



DM Dura|Mate™ Family



Environmentally-Sealed, Multi-Pin, Heavy-Duty, Plastic & Metal Circular Connectors

Amphenol Sine Systems' **DuraMate™ Family** of environmentally-sealed, multi-pin, heavy duty, plastic (AHDP) or metal (AHDM), circular connectors provides an economical, quick-connect, bayonet locking system manufactured to withstand the challenges and complexities of harsh environment off-road applications.

Currently available in **DuraMate™ AHDP Series** and **DuraMate™ AHDM Series**.

DM Dura|Mate™ AHDP DM Dura|Mate™ AHDM

Key Features

- **DuraMate™ AHDP: Size 24 with 13 insert arrangements** 7(x2), 9, 16, 18, 19, 21, 23, 27, 29, 31, 35 and 47
Size 18 with 6 insert arrangements 6(x2), 8, 14, 20 and 21
- **DuraMate™ AHDM: Size 24 with 13 insert arrangements** 7(x2), 9, 16, 18, 19, 21, 23, 27, 29, 31, 35 and 47
Size 18 with 6 insert arrangements 6(x2), 8, 14, 20 and 21
- 3 key-way bayonet design ensures proper mating of connectors
- High density signal and mixed power insert configurations
- Operating temperature range: -55°C to +125°C
- High current configurations incorporating revolutionary RADSOK® contacts
- High strength impact resistant & lightweight thermoplastic or zinc-alloy metal housings
- Low insertion force stamped terminals offer improved manufacturing efficiencies
- Standard WTA(Wide Thread Adapter) provides maximum access to rear grommet and improved serviceability
- Environmentally-sealed and engineered rapid and secure mating system achieves IP67/IP69K protection (in mated condition) from ingress of dust, water, mud and other contaminants and is vibration resistant
- Sealing features consisting of durable high temperature silicone provide barrier from lubricating oils, hydraulic fluids and fossil fuels
- Backshells maintain a compression-fit design to resist maximum pull-out forces and facilitate strain-relief for jacketed cable ranges
- Utilizes A Series™ standard contact system (Stamped & Formed or Machined)
- Wire entry sealing available in three separate ranges for discrete wire applications

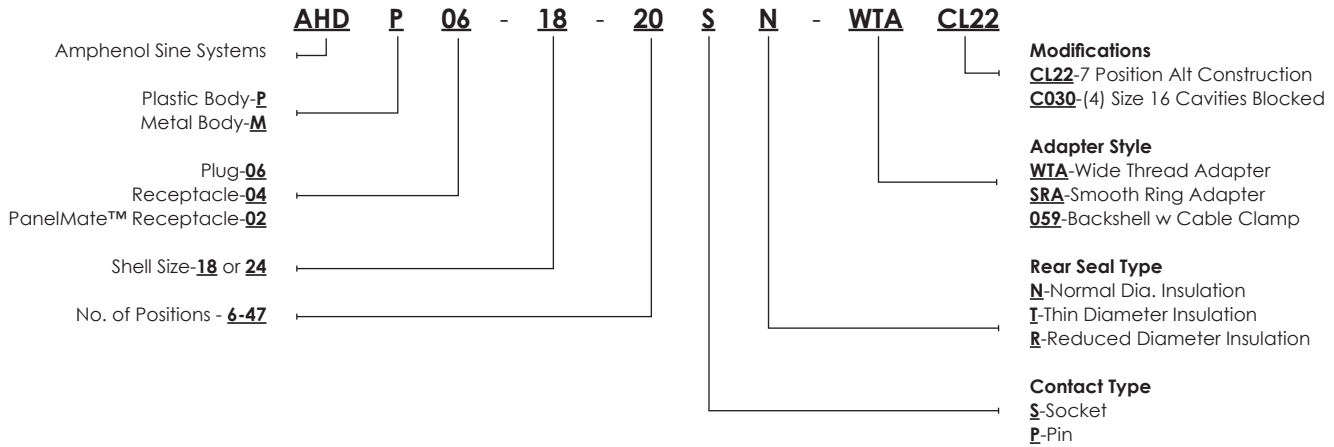


A **A Series™ Family**



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DuraMate™ Series Part Numbering Sequence



