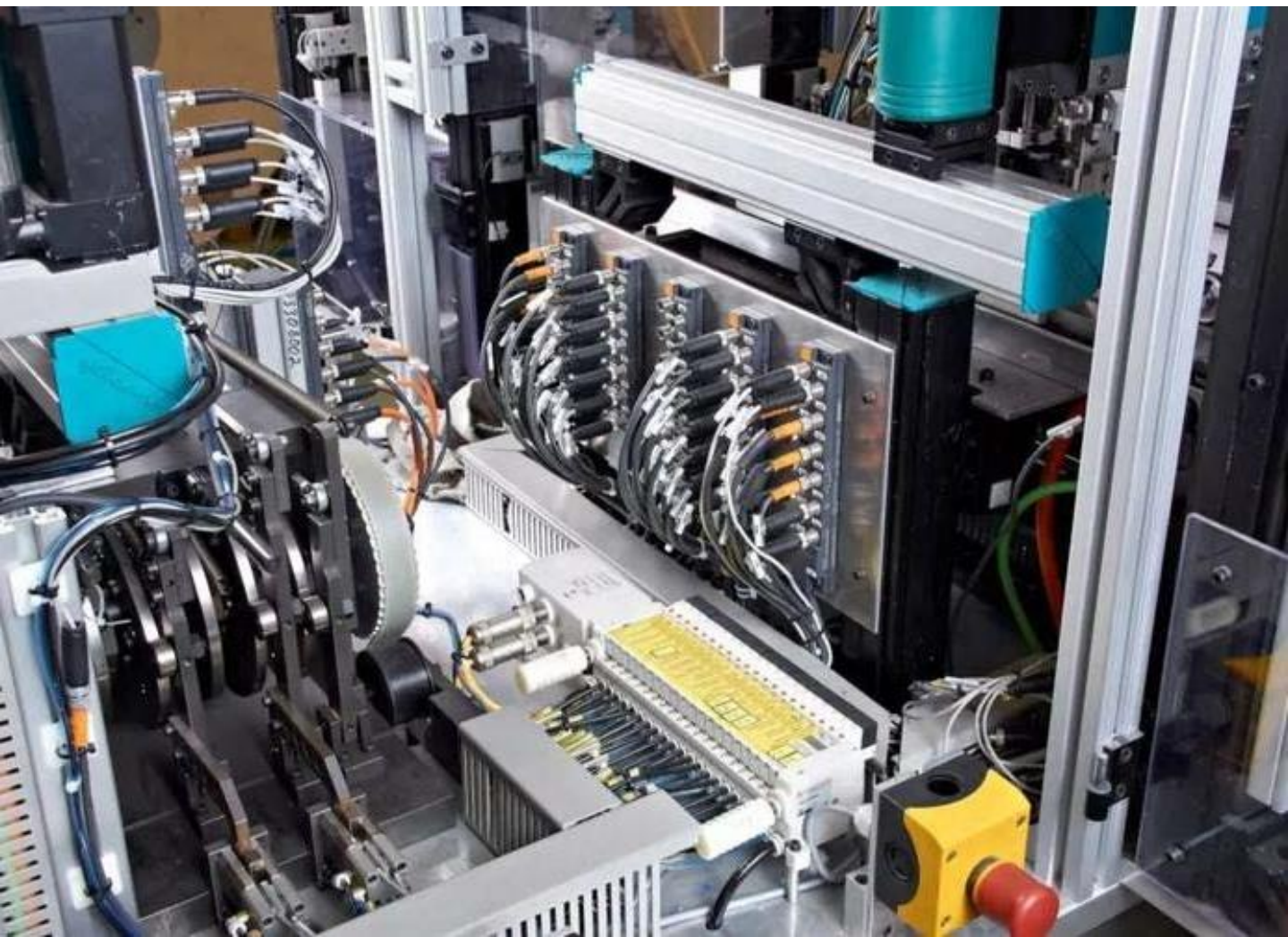


# **M Series** **Industrial Circular** **Connectors, Cables, and** **Adapters**





## Metabee (Chengdu) Technology Co., Ltd.

**180+**  
Countries

**300+**  
Workers

**20,000 M<sup>2</sup>**  
Production Workshop

**16M**  
Group Assets

Metabee (Chengdu) Technology Co., Ltd. established in 2022 located in Sichuan Province with convenient transportation. Our associated factory Jiangmen Dosin specialize in producing RF connectors, M series connectors, and cables.

We are committed to being the world's leading Manufacturer of electronic connectors and industrial cables. We have developed more than 20 product series and more than 5,000 varieties. These products have been widely sold to many countries and regions around the world. They are mainly used for outdoor lighting automation machinery, new energy vehicles, charging equipment, electricity generation facilities, and other industries.

