

The IP67-sealed M12 Circular Hybrid Technology (CHT) connector system, 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).

The new 8-pole (4+4) CHT connector features two Cat5e twisted-pair data lines and 4 power lines capable of carrying up to 6.0A. In the 6-pole (4+2) format, two Cat5e twisted-pair data lines and 2 power lines carry up to 12.0A. Combining power and data lines into one connector reduces cabling requirements and lowers installation time and associated costs. The IP67-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.

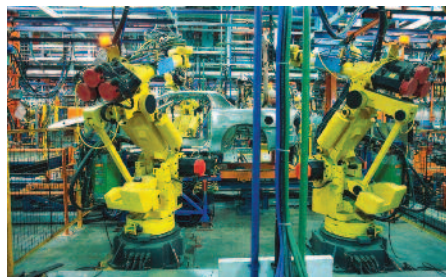
The shielding concept of the Micro-Change® CHT connector is not limited to the shown M12 build size. Different form factors, for example M16 and M23, could be developed based on a customer's application requirements. For additional information visit: www.molex.com/link/cht.html

FEATURES AND BENEFITS

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|---|---|
| <ul style="list-style-type: none"> Shielded, twisted-pair cable for Cat5e data performance (patent pending) | <ul style="list-style-type: none"> Achieves optimal signal performance without system noise interference |
| <ul style="list-style-type: none"> Fully shielded Cat5e, 4-pin array with a wrap-around metal tube shielding | <ul style="list-style-type: none"> Achieves optimal signal integrity and performance |
| <ul style="list-style-type: none"> Cat5e data lines and power lines carrying 6.0A (4+4) or 12.0A (4+2), in one connector | <ul style="list-style-type: none"> Removes requirement for separate data and power cabling Reduces installation time and associated costs |
| <ul style="list-style-type: none"> IP67-sealed interface | <ul style="list-style-type: none"> Reliable connectivity in harsh industrial environments |
| <ul style="list-style-type: none"> Cordsets feature M12 overmolded male-to-male CHT cable connectors | <ul style="list-style-type: none"> Ensures connection is sealed to IP67-rating Performs strain relief function |
| <ul style="list-style-type: none"> Nickel-plated brass cordset coupling nuts and receptacle shells | <ul style="list-style-type: none"> 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
- Industrial:
 - Robotics
 - Machine builders
- Military
- Transportation:
 - Railways
 - Subways
 - Docks / marinas
 - Camera systems
 - Telematics
 - In-vehicle data systems



Robotics



Surveillance cameras



Manufacturing cells



Plant floor data networks

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

- 120244 M12, 8-Pole, 4+4 Female Receptacle
- 120355 M12, 6-Pole, 4+2 Female Receptacle
- M12, 8-Pole, 4+4 Male Threaded Cordsets
- M12, 6-Pole, 4+2 Threaded Cordsets



Micro-Change® M12 CHT Connectors, 8-Pole, (4+4)



Micro-Change® M12 CHT Connectors, 6-Pole, (4+2)

SPECIFICATIONS

Reference Information

Packaging: Receptacles: Blister pack
 Cordsets: Box
 UL File No.: Pending
 CSA File No.: Pending
 Mates With: Series 120244
 Use With: Series 120244
 Designed In: Millimetres
 RoHS: Yes

Environmental

Degree of Protection: IP67
 Temperature Range: -25 to +75°C

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: 4
 Voltage (max.): 30V
 Current (max.): 6A at +55°C
 Contact Resistance: < 5 mOhm
 Insulation Resistance: > 100 MOhm

Cable Specifications

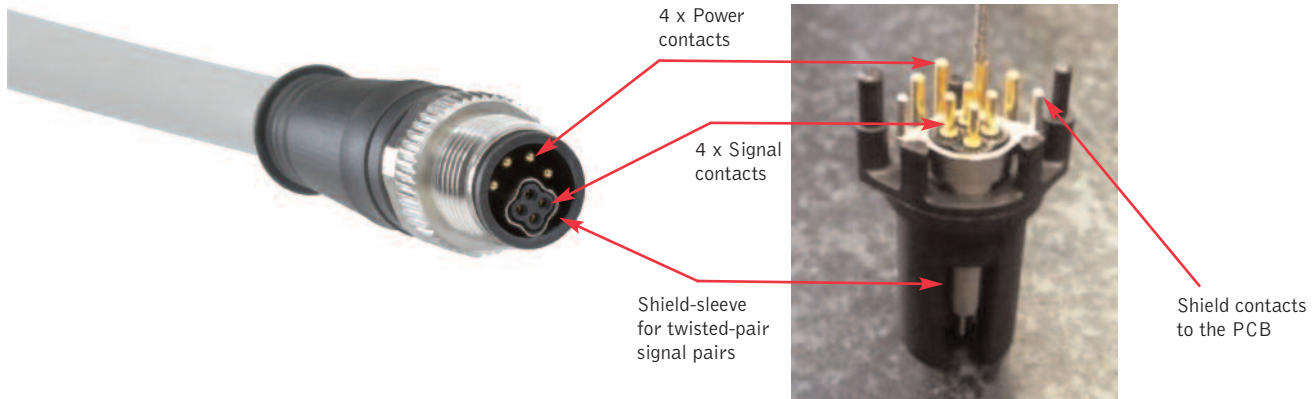
Wire Size AWG: 2x16 + 4x26
 Wire/Cable Type: Shielded twisted-pair
 Material – Cable Jacket: PUR
 Colour – Cable Jacket: Grey