Examples



DM Dura|Mate™ AHDP

AHDP06-18-20SN-SRA
Plastic Body, Plug, Shell Size 18, No. of Positions 20, Socket, Normal Diameter Insulation, Smooth Ring Adapter



DM Dura|Mate™ AHDP

AHDP02-24-16PR-SRA
Plastic Body, PanelMate™ Receptacle, Shell Size 24, No. of Positions 16, Pin, Reduced Diameter Insulation, Smooth Ring Adapter



DM Dura|Mate™ AHDM

AHDM04-18-08SN
Metal Body, Receptacle, Shell Size 18, No. of Positions 8, Socket, Normal Diameter Insulation



DM Dura|Mate™ AHDM

AHDM06-24-16PR
Metal Body, Plug, Shell Size 24, No. of Positions 16, Pin, Reduced Diameter Insulation



DM Dura|Mate™ AHDM

AHDM06-18-14SR-059
Metal Body, Plug, Shell Size 18, No. of Positions 14, Socket, Reduced Diameter Insulation, Backshell w Cable Clamp



DM Dura|Mate™ AHDM

AHDM04-24-09SR-059
Metal Body, Receptacle, Shell Size 24, No. of Positions 09, Socket, Reduced Diameter Insulation, Backshell w Cable Clamp



DM DuraMate™ AHDP

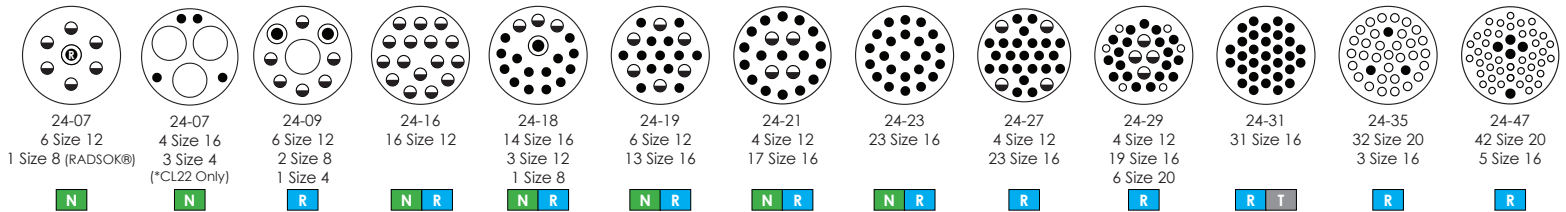
Environmentally-Sealed, Multi-Pin, Heavy-Duty, Plastic, Circular Connectors



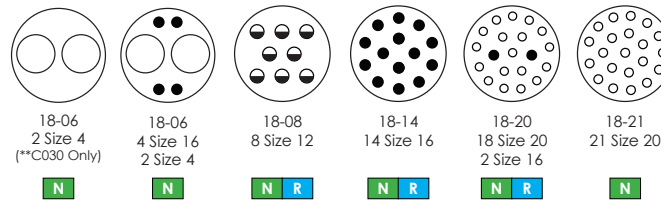
Available in Size 24 with 13 insert arrangements 7(x2), 9, 16, 18, 19, 21, 23, 27, 29, 31, 35 and 47
Available in Size 18 with 6 insert arrangements 6(x2), 8, 14, 20 and 21

The DuraMate™ AHDP environmentally-sealed, multi-pin, heavy duty, plastic, circular connector series provides an economical quick-connect bayonet locking system manufactured to withstand the challenges and complexities of harsh environment off-road applications.

- 3 key-way bayonet design ensures proper mating of connectors
- High density signal and mixed power insert configurations
- Operating temperature range: -55°C to +125°C
- High current configurations incorporating revolutionary RADSOK® contacts
- High strength impact resistant & lightweight thermoplastic housings
- Low insertion force stamped terminals offer improved manufacturing efficiencies
- Standard WTA(Wide Thread Adapter) provides maximum access to rear grommet and improved serviceability.
- Environmentally-sealed and engineered rapid and secure mating system achieves IP67/IP69K protection (in mated condition) from ingress of dust, water, mud and other contaminants and is vibration resistant.
- Sealing features consisting of durable high temperature silicone provide barrier from lubricating oils, hydraulic fluids and fossil fuels
- Back shells maintain a compression-fit design to resist maximum pull-out forces and facilitate strain-relief for jacketed cable ranges.
- Utilizes A Series™ standard contact system (Stamped & Formed or Machined)
- Wire entry sealing available in four separate ranges for discrete wire applications



| Contact Legend (Size/Max. Current) | | |
|---------------------------------------|------------|------------|
| ○ | ● | ◐ |
| 20/ 7.5A | 16/ 13A | 12/ 25A |
| ⊙ | ⦿ | ◯ |
| 8/ 86A RADSOK® | 8/ 60A | 4/ 100A |



| Seal Legend |
|-----------------------------|
| Normal |
| Thin |
| Reduced (See datasheets) |