We can also support OEM ODM and customized related products. All products have owned American UL, German TUV, and Europe CE ROHS certifications and have several design patents. Our associated factory has production workshop with an area of 20,000 square meters, more than 300 employees, 30 international advanced production lines, and tens of precision testing equipment. Moreover, we have constructed a specialized laboratory for product research and development. Our reliable product quality, good service, and rapid technical have helped us win many customers in China and overseas markets.

Metabee (Chengdu) Technology Co., Ltd. has become the leading technology and scale Enterprise in the connector field. We have a reliable reputation among our customers because of our professional services, quality products, and competitive prices. We welcome customers from home and abroad to cooperate with us for Common success.

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# M5 Connectors

## Description

M5 connector is one of the most miniature connectors in factory automation, designed for factory automation 5mm connection diameter sensors. In recent years, industrial measurement cameras, electric bicycle signal transmission, and other fields are also widely used. M5 connectors have anti-vibration, anti-rotation design, stable and reliable connection, and can be installed on equipment with space constraints. Common M5 connector PIN is 3Pin, 4pin.

## Applications

- Miniature sensors
- Industrial camera
- Electric bike
- Packaging, Labeling & Logistic
- Factory automation and Fieldbus module

## Quality Statement

- ✓ **Screws/nuts:** Brass with 120 $\mu$  nickel plated, CNC parts.
- ✓ **Male contacts:** Brass C3604, 3 $\mu$  gold plated on nickel base, machined solid pin.
- ✓ **Female contacts:** Phosphor bronze C5441 with 3 $\mu$  gold plated on nickel base, machined solid pin.
- ✓ **Temperature Range:** Dynamic -25 to 85°C, Static: -40 to 85°C/105°C
- ✓ **Protection degree:** IP67 in locked status, IP68 base on customer specific requirements.
- ✓ **ROHS compliant.**

## Order Information

	<b>M</b>	<b>5</b>	<b>03</b>	<b>P</b>	<b>1</b>	<b>F</b>	<b>W</b>
Series							
Thread Diameter							
<b>03:</b> 3-pin <b>04:</b> 4-pin							
<b>P:</b> Pin <b>S:</b> Socket							
<b>1:</b> PCB <b>2:</b> Solder							
<b>F:</b> Front Mount <b>B:</b> Back Mount							
Wire							

## M5 Connectors and Cables

Name	Picture	Drawing	Contacts	Part No.
M5 Male Solder/PCB Front Mount Connector			3	M5-03-P-1
			4	M5-04-P-1
M5 Female Solder/PCB Rear Mount Connector			3	M5-03-S-1
			4	M5-04-S-1
M5 Male Solder Front Mount Connector with Wire			3	M5-03-P-2-F-W
			4	M5-04-P-2-F-W
M5 Female Solder Rear Mount Connector with Wire			3	M5-03-S-2-B-W
			4	M5-04-S-2-B-W
M5 Female Straight Molded Cable			3	M5-03-S-2-W
			4	M5-04-S-2-W
M5 Male Straight Molded Cable			3	M5-03-P-2-W
			4	M5-04-P-2-W

## Specifications

### Basic Information:

<b>Standard:</b>	IEC 61076-2-104
<b>Gender:</b>	Male/Female
<b>Number of Contacts:</b>	3, 4 Pins
<b>Coding:</b>	A-coded
<b>Termination:</b>	Solder/PCB
<b>Orientation:</b>	Straight
<b>Coupling Method:</b>	Threaded connection
<b>Durability:</b>	>500 Cycles
<b>Wire Gauge:</b>	Max 0.14mm <sup>2</sup> /max 26AWG
<b>Temperature range:</b>	-25°C to +85°C
<b>Protection degree:</b>	IP67 or IP68

### Materials and Plating:

<b>Shell Material:</b>	Brass nickel-plated
<b>Sealing Material:</b>	Epoxy resin/Rubber
<b>Contact Material:</b>	Phosphorus copper gold-plated/Brass copper gold-plated
<b>Insulator Material:</b>	PA66
<b>Molding Material:</b>	TPU/PVC

### Electrical Performance:

<b>Rated voltage:</b>	60V
<b>Rated current:</b>	1A
<b>Insulation Resistance:</b>	≥100 MΩ
<b>Contact resistance:</b>	< 3 mΩ

