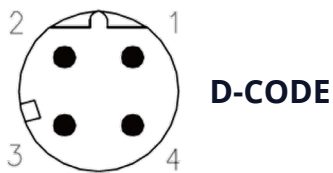


M12 Data Connectors and Cable Assemblies >

Engineered for longevity and rugged reliability, M12 Data Connectors and Cable Assemblies support Ethernet for fast and consistent connections between field devices. Compact IP67-rated connectors and cables are optimized to provide high signal integrity and minimize data errors, improving dependability in harsh conditions and demanding applications.



ADVANTAGES AND FEATURES



Enables fast and reliable Ethernet connectivity

M12 D-code connectors deliver up to 100Mbps data rates and limit data loss, supporting efficient and stable Fast Ethernet functionality for connecting field devices in industrial networks such as EtherNet/IP and PROFINET systems.

Delivers robust reliability in harsh environments

Connectors and cables are engineered with durable materials to withstand challenging industrial environments, ensuring longevity while reducing maintenance costs and system downtime.

Coding	D-code
IEC Specification	61076-2-101
Current	Up to 4.0A
Voltage	Up to 250V
Poles	4
Ingress Protection Rating	IP67 (M12) or IP20 (RJ45)
Data Rate (max.)	100Mbps
Operating Temperatures	-25 to +85°C (with exceptions)

Withstands dust and water ingress

M12 D-code connectors are rated IP67 for ingress protection, providing resistance to dust and water for maintaining consistent performance in challenging conditions.

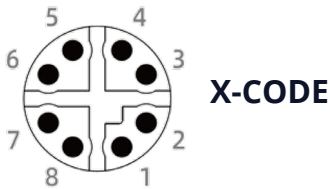
Simplifies installation

The quick-connect design minimizes installation time and effort, facilitating rapid deployment.

Maximizes space efficiency

The compact circular form factor integrates easily into existing setups and enhances functionality in limited spaces.

M12 Data Connectors and Cable Assemblies >



X-CODE

Supports industrial automation and Industry 4.0 applications

M12 X-Code Connectors enable data rates up to 10Gbps, delivering fast and efficient data transfer for high-volume automated systems.

Improves system reliability

Robust and reliable materials and components are engineered to endure mechanical stress and environmental effects, reducing failure rates.

Minimizes data errors

Superior EMI shielding ensures consistent signal integrity, helping prevent signal loss in electronically noisy environments.



CHT

Simplifies cabling and system design

M12 CHT connectors combine Ethernet and power into a single connector, reducing cabling system complexity and clutter while improving installation efficiency.

Maintains consistent connectivity

Engineered to withstand mechanical stress, vibration and extreme temperatures, M12 CHT connectors improve reliability, minimizing downtime and reducing maintenance costs.

Withstands dust and water ingress

Superior IP67-rated environmental sealing supports use in demanding industrial environments.

Coding	X-code
IEC Specification	61076-2-109
Current	Up to 1.0A
Voltage	Up to 60V
Poles	8
Ingress Protection Rating	IP67 (M12) or IP20 (RJ45)
Data Rate (max.)	10Gbps
Operating Temperatures	-25 to +85°C (with exceptions)

Streamlines upgrades and expansions

The standard M12 form factor simplifies upgrades and adaptations, reducing the cost of network expansions and minimizing downtime. Right-angle connectors enable horizontal cabling and high-density port usage, improving efficiency.

Enables use in challenging environments

M12 X-Code Connectors are IP67 rated against dust and water ingress, permitting use in harsh environments and simplifying design and inventory challenges.

Coding	CHT
IEC Specification	61076-2-101
Current	Up to 6.0A (power), up to 0.5A (signal)
Voltage	Up to 30V
Poles	8
Ingress Protection Rating	IP67
Data Rate (max.)	1Gbps
Operating Temperatures	-25 to +75°C (with exceptions)

Optimizes space efficiency

Using a single, compact M12 connector for both power and Ethernet connections improves system design flexibility and reduces space usage without compromising on power or data transmission performance.

Reduces installation and maintenance requirements

By combining multiple connectors, total cost of ownership is reduced through lower material costs, faster installation and simplified maintenance.

M12 Data Connectors and Cable Assemblies >

MARKETS AND APPLICATIONS

Industrial Automation

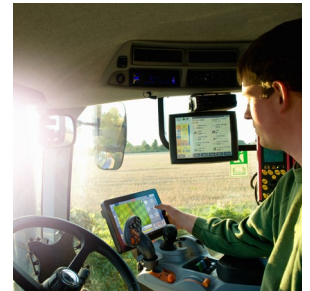
Assembly lines
Automated production facilities
Automated warehouses
Manufacturing facilities
Real-time safety monitoring systems
Robotics
Vision systems



Robotics



Automotive Manufacturing Plants



Onboard Vehicle Networking

Automotive

Automotive manufacturing plants
Industrial Ethernet switches
Routers
Smart warehouses

Agricultural Machinery

Construction vehicles
Forestry equipment
Heavy machinery
Mining equipment
Onboard vehicle networking

SPECIFICATIONS

Reference Information

Packaging: Dependent on component
Designed in: Millimeters
RoHS: Compliant by exemption
Halogen Free: Varies by component
Mates With: M12 cordsets, receptacles
and message-passing interfaces (MPI) I/O
blocks (dependent on coding), RJ45 jacks
IEC Specification: 61076-2-101
UL File: E218123 (CHT)

Electrical

Voltage (max.): 250V (D-code), 60V (X-code)
or 30V (CHT)
Current (max.): 4.0A (D-code), 1.0A (X-code)
or 0.5A (CHT)
Data Rate (max.): 100Mbps (D-code), 10Gbps
(X-code) or 1Gbps (CHT)

Mechanical

Coding: D-code, X-code, CHT
(other coding options available
for power and signal applications)
Poles: 4 (D-code), 8 (X-code, CHT)
CAT5e Data Lines: 4-pin array with wrap-around
metal tube shielding
Ingress Protection Rating: IP67 (M12) or IP20 (RJ45)
Durability (min.): 100 mating cycles

Physical

Coupling Nut: Brass, nickel-plated brass
(dependent on coding)
Insert: Plastic, PUR (dependent on coding)
Overmold: Plastic, TPU (dependent on coding)
Contact: Copper alloy
Contact Plating: Gold over nickel
Operating Temperatures: -25 to +85°C (D-code),
-20 to +80°C (X-code) or -25 to +75°C (CHT)
(each with exceptions)