*CL22 - Receptacle with Diagnostic Keying; **C030 - Four Size 16 cavities blocked (1, 2, 5, 6)

A Series™ Family



Standard products. Custom solutions
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DuraMate™ AHDP Material & Performance Specifications

| | | | |
|---------------------------------|--|-------------------|-------------------------|
| Current Rating per Contact | Size 4, 100A; Size 8, 86A; Size 12, 25A; Size 16, 13A; Size 20, 7.5A | Housing Material | Thermoplastic |
| Operating Temperature | -55°C to +125°C | Insulation Insert | Thermoplastic |
| Dielectric Withstanding Voltage | Current Leakage -2mA at 1500 VAC | Seal | Silicone Rubber |
| Degree of Protection | IP67/69K (in mated condition) | Contact | A Series™ Common System |
| Mating Cycle Durability | 100 Cycles | Compliance | RoHS |

DuraMate™ AHDP Recommended Wire Insulation Overall Diameter (OD)

| Contact Size | Typical Wire Range | Normal Seal | Thin Seal | Reduced Seal (See datasheets) | |
|--------------|-------------------------------------|----------------------------|---------------------------|-------------------------------|----------------------------|
| 20 | 16-22AWG (1.5-0.35mm ²) | 1.02-2.41mm (0.040-.095") | - | 1.02-02.41mm (0.040-0.095") | 1.02-2.10mm (0.040-0.083") |
| 16 | 14-20AWG (2.0-0.5mm ²) | 2.54-3.40mm (0.100-0.134") | 2.23-2.69mm (0.088-.106") | 1.35-3.05mm(0.053-0.120") | 1.35-2.62mm (0.053-0.103") |
| 12 | 10-14AWG (6.0 2.0mm ²) | 3.43-4.32mm (0.135-.170") | - | 2.46-4.01mm (0.135-0.158") | 2.46-4.01mm (0.135-0.158") |
| 8 | 8-10AWG (10.0-5.0mm ²) | 4.83-6.10mm (0.190-0.240") | - | 3.43-5.59mm (0.135-0.220") | - |
| 4 | 6AWG (16.0-13.0mm ²) | 6.63-7.41mm (0.261-0.292") | - | 6.63-7.41mm (0.261-0.292") | - |
| 4+ | 4AWG (25.0-21.0mm ²) | 7.9-10.67mm (0.311-0.420") | - | - | - |

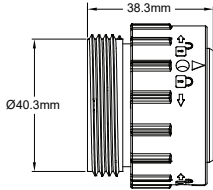
4+ contact is only available for 24-07CL22.

DuraMate™ AHDP Backshell Options and Accessory Overview

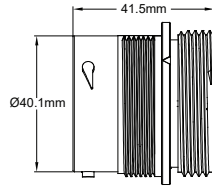


DuraMate™ AHDP Plug & Receptacle Options (Dimensions in mm)

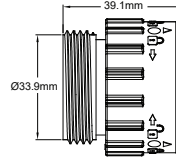
*Refer to page 3 for available insert arrangements



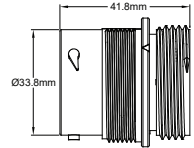
Size 24 Plug
(WTA) Wide Thread Adapter



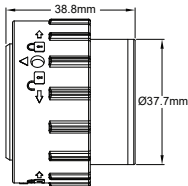
Size 24 Receptacle
(WTA) Wide Thread Adapter



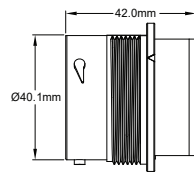
Size 18 Plug
(WTA) Wide Thread Adapter



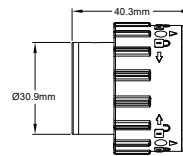
Size 18 Receptacle
(WTA) Wide Thread Adapter