## M5 Electrical Parameters

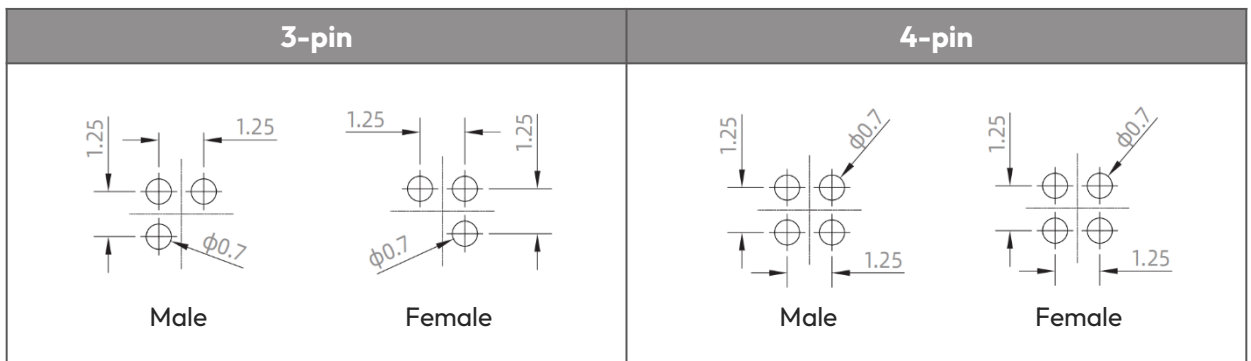
Pins	Male	Rated Current	Rated Voltage		Conductor Size		Female
			A/C	D/C	AWG	mm <sup>2</sup>	
3		1A	60V	60V	26	0.14	
4		1A	60V	60V	26	0.14	

## M5 Wiring Diagram

Pins	Wire Core Color
<b>3-pin</b>	
1	BN
2	-
3	BU
4	BK

Pins	Wire Core Color
<b>4-pin</b>	
1	BN
2	WH
3	BU
4	BK

## M5 PCB Arrangement





# M8 Connectors

## Description

The M8 connectors, also known as the M8 electrical connectors, are designed for 8MM link diameter sensors and actuators. It's widely used in factory automation, packaging systems, outdoor LED modules, and new energy signal control. M8 connector is known for their anti-vibration, anti-rotation design, and compact size, making them suitable for equipment with space constraints. Furthermore, M8 connectors feature specific coding to prevent incorrect mating, ensuring proper electrical connections.

## Applications

- Miniature sensors
- Industrial camera
- Electric bike
- Packaging, Labeling & Logistic
- Factory automation and Fieldbus module

## Quality Statement

- ✓ **Screws/nuts:** Brass with 120μ nickel plated, CNC parts.
- ✓ **Male contacts:** Brass C3604, 3μ gold plated on nickel base, machined solid pin.
- ✓ **Female contacts:** Phosphor bronze C5441 with 3μ gold plated on nickel base, machined solid pin.
- ✓ **Temperature Range:** Dynamic -25 to 85°C, Static: -40 to 85°C/105°C
- ✓ **Protection degree:** IP67 in locked status, IP68 base on customer specific requirements.
- ✓ **ROHS compliant.**

## Order Information

	<b>M</b>	<b>8</b>	<b>03</b>	<b>A</b>	<b>P</b>	<b>1</b>	<b>S</b>	<b>F</b>	<b>W</b>
Series									
Thread Diameter									
Number of Contacts: <b>3/4/5/6/8</b>									
<b>A:</b> A-coded <b>B:</b> B-coded									
<b>P:</b> Pin <b>S:</b> Socket									
<b>1:</b> PCB <b>2:</b> Soldering <b>3:</b> Plastic screw-joint <b>4:</b> Metal screw-joint									
<b>S:</b> Straight <b>R:</b> Right angle									
<b>F:</b> Front Mount <b>B:</b> Backend Mount									
Wire									

## M8 A-coded and B-coded Panel Receptacles

The M8 panel receptacles are ideal for compact and space-sensitive industrial applications. Metabee M8 panel connectors are available with solder termination and PCB panel assembly type, with rear mounting and front mounting.

- Operating voltage 60V/ 30V, rated current 3A/1A.
- 3, 4, 5 (B-coded), 6, 8 pins are available.
- Protection degree IP67.
- Temperature range: -40°C to +105°C.
- Cable length 1m, 2m, 3m or customized.
- UL94-V0 flame retardant degree.

Name	Picture	Drawing	Contacts	Part No.
M8 Male Solder/PCB Back Mount Connector			3	M8-03-A-P-1-S-B
			4	M8-04-A-P-1-S-B
			5	M8-05-B-P-1-S-B
			6	M8-06-A-P-1-S-B
			8	M8-08-A-P-1-S-B
M8 Female Solder/PCB Back Mount Connector			3	M8-03-A-S-1-S-B
			4	M8-04-A-S-1-S-B
			5	M8-05-B-S-1-S-B
			6	M8-06-A-S-1-S-B
			8	M8-08-A-S-1-S-B
M8 Male Solder/PCB Front Mount Connector			3	M8-03-A-P-1-S-F
			4	M8-04-A-P-1-S-F
			5	M8-05-B-P-1-S-F
			6	M8-06-A-P-1-S-F
			8	M8-08-A-P-1-S-F
M8 Female Solder/PCB Front Mount Connector			3	M8-03-A-S-1-S-F
			4	M8-04-A-S-1-S-F
			5	M8-05-B-S-1-S-F
			6	M8-06-A-S-1-S-F
			8	M8-08-A-S-1-S-F
M8 Female R/A PCB Mount Connector			3	M8-03-A-S-1-R
			4	M8-04-A-S-1-R