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

120244 M12, 8-Pole, 4+4 Female Receptacle
 M12, 8-Pole, 4+4 Male Threaded Cordsets

Micro-Change® M12 CHT 4+4 Male-to-Male Molded Cable Assembly:
 Shielded, 2 twisted-pair data cable for best Cat5e speed Ethernet performance

Micro-Change® M12 CHT 4+4 Receptacle Interface:
 PCB mount style



ORDERING INFORMATION

Receptacle

Order No.	Gender	Interface	Poles	Plating	Minimum Order Qty
120244-0002	Female	M12	8 (4 Signal + 4 Power)	Gold (Au)	25

Double-Ended Cordsets

Order No.	Cable Length	Gender	Interface	Poles	Minimum Order Qty
120244-0200	0.25m	Male to Male	M12	8 (4 Signal + 4 Power)	<10m: 8 pcs 10m+: 4 pcs
120244-0201	0.50m				
120244-0202	1.00m				
120244-0204	2.00m				
120244-0205	5.00m				
120244-0207	10.00m				

SPECIFICATIONS

Reference Information

Packaging: Receptacles: Blister pack
 Cordsets: Box
 UL File No.: Pending
 CSA File No.: Pending
 Mates With: Series 120355
 Use With: Series 120355
 Designed In: Millimetres
 RoHS: Yes

Environmental

Degree of Protection: IP67
 Temperature Range: -25 to +75°C

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.): 60V
 Current (max.): 12A at +55°C
 Contact Resistance: < 5 mOhm
 Insulation Resistance: > 100 Mohm

Cable Specifications

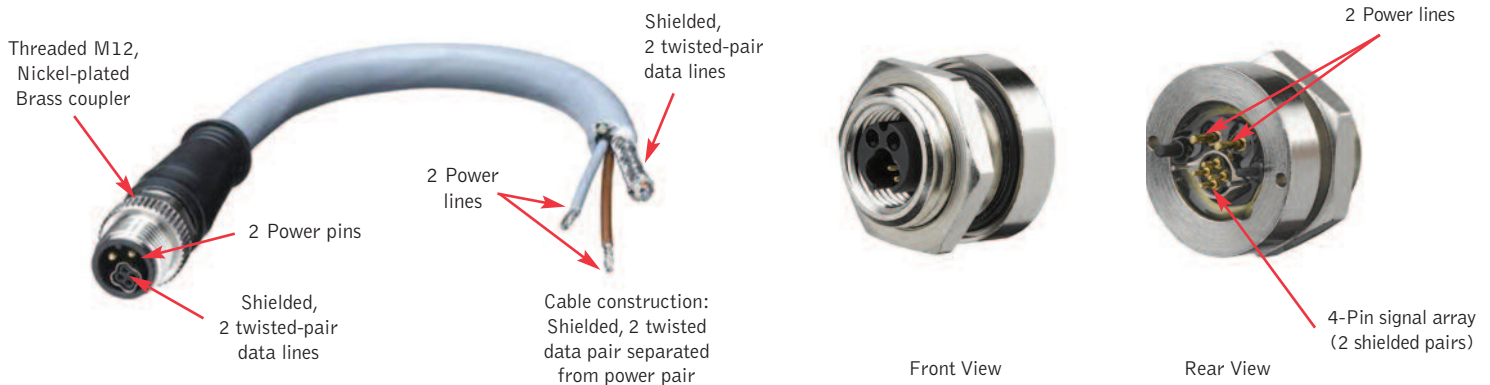
Wire Size AWG: 2x16 plus 4x26
 Wire/Cable Type: Shielded twisted-pair
 Material - Cable Jacket: PUR
 Colour - Cable Jacket: Grey

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

120355 M12, 6-Pole 4+2, Female Receptacle
 M12, 6-Pole 4+2, Male Threaded Cordsets

Micro-Change® M12 CHT 4+2 Male-to-Male Molded Cable Assembly:
 Shielded, 2 twisted-pair data cable for best Cat5e speed Ethernet performance

Micro-Change® M12 CHT 4+2 Female Receptacle Interface:
 PCB mount style



ORDERING INFORMATION

Receptacle

Order No.	Gender	Interface	Poles	Plating	Minimum Order Qty
120355-0055	Female	M12	6 (4 Signal + 2 Power)	Tin (Sn)	25

Double-Ended Cordsets

Order No.	Cable Length	Gender	Interface	Poles	Minimum Order Qty
120355-0002	0.25m	Male to Male	M12	6 (4 Signal + 2 Power)	<10m: 8 pcs 10m+: 4 pcs
120355-0014	0.50m				
120355-0015	1.00m				
120355-0017	2.00m				
120355-0018	5.00m				
120355-0020	10.00m				