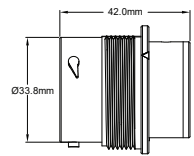
Size 24 Plug
(SRA) Smooth Ring Adapter



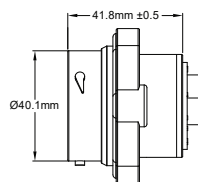
Size 24 Receptacle
(SRA) Smooth Ring Adapter



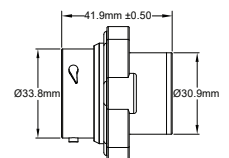
Size 18 Plug
(SRA) Smooth Ring Adapter



Size 18 Receptacle
(SRA) Smooth Ring Adapter



Size 24 Receptacle
PanelMate™ (w SRA)













Size 18 Receptacle
PanelMate™ (w SRA)

DuraMate™ AHDP Backshell Options and Accessories

| Image | Part Number | Description |
|---|------------------|--|
|  | AHDPBS-011-2405 | Size 24 , Backshell, Conduit, Snap Over, Right Angle 90°, DuraMate™ AHDP *For use with Wide Thread Adapter (WTA) May also be used on DuraMate™ AHDM with P/N AHDM-BS-24NUT Adapter (see page 10) |
| | AHDPBS-015-1805 | Size 18 , Backshell, Conduit, Snap Over, Right Angle 90°, Duramate™ AHDP *For use with Wide Thread Adapter (WTA) May also be used on DuraMate™ AHDM with P/N AHDM-BS-18NUT Adapter (see page 10) |
|  | AHDPBS-010-2405 | Size 24 , Backshell, Conduit, Snap Over, Straight 180°, DuraMate™ AHDP *For use with Wide Thread Adapter (WTA) May also be used on DuraMate™ AHDM with P/N AHDM-BS-24NUT Adapter (see page 10) |
| | AHDPBS-016-1805 | Size 18 , Backshell, Conduit, Snap Over, Straight 180°, Duramate™ AHDP *For use with Wide Thread Adapter (WTA) May also be used on DuraMate™ AHDM with P/N AHDM-BS-18NUT Adapter (see page 10) |
|  | AHDPBS-0406-001 | Size 24 , Backshell, Tie Wrap, Wide Thread Adapter (WTA), DuraMate™ AHDP *For use with Wide Thread Adapter (WTA) |
| | AHDPBS-18-001 | Size 18 , Backshell, Tie Wrap, Wide Thread Adapter (WTA) Cable Diameter Range 14.5mm - 18.0mm, Duramate™ AHDP *For use with Wide Thread Adapter (WTA) |
|  | AHDPBS-0406-002 | Size 24 , Backshell, Wide Thread Adapter (WTA), 2 PC, Compression Nut Cable Diameter Range 14.5mm - 18.0mm, DuraMate™ AHDP *For use with Wide Thread Adapter (WTA) |
| | AHDPBS-0406-003 | Size 24 , Backshell, Wide Thread Adapter (WTA), 2 PC, Compression Nut Cable Diameter Range 19.5mm - 24.1mm, DuraMate™ AHDP *For use with Wide Thread Adapter (WTA) |
| | AHDPBS-18-002 | Size 18 , Backshell, Wide Thread Adapter (WTA), 2PC, Compression Nut Cable Diameter Range 14.5mm-18.0mm, Duramate™ AHDP *For use with Wide Thread Adapter (WTA) |
|  | AHDPBS-0406-SM01 | Size 24 , Backshell, Sealed, Cable Grommet, DuraMate™ AHDP *For use with Wide Thread Adapter (WTA) |
| | AHDPBS-18-SM01 | Size 18 , Backshell, Sealed, Cable Grommet, Duramate™ AHDP *For use with Wide Thread Adapter (WTA) |
|  | AHDC06-24 | Size 24 , Receptacle Cap, Sealed, DuraMate™ AHDP |
| | AHDC06-18 | Size 18 , Receptacle Cap, Sealed, DuraMate™ AHDP |
|  | AHDC04-24 | Size 24 , Plug Cap, Sealed, DuraMate™ AHDP |
| | AHDC04-18 | Size 18 , Plug Cap, Sealed, DuraMate™ AHDP |
|  | AHDC04-24-PM | Size 24 , Plug Cap, Sealed, Threaded, DuraMate™ AHDP |