## M8 A-coded Filed Wireable Connectors

These M8 field installable connectors permit high flexibility for wiring in the field. For quick assembly of often differing cable lengths, Metabee supplies straight male and female type connectors for free assembly with screw type wire connection.

- Screwing termination contacts.
- Protection degree IP67.
- 3-Pole, 4-Pole are available.
- Temperature range: -40°C to +125°C.
- Operating voltage 250V-AD, current 4A.

Name	Picture	Drawing	Contacts	Part No.
M8 Female Straight Plastic Plug with Screw Termination			3	M8-03-A-S-3-S
			4	M8-04-A-S-3-S
M8 Male Straight Plastic Plug with Screw Termination			3	M8-03-A-P-3-S
			4	M8-04-A-P-3-S
M8 Female Straight Metal Plug with Screw Termination			3	M8-03-A-S-4-S
			4	M8-04-A-S-4-S
M8 Male Straight Metal Plug with Screw Termination			3	M8-03-A-P-4-S
			4	M8-04-A-P-4-S
M8 Male R/A Plastic Plug with Screw Termination			3	M8-03-A-P-3-R
			4	M8-04-A-P-3-R
M8 Female R/A Plastic Plug with Screw Termination			3	M8-03-A-S-3-R
			4	M8-04-A-S-3-R

## M8 A-coded and B-coded Pre-molded Cable Connectors

These M8 molded connectors provide 3/4/5/6/8 position factory PUR/PVC over-molded cable and the length is depend on customers requests.

- Degree of protection IP67.
- 3, 4, 6, 8 pins are available.
- Operating voltage 60V, 30V-DC/AC, Rated current 4A, 1 A.
- Cable length customized, PUR and PVC cable for options.
- Anti-vibration locking screw design.

Name	Picture	Drawing	Contacts	Part No.
M8 Straight Female Molded Cable			3	M8-03-A-S-2-S-W
			4	M8-04-A-S-2-S-W
			5	M8-05-B-S-2-S-W
			6	M8-06-A-S-2-S-W
			8	M8-08-A-S-2-S-W
M8 Straight Male Molded Cable			3	M8-03-A-P-2-S-W
			4	M8-04-A-P-2-S-W
			5	M8-05-B-P-2-S-W
			6	M8-06-A-P-2-S-W
			8	M8-08-A-P-2-S-W
M8 Right Angle Female Molded Cable			3	M8-03-A-S-2-R-W
			4	M8-04-A-S-2-R-W
			6	M8-06-A-S-2-R-W
			8	M8-08-A-S-2-R-W
M8 Right Angle Male Molded Cable			3	M8-03-A-P-2-R-W
			4	M8-04-A-P-2-R-W
			6	M8-06-A-P-2-R-W
			8	M8-08-A-P-2-R-W

## Specifications

### Basic Information:

<b>Standard:</b>	IEC 61076-2-104
<b>Gender:</b>	Male/Female
<b>Number of Contacts:</b>	3, 4, 5, 6, 8 Pins
<b>Coding:</b>	A, B coded
<b>Termination:</b>	Soldering/PCB/Screw-joint
<b>Orientation:</b>	Straight/Right angle
<b>Coupling Method:</b>	Threaded connection
<b>Durability:</b>	>500 Cycles
<b>Wire Gauge:</b>	0.14/0.25/0.34mm <sup>2</sup> (26/24/22AWG)
<b>Temperature range:</b>	-25°C to +85°C
<b>Protection degree:</b>	IP67 or IP68

### Materials and Plating:

<b>Shell Material:</b>	Brass nickel-plated
<b>Sealing Material:</b>	Epoxy resin/Rubber
<b>Contact Material:</b>	Phosphorus copper gold-plated/Brass copper gold-plated
<b>Insulator Material:</b>	PA66
<b>Molding Material:</b>	TPU/PVC

### Electrical Performance:

<b>Rated voltage:</b>	60V for 3/4/5/6 pin, 30V for 8 pin
<b>Rated current:</b>	4A for 3/4/5 pin, 2A for 6 pin, 1.5A for 8 pin
<b>Insulation Resistance:</b>	≥100 MΩ
<b>Contact resistance:</b>	< 5 mΩ

