

Amphenol®



Max-M12 Connector

Amphenol Industrial Operations 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:

- 2 versions are available
 - HDM 12 - 90° right angle and straight connector offerings
 - 440 N (100 LBF) pull force on cable
 - HDM 12 EX – additional metal shell to protect against extreme impact / force
 - 1,332 N (300 LBF) pull force on cable
- 4 way and 5 way circuit patterns available for each version
 - B, D & P polarity codes – based on IEC 61087-2-101
- 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
- Backward compatible with IEC 61076-2-101 (M12) with higher environmental rating
- More resistant to terminal damage
- Extreme environmental testing based on J 2030 requirements
 - High pressure wash down

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Electrical & Environmental Characteristics:

- SAE J 2839 Compliant
- IP 67 & IP 69 K Compliant
- Backward compatible with IEC 61076-2-101 (M12) with higher environmental rating
- Provisions for overall cable shield or drain wire to the connector plug housing
- Connection resistance – maximum millivolt drop of 50 millivolts



SPECIFICATION

Operating Voltage	5 pin - 60V AC/DC 4 pin - 250V AC/DC	IEC 60664
Current Rating	4A MAX.	IEC 60512 TEST 5B
Temperature Rating	-40°C - +125°C	SAE J2030, 6 . 13
Dielectric Withstanding Voltage	1000V	IEC 60512, TEST 4A
Insulation Resistance	>20 Megohms	SAE J2030, 6 . 3
Rated Impulse Voltage	1500V	IEC 60664-1
Contact Resistance	<10 mΩ	IEC60512 TEST 2A
Vibration, Sine	10 - 2000 Hz, 20g, <1 us	SAE J2030, 6 . 15
Shock, Half Sine	10 CYCLES, 50g, 11mg, <1 us	SAE J2030, 6 . 16
Temperature Life	1000H AT 125°C ± 3°C	SAE J2030, 6 . 6
Durability	50 CYCLES MIN.	SAE J2030, 6 . 11
Salt Fog	96H	SAE J2030, 6 . 12
Protection Class	IP67 and IP69K	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 J2030, 6 . 20
Contact Retention	110 N MIN	SAE J2030, 6 . 18

Applications:

- Construction Machinery & Equipment
- Forestry Equipment
- Navigation, GPS and Telematics Applications
- Mining Machinery & Equipment
- Agricultural Machinery & Equipment
- Harsh Environment Sensors, Controllers, Actuators, Switches, etc.

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