DuraMate™ AHDP Backshell Options and Accessories

| Image | Part Number | Description |
|---|---------------|--|
|  | AHDC04-24-PMT | Size 24 , Plug Cap, w Tether, Threaded, Lock Washer, Sealed, DuraMate™ AHDP |
|  | AHDC04-24-T | Size 24 , Plug Cap, w Tether, Sealed, DuraMate™ AHDP |
|  | AHDP24-PN01 | Size 24 , Panel Nut, Duramate™ AHDP |
| | AHDP18-PN01 | Size 18 , Panel Nut, DuraMate™ AHDP |
|  | AT14-001-2486 | Size 24 , Lock Washer, Wave, Duramate™ AHDP |
| | AT14-002-1886 | Size 18 , Lock Washer, Wave, DuraMate™ AHDP |
|  | AHDP-16-04477 | Size 24 , Rubber Flange Seal, Duramate™ AHDP |
| | AHDP-16-04978 | Size 18 , Rubber Flange Seal, DuraMate™ AHDP |
|  | A114019 | Size 4 , Blank Seal Plug |
|  | A114018 | Size 8 , Blank Seal Plug |
|  | A114017 | Size 12/16 , Blank Seal Plug |
|  | AT13-217-1605 | Size 16 , Locking Seal Plug |
|  | AT114009 | Size 4 , Contact Removal Tool, 6AWG |
| | AT114008 | Size 8 , Contact Removal Tool, 8-10AWG |
| | AT11-027-0405 | Size 4 , Contact Removal Tool, 4AWG |
| | AT11-240-2005 | Size 20 , Contact Removal Tool, 20-22AWG |
| | AT11-310-1605 | Size 16 , Contact Removal Tool, 16-20AWG |
| | AT11-337-1205 | Size 12 , Contact Removal Tool, 12-14AWG |
| | AT11-001-3.6M | Size 8 , Contact Removal Tool, 7-10AWG |



DM Dura|Mate™ AHDM

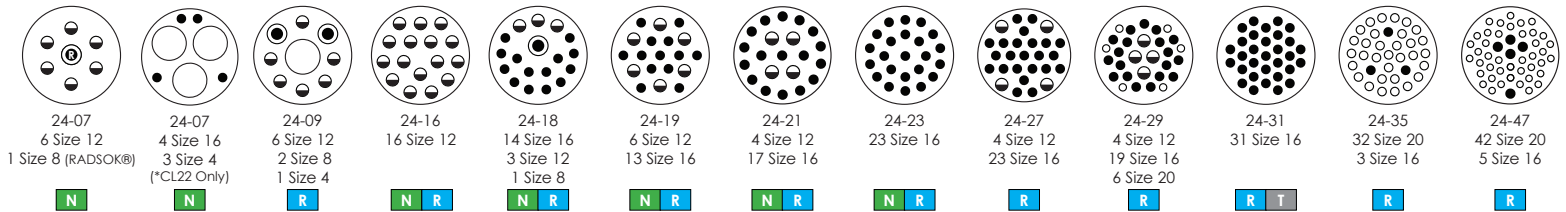
Environmentally-Sealed, Multi-Pin, Heavy-Duty, Metal, Circular Connectors



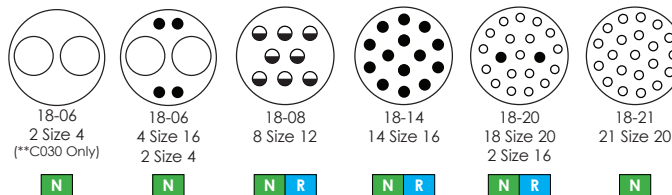
Available in Size 24 with 13 insert arrangements 7(x2), 9, 16, 18, 19, 21, 23, 27, 29, 31, 35 and 47
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- 3 key-way bayonet design ensures proper mating of connectors
- High density signal and mixed power insert configurations
- Operating temperature range: -55°C to +125°C
- High current configurations incorporating revolutionary RADSOK® contacts
- High strength impact resistant & lightweight zinc-alloy metal housings
- Low insertion force stamped terminals offer improved manufacturing efficiencies
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| Contact Legend (Size/Max. Current) | | |
|---------------------------------------|------------|------------|
| ○ | ● | ◐ |
| 20/ 7.5A | 16/ 13A | 12/ 25A |
| ⊙ | ⦿ | ◯ |
| 8/ 86A RADSOK® | 8/ 60A | 4/ 100A |



| Seal Legend |
|-----------------------------|
| Normal |
| Thin |
| Reduced (See datasheets) |