## M8 Electrical Parameters

芯数 Pins	针型 Male			额定电流 Rated current	额定电压 Rated voltage		导体规格 Conductor size		孔型 Female		
	A	B	D		A/C	D/C	AWG	mm <sup>2</sup>	A	B	D
3				3A	60V	60V	24	0.25			
4				A型(A-Code): 3A D型(D-Code): 4A	A型(A-Code): 60V D型(D-Code): 48V	60V	24	0.25			
5				3A	30V	30V	24	0.25			
6				A型(A-Code): 1.5A D型(D-Code): 1.5A/3A	30V	30V	26	0.14			
8				1.5A	30V	30V	26	0.14			

## M8 Color Codes and Wiring Diagram

芯位 Pins	线芯颜色 Wire core color	
3芯(Pins)		
1	BN	
2	-	
3	BU	
4	BK	

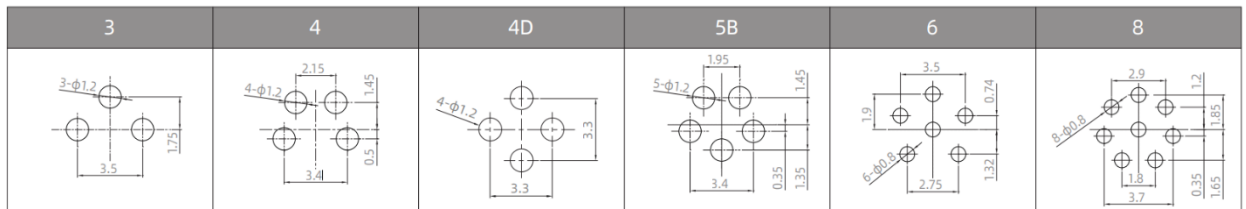
芯位 Pins	线芯颜色 Wire core color			
4芯A编码(4 Pins A-Code) 4芯D编码(4 Pins D-Code)				
1	BN		YE	
2	WH		WH	
3	BU		OG	
4	BK		BU	

芯位 Pins	线芯颜色 Wire core color	
8芯(Pins)		
1	WH	
2	BN	
3	GN	
4	YE	
5	GY	
6	PK	
7	BU	
8	RD	

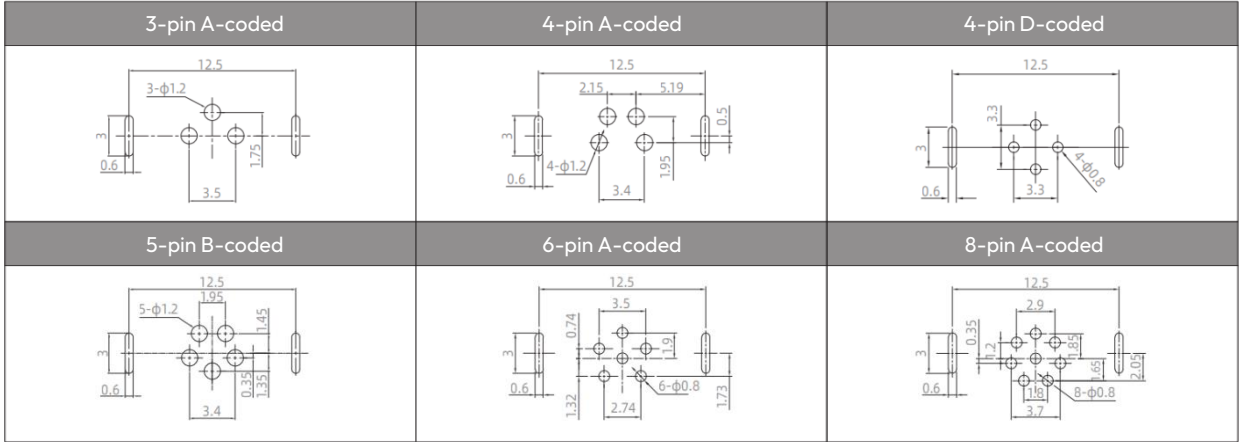
芯位 Pins	线芯颜色 Wire core color			
5芯A编码(5 Pins A-Code) 5芯B编码(5 Pins B-Code)				
1	BN		BN	
2	WH		WH	
3	BU		BU	
4	BK		BK	
5	GY		GY	

