gold-plated   | 16   | 14    | Machined |
| AT60-215-16141                    | Male Contact - Pin, Nickel-plated      | 16   | 14    | Machined |
| AT62-209-16141                    | Female Contact - Socket, Nickel-plated | 16   | 14    | Machined |
| AT60-202-1631                     | Male Contact - Pin, Gold-plated        | 16   | 16-20 | Machined |
| AT62-201-1631                     | Female Contact - Socket, Gold-plated   | 16   | 16-20 | Machined |
| AT60-202-16141                    | Male Contact - Pin, Nickel-plated      | 16   | 16-20 | Machined |
| AT62-201-16141                    | Female Contact - Socket, Nickel-plated | 16   | 16-20 | Machined |
| AT60-202-1631-22                  | Male Contact - Pin, Gold-plated        | 16   | 22-24 | Machined |
| AT62-201-1631-22                  | Female Contact - Socket, Gold-plated   | 16   | 22-24 | Machined |
| AT60-202-16141-22                 | Male Contact - Pin, Nickel-plated      | 16   | 22-24 | Machined |
| AT62-201-16141-22                 | Female Contact - Socket, Nickel-plated | 16   | 22-24 | Machined |

| Tooling - Machined Contacts   |             |   |
|---|-------------|---|
| Part  | Part Number | Description   |
|  | CA-5D12     | Universal Hand Crimp Tool, Size 12/16/20 (Machined contacts only) |
|  | CA-5E12     | Pneumatic Crimp Tool, Size 12/16/20 (Machined contacts only)      |

| Contact Removal Tools   |               |   |
|---|---------------|---|
| Part  | Part Number   | Description   |
|  | ATRT-100      | Used for removal of contacts for A Series™ products |
|  | AT11-310-1605 | Contact Removal Tool, Plastic, Size 16              |
|  | A114017       | Sealing Plug, Size 16, White                        |

| Stamped & Formed Contacts, Sockets & Pins |  |      |       |                  |
|---|--|------|-------|------------------|
| Part Number                               | Description                            | Size | AWG   | Type             |
| AT60-14-0144                              | Male Contact - Pin, Gold-plated        | 16   | 14-16 | Stamped & Formed |
| AT62-14-0144                              | Female Contact - Socket, Gold-plated   | 16   | 14-16 | Stamped & Formed |
| AT60-14-0122                              | Male Contact - Pin, Nickel-plated      | 16   | 14-16 | Stamped & Formed |
| AT62-14-0122                              | Female Contact - Socket, Nickel-plated | 16   | 14-16 | Stamped & Formed |
| AT60-16-0144                              | Male Contact - Pin, Gold-plated        | 16   | 16-18 | Stamped & Formed |
| AT62-16-0144                              | Female Contact - Socket, Gold-plated   | 16   | 16-18 | Stamped & Formed |
| AT60-16-0122                              | Male Contact - Pin, Nickel-plated      | 16   | 16-18 | Stamped & Formed |
| AT62-16-0122                              | Female Contact - Socket, Nickel-plated | 16   | 16-18 | Stamped & Formed |
| AT60-16-0644                              | Male Contact - Pin, Gold-plated        | 16   | 18-20 | Stamped & Formed |
| AT62-16-0644                              | Female Contact - Socket, Gold-plated   | 16   | 18-20 | Stamped & Formed |
| AT60-16-0622                              | Male Contact - Pin, Nickel-plated      | 16   | 18-20 | Stamped & Formed |
| AT62-16-0622                              | Female Contact - Socket, Nickel-plated | 16   | 18-20 | Stamped & Formed |
| AT60-16-0844                              | Male Contact - Pin, Gold-plated        | 16   | 20-22 | Stamped & Formed |
| AT62-16-0844                              | Female Contact - Socket, Gold-plated   | 16   | 20-22 | Stamped & Formed |
| AT60-16-0822                              | Male Contact - Pin, Nickel-plated      | 16   | 20-22 | Stamped & Formed |
| AT62-16-0822                              | Female Contact - Socket, Nickel-plated | 16   | 20-22 | Stamped & Formed |



| Tooling - Stamped & Formed Contacts   |             |   |
|---|-------------|---|
| Part  | Part Number | Description   |
|   | MFX-3950    | Crimp Die - Size 16, 18-20AWG (S&F contacts only)       |
|   | MFX-3953    | Crimp Die - Size 16, 16-18AWG (S&F contacts only)       |
|   | MFX-3975    | Crimp Die - Size 16, 14-16AWG (S&F contacts only)       |
|   | MFX-3990    | Crimp Die - Size 16, 20-22AWG (S&F contacts only)       |
|  | ATT-16-00   | Hand Crimp Tool - Size 16, 14-16AWG (S&F contacts only) |
|   | ATT-16-01   | Hand Crimp Tool - Size 16, 18-20AWG (S&F contacts only) |
|   | ATT-1612-03 | Hand Crimp Tool - Size 16, 20-22AWG (S&F contacts only) |