*CL22 - Receptacle with Diagnostic Keying; **C030 - Four Size 16 cavities blocked (1, 2, 5, 6)

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DuraMate™ AHDM Material & Performance Specifications

| | | | |
|---------------------------------|--|-------------------|-------------------------|
| Current Rating per Contact | Size 4, 100A; Size 8, 86A; Size 12, 25A; Size 16, 13A; Size 20, 7.5A | Housing Material | Zinc-alloy |
| Operating Temperature | -55°C to +125°C | Insulation Insert | Thermoplastic |
| Dielectric Withstanding Voltage | Current Leakage-2mA at 1500 VAC | Seal | Silicone Rubber |
| Degree of Protection | IP67/69K (in mated condition) | Contact | A Series™ Common System |
| Mating Cycle Durability | 100 Cycles | Compliance | RoHS |

DuraMate™ AHDM Recommended Wire Insulation Overall Diameter (OD)

| Contact Size | Typical Wire Range | Normal Seal | Thin Seal | Reduced Seal (See datasheets) | |
|--------------|-------------------------------------|----------------------------|---------------------------|-------------------------------|----------------------------|
| 20 | 16-22AWG (1.5-0.35mm ²) | 1.02-2.41mm (0.040-.095") | - | 1.02-02.41mm (0.040-0.095") | 1.02-2.10mm (0.040-0.083") |
| 16 | 14-20AWG (2.0-0.5mm ²) | 2.54-3.40mm (0.100-0.134") | 2.23-2.69mm (0.088-.106") | 1.35-3.05mm(0.053-0.120") | 1.35-2.62mm (0.053-0.103") |
| 12 | 10-14AWG (6.0 2.0mm ²) | 3.43-4.32mm (0.1350-.170") | - | 2.46-4.01mm (0.135-0.158") | 2.46-4.01mm (0.135-0.158") |
| 8 | 8-10AWG (10.0-5.0mm ²) | 4.83-6.10mm (0.190-0.240") | - | 3.43-5.59mm (0.135-0.220") | - |
| 4 | 6AWG (16.0-13.0mm ²) | 6.63-7.41mm (0.261-0.292") | - | 6.63-7.41mm (0.261-0.292") | - |
| 4+ | 4AWG (25.0-21.0mm ²) | 7.9-10.67mm (0.311-0.420") | - | - | - |

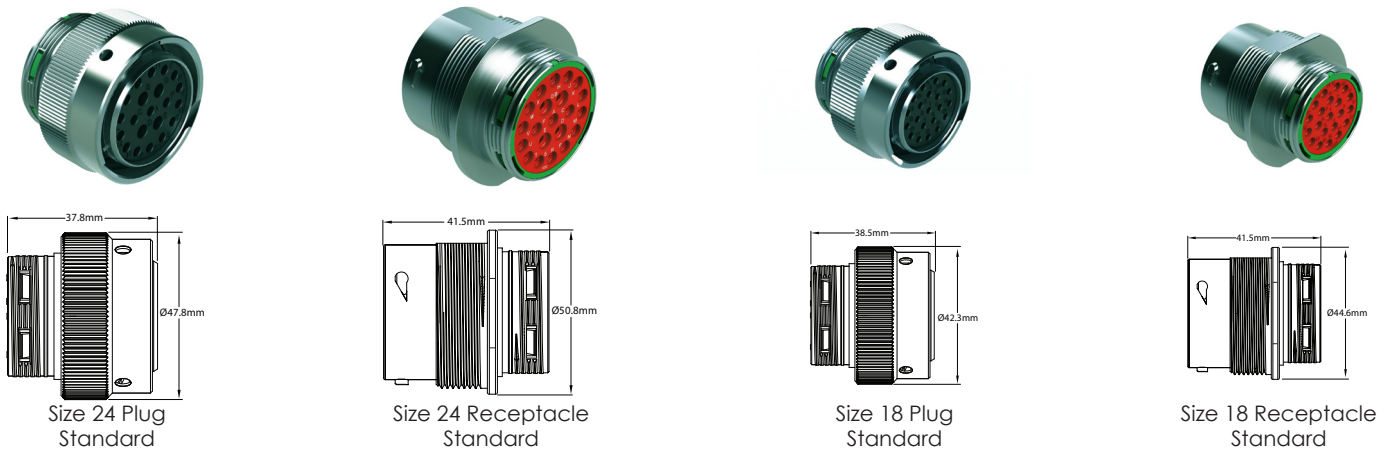
4+ contact is only available for 24-07CL22.