芯位 Pins	线芯颜色 Wire core color	
6芯(Pins)		
1	BN	
2	WH	
3	BU	
4	BK	
5	GY	
6	PK	

## M8 PCB Pins Arrangement



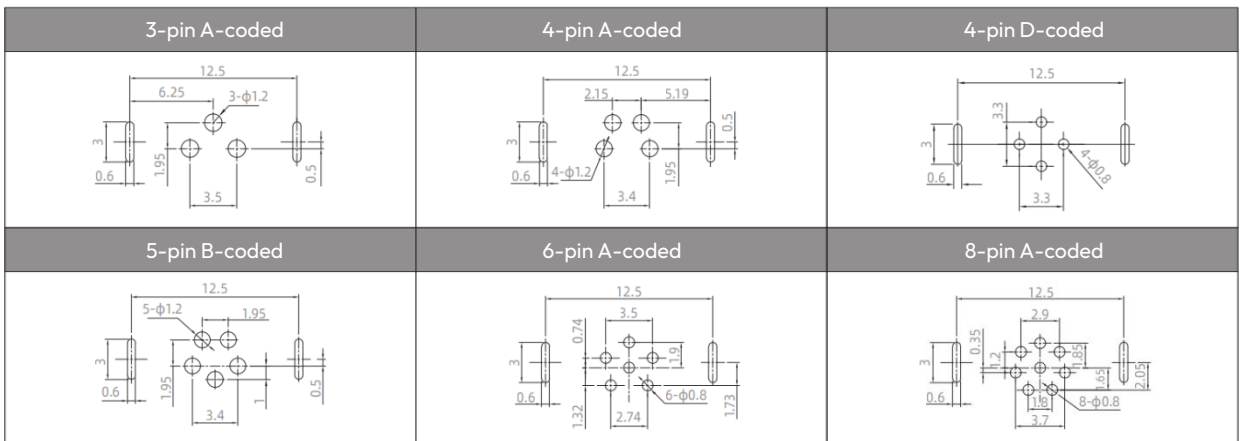
## M8 PCB Straight Pins Arrangement (Grounded Type)



## M8 PCB Angled Pins Arrangement



## M8 PCB Angled Pins Arrangement (Grounded Type)





# M12 Connectors

## Description

M12 connector is the most commonly used connector in factory automation, widely used in sensors, robots, motors, packaging and conveyor systems, rail transportation, etc. The common M12 connector PINs are 3Pin, 4pin, 5pin, 8pin, and 12pin. The M12 is available in A, B, and D coded. M12 connector includes M12 Panel Receptacles, M12 Field Wirable Connector, M12 Molded Cable Connector, and M12 Adapter.

## Applications

- Miniature sensors
- Industrial camera
- Electric bike
- Packaging, Labeling & Logistic
- Factory automation and Fieldbus module

## Quality Statement

- ✓ **Screws/nuts:** Brass with 120μ nickel plated, CNC parts.
- ✓ **Male contacts:** Brass C3604, 3μ gold plated on nickel base, machined solid pin.
- ✓ **Female contacts:** Phosphor bronze C5441 with 3μ gold plated on nickel base, machined solid pin.
- ✓ **Temperature Range:** Dynamic -25 to +85°C, Static: -40 to +85°C/105°C
- ✓ **Protection degree:** IP67 in locked status, IP68 base on customer specific requirements.
- ✓ **ROHS compliant.**

## Order Information

	<b>M</b>	<b>12</b>	<b>03</b>	<b>A</b>	<b>P</b>	<b>1</b>	<b>S</b>	<b>F</b>	<b>W</b>
Series									
Thread Diameter									
Number of Contacts: <b>03/04/05/08/12</b>									
<b>A:</b> A-coded <b>B:</b> B-coded <b>D:</b> D-coded									
<b>P:</b> Pin <b>S:</b> Socket									
<b>1:</b> PCB <b>2:</b> Soldering <b>3:</b> Plastic screw-joint <b>4:</b> Metal screw-joint									
<b>S:</b> Straight <b>R:</b> Right angle <b>H:</b> Flange									
<b>F:</b> Front Mount <b>B:</b> Backend Mount									
Wire									


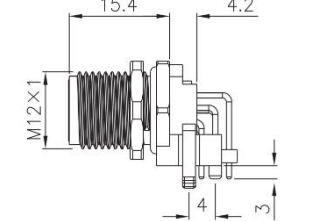

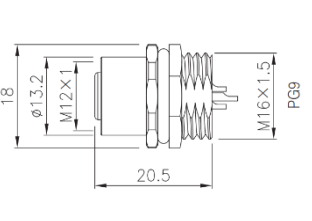

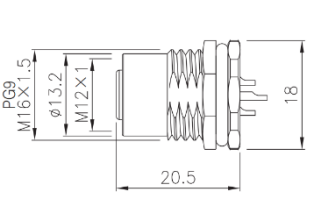

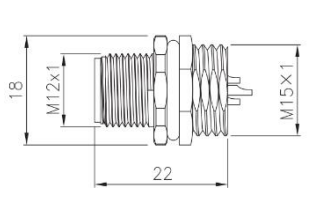
## M12 A-coded Panel Receptacles

M12 panel mount connectors are electrical connectors used for data and signal transmission in industrial environments. They are available in both male and female versions and can be soldered with individual wires or mounted on PCBs. These connectors provide a quick and secure way to connect field devices and cables. Metabee offers a variety of M12 panel mount connector solutions suitable for enclosures, panels, and PCBs. Additionally, these connectors can be mounted on the front or rear of a panel.

