

Amphenol®



Max-M12 Connector

Amphenol Industrial Products Group introduces our ruggedized M12 high speed data connector, the Max-M12. High speed data transmission connection systems have traditionally been implemented into commercial applications with little regard to high vibration, high temperature and overall harsh environment demands. With the increased implementation of these high speed Datalink connection systems into more heavy duty / harsh environment surroundings, the need for a more robust and ruggedized connection system has surfaced.

Based on the IEC 61076-2-101 and SAE J 2839 standards the Max-M12 connection system makes it the perfect solution for the ultra rugged applications that sometimes exist in markets dealing with Heavy Equipment, Rail & Mass Transit, Process Control, Factory Automation, etc.

Features:

- HDM 12 Versions Available
 - Plastic or Metal (for shielding)
 - 90° right angle and straight connector offerings
 - 3, 4, and 5 way circuit patterns
 - A, B, D & P polarity codes – based on IEC 61076-2-101
 - Terminals for solder to wire or pins for PCB applications
- Available as stand-alone connectors & cable assemblies (standard and overmolded)
- Terminals capable of being terminated to:
 - 0.8 mm² (18 AWG) or 0.5 mm² (20 AWG) conductors as defined by SAE J1128 and 0.75 mm² and 0.50 mm² conductors as defined by ISO 6722
- 444 N (100 LBF) pull force on cable
- Backward compatible with IEC 61076-2-101 (M12)
- More resistant to terminal damage
- Extreme environmental testing based on J2839 requirements
 - High pressure wash down
- Provisions for overall cable shield or drain wire to the connector plug housing
- RoHS compliant

Max-M12 Connector



| SPECIFICATION | | |
|---------------------------------|---|---------------------------|
| Operating Voltage | 5 pin - 60V AC/DC 3 & 4 pin - 250V AC/DC | IEC 60664 |
| Current Rating | 4A MAX. | IEC 60512 TEST 5B |
| Temperature Rating | -55°C - +125°C -55°C - +150°C (with Viton Seals) | SAE J2839, 4 . 2 . 3 . 13 |
| Dielectric Withstanding Voltage | 1000V | IEC 60512, TEST 4A |
| Insulation Resistance | >20 Megohms | SAE J2839, 4 . 2 . 3 . 3 |
| Rated Impulse Voltage | 1500V | IEC 60664-1 |
| Contact Resistance | <10 mΩ | IEC 60512 |
| Vibration, Sine | 10 - 2000 Hz, 20g, <1 us | SAE J2839, 4 . 2 . 3 . 15 |
| Shock, Half Sine | 10 CYCLES, 50g, 11ms, <1 us | SAE J2839, 4 . 2 . 3 . 16 |
| Temperature Life | 1000H AT 125°C + 3°C | SAE J2839, 4 . 2 . 3 . 7 |
| Durability | 100 CYCLES MIN. | SAE J2839, 4 . 2 . 3 . 11 |
| Salt Fog | 240H | SAE J2839, 4 . 2 . 3 . 12 |
| Protection Class | IP67 or Above | IEC 60529 |
| Wire Gauge | 0.5 mm ² (20AWG) or 0.8 mm ² (18AWG)/ 0.75 mm ² | SAE J1128 / ISO 6722 |
| Cable OD. | ø 12.7 MAX. | |
| Recommended Torque | M12 THREAD, 0.8 - 1.0 Nm | |
| Connector Retention | 444 N MIN | SAE J2839, 4 . 2 . 3 . 20 |
| Contact Retention | 110 N MIN | SAE J2839, 4 . 2 . 3 . 18 |
| Panel Thickness | 1-6 mm | |
| Shell Plating | Nickel | |

| HOW TO ORDER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---|------------|--|--------|--------|--------------------|--------|--------|---|----------------|----------|-----------|--------|--------------------|----|--------------|-------------|----------------|-----------------------|---------------|--------|---|-------------------------------|--|---------|-----------------------------|--------|--------------------------|------------------------------|--|---------|--|--------|--|--------|--|---------|--|---------|--|
| 1 HDM12 | | | | | | | | | | | | | | | | | | | | | 2 P | | 3 M | | 4 05 | | 5 D | | 6 1 | | 7 ST | | 8 M | | 9 V | | 10 H | | 11 P | |
| 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | | | | | | | | | | | | | | | | | | | |
| HDM12 | | P | | M | | 05 | | D | | 1 | | ST | | M | | V | | H | | P | | | | | | | | | | | | | | | | | | | | |
| Product Line | | Shell Line | | Gender | | Insert Arrangement | | Coding | | Contact Finish | | Backshell | | Backshell Material | | Seal | | Voltage Rating | | Contact Style | | | | | | | | | | | | | | | | | | | | |
| HDM12 | P | Plug | | M | Male | | 03 | 3 Pole | | A | A-Coding | | 1 | Gold | | ST | Straight | | M | Metal | | V | Viton Rubber Seal | | H | 240V AC/DC | | PR | PC Tail Contacts Right Angle | | | | | | | | | | | |
| | R | Receptacle | | F | Female | | 04 | 4 Pole | | B | B-Coding | | 2 | Silver | | RA | Right Angle | | P | Plastic | | | Omit for Standard Rubber Seal | | | Omit for Standard 60V AC/DC | | PS | PC Tail Contacts Straight | | | | | | | | | | | |
| | | | | | | 05 | 5 Pole | | D | D-Coding | | 4 | Nickel | | XX | No Backshell | | | Omit for no Backshell | | | | | | | | | Omit for Solder Contacts | | | | | | | | | | | | |
| | | | | | | | | | P | P-Coding | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Example Order: HDM12, Receptacle, Female, 4 Pole, A-Coding, Silver, Straight, Metal, Standard Rubber Seal, 240V AC/DC, Straight PC Tail Contacts: **HDM12 R F 04 A 2 ST M H PS**

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