DuraMate™ AHDM Backshell Options and Accessory Overview










DuraMate™ AHDM Plug & Receptacle Options (Dimensions in mm)








*Refer to page 8 for available insert arrangements



DuraMate™ AHDM Backshell Options and Accessories

| Image | Part Number | Description |
|---|----------------|--|
|  | AHDMBS-24-002 | Size 24 , Backshell, 2 PC, DuraMate™ AHDM |
| | AHDMBS-18-002 | Size 18 , Backshell, 2 PC, DuraMate™ AHDM |
|  | AHDMBS-24-001 | Size 24 , Backshell, Tie Wrap, End Bell, DuraMate™ AHDM |
| | AHDMBS-18-001 | Size 18 , Backshell, Tie Wrap, End Bell, DuraMate™ AHDM |
|  | AHDMBS-24-059 | Size 24 , Backshell, w Cable Clamp, DuraMate™ AHDM |
| | AHDMBS-18-059 | Size 18 , Backshell, w Cable Clamp, DuraMate™ AHDM |
|  | AHDMBS-24-SM01 | Size 24 , Backshell, Metal, DuraMate™ AHDM |
| | AHDMBS-18-SM01 | Size 18 , Backshell, Metal, DuraMate™ AHDM |
|  | AHDM-BS-24NUT | Size 24 , Adapter for use with: AHPBS-010-2405 AHDP Backshell, Conduit, Snap-Over, Straight 180 (See page 6) AHPBS-011-2405 AHDP Backshell, Conduit, Snap-Over, Right Angle 90 (See page 6) |
| | AHDM-BS-18NUT | Size 18 , Adapter for use with: AHPBS-015-1805 AHDP Backshell, Conduit, Snap-Over, Straight 180 (See page 6) AHPBS-016-1805 AHDP Backshell, Conduit, Snap-Over, Right Angle 90 (See page 6) |
|  | AHDC34-24 | Size 24 , Protective Cap for Plug, DuraMate™ AHDM |
| | AHDC34-18 | Size 18 , Protective Cap for Plug, DuraMate™ AHDM |
|  | AHDC36-24 | Size 24 , Protective Cap for Receptacle, DuraMate™ AHDM |
| | AHDC36-18 | Size 18 , Protective Cap for Receptacle, DuraMate™ AHDM |

DuraMate™ AHDM Backshell Options and Accessories

| Image | Part Number | Description |
|---|---------------|---|
|  | A112264 | Size 24 , Lockwasher, DuraMate™ AHDM |
| | A114021 | Size 18 , Lockwasher, DuraMate™ AHDM |
|  | A112263-90 | Size 24 , Nut, DuraMate™ AHDM |
| | A114020-90 | Size 18 , Nut, DuraMate™ AHDM |
|  | A114019 | Size 4 , Blank Seal Plug |
|  | A114018 | Size 8 , Blank Seal Plug |
|  | A114017 | Size 12/16 , Blank Seal Plug |
|  | AT13-217-1605 | Size 16 , Locking Seal Plug |
|  | AT114009 | Size 4 , Contact Removal Tool, 6AWG |
| | AT114008 | Size 8 , Contact Removal Tool, 8-10AWG |
| | AT11-027-0405 | Size 4 , Contact Removal Tool, 4AWG |
| | AT11-240-2005 | Size 20 , Contact Removal Tool, 20-22AWG |
| | AT11-310-1605 | Size 16 , Contact Removal Tool, 16-20AWG |
| | AT11-337-1205 | Size 12 , Contact Removal Tool, 12-14AWG |
| | AT11-001-3.6M | Size 8 , Contact Removal Tool, 7-10AWG |

For more information, contact: Customer Service, +1 800 394 7732, csr@amphenol-sine.com

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