- 3, 4, 5, 8, 12 poles are available.
- Operating voltage 300V-DC/ 250V-AC/ 60V/ 30V, current 4A / 1.5A.
- Protection degree IP67.
- Temperature range: -40°C-+125 °C.
- UL94-V0 flame retardant degree.
- Ground Pin available for option.

Name	Picture	Drawing	Contacts	Part No.
M12 A-coded Male PCB/Solder Front Mount Connector			3	M12-03-A-P-1-S-F
			4	M12-04-A-P-1-S-F
			5	M12-05-A-P-1-S-F
			8	M12-08-A-P-1-S-F
			12	M12-12-A-P-1-S-F
M12 A-coded Female PCB/Solder Backend Mount Connector			3	M12-03-A-S-1-S-B
			4	M12-04-A-S-1-S-B
			5	M12-05-A-S-1-S-B
			8	M12-08-A-S-1-S-B
			12	M12-12-A-S-1-S-B
M12 A-coded Female PCB/Solder Front Mount Connector			3	M12-03-A-S-1-S-F
			4	M12-04-A-S-1-S-F
			5	M12-05-A-S-1-S-F
			8	M12-08-A-S-1-S-F
			12	M12-12-A-S-1-S-F

Name	Picture	Drawing	Contacts	Part No.
M12 A-coded Male PCB/Solder Backend Mount Connector			3	M12-03-A-P-1-S-B
			4	M12-04-A-P-1-S-B
			5	M12-05-A-P-1-S-B
			8	M12-08-A-P-1-S-B
			12	M12-12-A-P-1-S-B
M12 A-coded Male PCB/Solder Front Mount Connector			3	M12-03-A-P-1-S-F
			4	M12-04-A-P-1-S-F
			5	M12-05-A-P-1-S-F
			8	M12-08-A-P-1-S-F
			12	M12-12-A-P-1-S-F
M12 A-coded Male Flange PCB/Solder Connector			3	M12-03-A-P-1-H
			4	M12-04-A-P-1-H
			5	M12-05-A-P-1-H
			8	M12-08-A-P-1-H
			12	M12-12-A-P-1-H
M12 A-coded Female Flange PCB/Solder Connector			3	M12-03-A-S-1-H
			4	M12-04-A-S-1-H
			5	M12-05-A-S-1-H
			8	M12-08-A-S-1-H
			12	M12-12-A-S-1-H
M12 Right Angle A-coded Female PCB Connector			3	M12-03-A-S-1-R
			4	M12-04-A-S-1-R
			5	M12-05-A-S-1-R
			8	M12-08-A-S-1-R
			12	M12-12-A-S-1-R

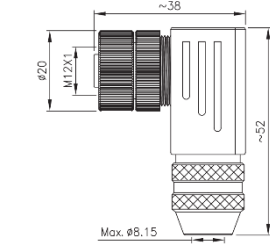
Name	Picture	Drawing	Contacts	Part No.
M12 Right Angle A-coded Male PCB Connector			3	M12-03-A-P-1-R
			4	M12-04-A-P-1-R
			5	M12-05-A-P-1-R
			8	M12-08-A-P-1-R
			12	M12-12-A-P-1-R
M12 A-coded Female Backend Mount Connector with Wire			3	M12-03-A-S-2-S-B-W
			4	M12-04-A-S-2-S-B-W
			5	M12-05-A-S-2-S-B-W
			8	M12-08-A-S-2-S-B-W
			12	M12-12-A-S-2-S-B-W
M12 A-coded Female Front Mount Connector with Wire			3	M12-03-A-S-2-S-F-W
			4	M12-04-A-S-2-S-F-W
			5	M12-05-A-S-2-S-F-W
			8	M12-08-A-S-2-S-F-W
			12	M12-12-A-S-2-S-F-W
M12 A-coded Male Backend Mount Connector with Wire			3	M12-03-A-P-2-S-F-W
			4	M12-04-A-P-2-S-F-W
			5	M12-05-A-P-2-S-F-W
			8	M12-08-A-P-2-S-F-W
			12	M12-12-A-P-2-S-F-W

## M12 A-coded Field Wireable Connectors

Metabee provides M12 field installable connectors. These field wireable connectors permit high flexibility for wiring in the field for quick assembly and disassembly. It will also save the cable cost when connector replacing is necessary.

- Screwing termination contacts.
- Protection degree IP67.
- 3, 4, 5, 8, 12 pins are available.
- Operating voltage 300V-DC/ 250V-AC/ 60V/ 30V, current 4A / 1.5A.
- PA+GF Housing / Metal shell.

