

While connectors may easily be characterized by their pin configurations or color codes, there is still a variety of keyways to pick and choose from.

The following charts will outline the physical features of each keyway and which ones to use for certain applications.

The keyway types have been separated into three functional groups.

A, B, and C-coded connectors for standard device communication.

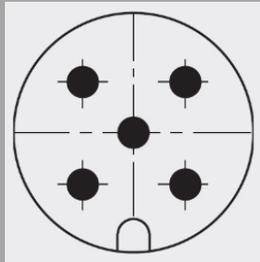
K, L, M, S, and T-coded connectors for general power transmission.

D and X-coded connectors for industrial ethernet applications.

Connecting Standard Devices

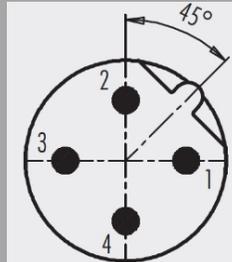
A-coded

The A-coded connector is the most widely used type in industrial automation and can be used in AC or DC applications. It comes in anywhere between 2 to 12-pins and is most commonly used to connect to sensors, actuators, motors and switches.



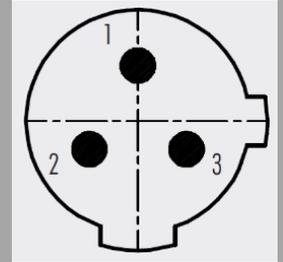
B-coded

The B-coded connector is not as heavily used in the US but finds AC applications in Europe. This connector is primarily used as a FieldBUS connection for PROFIBUS and Interbus. It typically comes in 3 to 5-pins and is differentiated by the single reversed keyway.



C-coded

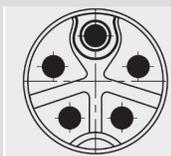
The C-coded connector has a dual keyway configuration which acts as a preventative measure in misconnecting wired components. This code type is most heavily used in applications with AC sensors and actuators and comes in 3 to 6-pins.



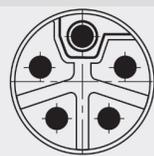
General Power Transmission

Type	Voltage	Current	Power
K-coded	800 V	12 A	AC
L-coded	63 V	16 A	DC
M-coded	630 V	12 A	AC
S-coded	620 V	12 A	AC
T-coded	63 V	12 A	DC

The K, L, and M-coded connectors are more recently developed for power transmission. These codes include a PE (protected earth) ground pin in addition to the 4 signal pins. The S-coded



K-coded



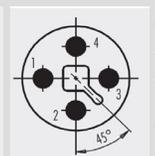
L-coded



M-coded



S-coded



T-coded

connector is heavily used in motors and frequency converters. While the T-coded connectors are used in fieldbus connections.

EandM

Is an industrial automation distributor based on the west coast.

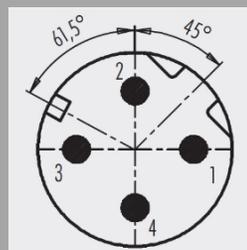
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Industrial Ethernet

D-coded

The D-coded connector can function on EtherNet/IP, PROFINET, and EtherCAT for up to 100 MB. The number of pins can vary depending on the network and usually falls between 3 to 5-pin connections.



X-coded

The X-coded connector is mainly concerned with high-speed data transfer with Gigabit Ethernet. It's easily distinguished by the cross and only comes in 8-pin connections.

