

The IP67-sealed M12 Circular Hybrid Technology (CHT) connector, with innovative wrap-around shielding, combines Cat5e data speed with power lines for excellent signal integrity and optimal performance and reduces cabling requirements and installation costs in harsh industrial applications

Based on the Brad® circular M12 threaded coupling design, the innovative Micro-Change® Circular Hybrid Technology (CHT) connector combines Cat5e data traffic with power lines in a small build size. The fully shielded 4-pin array (2 shielded pairs) is enclosed by a wrap-around metal tube shield (patent pending) which allows for optimum signal integrity and performance. The two overlapping metal tubes channel the signal through the connector without disturbance of cross-talk and EMI (electro-magnetic interference).

Combining power and data lines into one connector reduces cabling requirements and lowers installation time and associated costs. The sealed CHT connector system is ideal for, but not limited to, industrial process and automation control applications, HVAC control systems, telecoms infrastructure and base stations. Micro-Change® CHT connectors and cordsets are also suitable for many other rugged applications that require power and data in one device.

The shielding concept of the Micro-Change® CHT connector is not limited to the shown M12 build size. Different form factors, for example M16 and M23, could be developed based on a customer's application requirements. For additional information visit: www.molex.com/link/cht.html

Brad® Micro-Change® M12 Circular Hybrid Technology (CHT) Connector

120355 M12, 6-Pole, Female Receptacle
M12, 6-Pole, Threaded Cordsets



Micro-Change® M12 Circular Hybrid Technology (CHT) Connectors

FEATURES AND BENEFITS

- Shielded, twisted-pair cable for Cat5e data performance (patent pending)
- Four Cat5e data lines and 2 power lines carrying 12A in one connector
- Fully shielded 4-pin array with a wrap-around metal tube shielding
- IP67-sealed interface
- Cordsets feature overmolded male-to-male CHT cable connectors
- Nickel-plated brass cordset coupling nuts and receptacle shells
- Achieves optimal signal performance without system noise interference
- Removes requirement for separate data and power cabling
- Reduces installation time and associated costs
- Achieves optimal signal integrity and performance
- Reliable connectivity in harsh industrial environments
- Ensures connection is sealed to IP67-rating
- Performs strain relief function
- Corrosion-resistant hardware assures compatibility with demanding environments

MARKETS AND APPLICATIONS

- Process and automation control:
 - Manufacturing cells
 - Plant floor data networks
- Heat and ventilation control (HVAC)
- Telecommunications
- Vision systems and surveillance cameras
- Industrial:
 - Robotics
 - Machine builders
- Military
- Transportation:
 - Railways
 - Subways
 - Docks / marinas



SPECIFICATIONS

Reference Information

UL File No.: Pending
CSA File No.: Pending
RoHS: Yes

Environmental

Degree of Protection: IP67
Temperature Range: -25 to +75°C
Soldering Temperature:
180°C / 20 to 40 seconds at the placement side of the PCB

Electrical – Signal

Poles: 4
Voltage (max.): 30V
Current (max.): 0.5A at +55°C
Contact Resistance: < 5 mOhm
Insulation Resistance: > 100 MOhm

Electrical – Power

Poles: 2
Voltage (max.): 30V
Current (max.): 12A at +55°C
Contact Resistance: < 5 mOhm
Insulation Resistance: > 100 Mohm

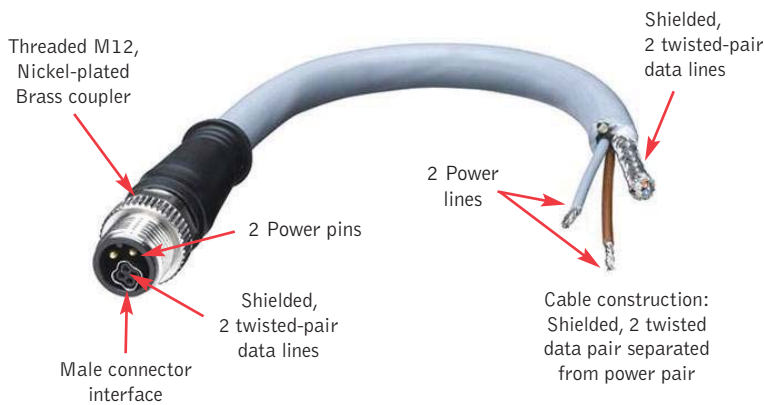
Cable Specifications

Cable Specifications:
Wire Size AWG: 2x16 plus 4x26
Wire/Cable Type: Shielded twisted-pair
Material - Cable Jacket: PUR
Color - Cable Jacket: Gray

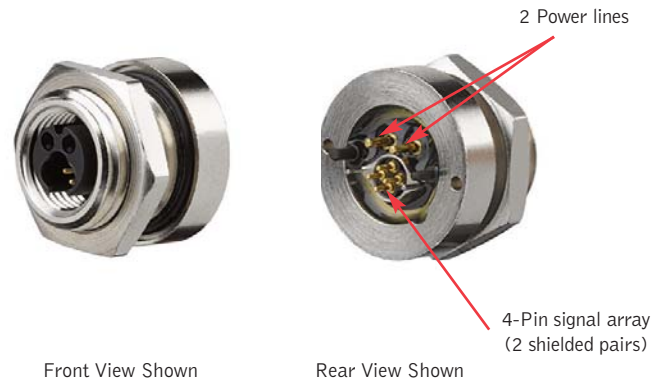
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Micro-Change® M12 CHT Male-to-Male Molded Cable Assembly:
Shielded, 2 twisted-pair data cable for best Cat5e speed Ethernet performance



Micro-Change® M12 CHT Female Receptacle Interface:
PCB mount style



ORDERING INFORMATION

Receptacle

Order No.	Gender	Interface	Poles	Packaging	Minimum Pack Qty	Minimum Order Qty
120355-0055	Female	M12	6 (4 Signal + 2 Power)	Blister Pack	25	50

Double-Ended Cordsets

Order No.	Cable Length	Gender	Interface	Poles	MOQ
120355-0002	0.25m (0.82')	Male to Male	M12	6 Pole (4 Signal + 2 Power)	5
120355-0014	0.5m (1.64')				
120355-0015	1.0m (3.28')				
120355-0017	2.0m (6.56')				
120355-0018	5.0m (16.40')				
120355-0020	10.0m (32.81')				
120355-0021	15.0m (49.21')				
120355-0022	20.0m (65.62')				
120355-0023	30.0m (98.40')				