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 44724 Morley Drive  
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# ATP Series™ - Contact Size 12 Options



| Machined Contacts, Sockets & Pins |  |      |       |          |
|-----------------------------------|--|------|-------|----------|
| Part Number                       | Description                            | Size | AWG   | Type     |
| AT60-204-12141-10                 | Male Contact - Pin, Nickel-plated      | 12   | 10-12 | Machined |
| AT62-203-12141-10                 | Female Contact - Socket, Nickel-plated | 12   | 10-12 | Machined |
| AT60-220-1231                     | Male Contact - Pin, Gold-plated        | 12   | 12-14 | Machined |
| AT62-210-1231                     | Female Contact - Socket, Gold-plated   | 12   | 12-14 | Machined |
| AT60-204-12141                    | Male Contact - Pin, Nickel-plated      | 12   | 12-14 | Machined |
| AT62-203-12141                    | Female Contact - Socket, Nickel-plated | 12   | 12-14 | Machined |

| DiagnosticGrade™ Machined Contacts, Sockets & Pins   |  |      |     |          |
|--|--|------|-----|----------|
| • Smaller AWG for Diagnostic Applications • Gold-plated • Increased Mating Cycles • Cost-effective |  |      |     |          |
| Part Number  | Description  | Size | AWG | Type     |
| 65-54749   | Male Contact - DiagnosticGrade™, Pin, Gold-plated      | 12   | 20  | Machined |
| AT62-210-1231-1820   | Female Contact - DiagnosticGrade™, Socket, Gold-plated | 12   | 20  | Machined |

| Tooling - Machined Contacts   |             |   |
|---|-------------|---|
| Part  | Part Number | Description   |
|  | CA-5D12     | Universal Hand Crimp Tool, Size 12/16/20 (Machined contacts only) |
|  | CA-5E12     | Pneumatic Crimp Tool, Size 12/16/20 (Machined contacts only)      |

| Contact Removal Tools   |               |   |
|---|---------------|---|
| Part  | Part Number   | Description   |
|  | ATRT-100      | Used for removal of contacts for A Series™ products |
|  | AT11-337-1205 | Contact Removal Tool, Plastic, Size 12              |
|  | A114017       | Sealing Plug, Size 12, White                        |

| Stamped & Formed Contacts, Sockets & Pins |  |      |       |                  |
|---|--|------|-------|------------------|
| Part Number                               | Description                            | Size | AWG   | Type             |
| AT60-12-0244                              | Male Contact - Pin, Gold-plated        | 12   | 10-12 | Stamped & Formed |
| AT62-12-0244                              | Female Contact - Socket, Gold-plated   | 12   | 10-12 | Stamped & Formed |
| AT60-12-0222                              | Male Contact - Pin, Nickel-plated      | 12   | 10-12 | Stamped & Formed |
| AT62-12-0222                              | Female Contact - Socket, Nickel-plated | 12   | 10-12 | Stamped & Formed |
| AT60-12-0144                              | Male Contact - Pin, Gold-plated        | 12   | 12-14 | Stamped & Formed |
| AT62-12-0144                              | Female Contact - Socket, Gold-plated   | 12   | 12-14 | Stamped & Formed |
| AT60-12-0166                              | Male Contact - Pin, Nickel-plated      | 12   | 12-14 | Stamped & Formed |
| AT62-12-0166                              | Female Contact - Socket, Nickel-plated | 12   | 12-14 | Stamped & Formed |

| Tooling - Stamped & Formed Contacts   |             |   |
|---|-------------|---|
| Part  | Part Number | Description   |
|  | MXF-3973    | Crimp Die - Size 12 (S&F contacts only)                       |
|   | MXF-3985    | Crimp Die - Size 12 (S&F contacts only) 10-12AWG -02XX Series |
|  | ATT-12-00   | Hand Crimp Tool - Size 12, 12AWG (S&F contacts only)          |

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