Name	Picture	Drawing	Contacts	Part No.
M12 Straight A-coded Female Plastic Plug with Screw Termination			3	M12-03-A-S-3-S
			4	M12-04-A-S-3-S
			5	M12-05-A-S-3-S
			8	M12-08-A-S-3-S
			12	M12-12-A-S-3-S
M12 Straight A-coded Male Plastic Plug with Screw Termination			3	M12-03-A-P-3-S
			4	M12-04-A-P-3-S
			5	M12-05-A-P-3-S
			8	M12-08-A-P-3-S
			12	M12-12-A-P-3-S
M12 Right Angle A-coded Female Plastic Plug with Screw Termination			3	M12-03-A-S-3-R
			4	M12-04-A-S-3-R
			5	M12-05-A-S-3-R
			8	M12-08-A-S-3-R
			12	M12-12-A-S-3-R
M12 Right Angle A-coded Male Plastic Plug with Screw Termination			3	M12-03-A-P-3-R
			4	M12-04-A-P-3-R
			5	M12-05-A-P-3-R
			8	M12-08-A-P-3-R
			12	M12-12-A-P-3-R

Name	Picture	Drawing	Contacts	Part No.
M12 Straight A-coded Female Metal Plug with Screw Termination			3	M12-03-A-S-4-S
			4	M12-04-A-S-4-S
			5	M12-05-A-S-4-S
			8	M12-08-A-S-4-S
			12	M12-12-A-S-4-S
M12 Straight A-coded Male Metal Plug with Screw Termination			3	M12-03-A-P-4-S
			4	M12-04-A-P-4-S
			5	M12-05-A-P-4-S
			8	M12-08-A-P-4-S
			12	M12-12-A-P-4-S
M12 Right Angle A-coded Female Metal Plug with Screw Termination			3	M12-03-A-S-4-R
			4	M12-04-A-S-4-R
			5	M12-05-A-S-4-R
			8	M12-08-A-S-4-R
			12	M12-12-A-S-4-R
M12 Right Angle A-coded Male Metal Plug with Screw Termination			3	M12-03-A-P-4-R
			4	M12-04-A-P-4-R
			5	M12-05-A-P-4-R
			8	M12-08-A-P-4-R
			12	M12-12-A-P-4-R

## M12 A-coded Molded Cables

Metabee's M12 molded cables are built to endure harsh industrial environments. Their superior quality ensures reliable connections, even in extreme weather conditions.

- Cable length base on customer requesting.
- Protection degree IP67.
- 3, 4, 5, 8, 12 poles are available.
- Operating voltage 250V/60V/30V; Current range: 4A, 2A, 1.5A .
- Anti-vibration locking screw design.

Name	Picture	Drawing	Contacts	Part No.
M12 Straight A-coded Female Molded Cable			3	M12-03-A-S-2-S-W
			4	M12-04-A-S-2-S-W
			5	M12-05-A-S-2-S-W
			8	M12-08-A-S-2-S-W
			12	M12-12-A-S-2-S-W
M12 Straight A-coded Male Molded Cable			3	M12-03-A-P-2-S-W
			4	M12-04-A-P-2-S-W
			5	M12-05-A-P-2-S-W
			8	M12-08-A-P-2-S-W
			12	M12-12-A-P-2-S-W
M12 Right Angle A-coded Female Molded Cable			3	M12-03-A-S-2-R-W
			4	M12-04-A-S-2-R-W
			5	M12-05-A-S-2-R-W
			8	M12-08-A-S-2-R-W
			12	M12-12-A-S-2-R-W
M12 Right Angle A-coded Male Molded Cable			3	M12-03-A-P-2-R-W
			4	M12-04-A-P-2-R-W
			5	M12-05-A-P-2-R-W
			8	M12-08-A-P-2-R-W
			12	M12-12-A-P-2-R-W

## M12 B-coded Panel Receptacles

M12 B-coded connectors, available in panel mount or PCB mount options, offer quick connections for data and signal transmission between industrial devices and cables. They can be soldered with individual wires for field devices or utilize PCB pins for direct mounting on circuit boards.

- 5 poles contacts.
- Operating voltage 60V, rated current 4A.
- Protection degree IP67.
- Temperature range: -40°C~+125°C.
- UL94-V0 flame retardant degree.
- Ground (PE) Pin available for option.

Name	Picture	Drawing	Contacts	Part No.
M12 B-coded Female Solder/PCB Rear Mount Connector			5	M12-05-B-S-1-S-B
M12 B-coded Female Solder/PCB Front Mount Connector			5	M12-05-B-S-1-S-F
M12 B-coded Male Solder/PCB Front Mount Connector			5	M12-05-B-P-1-S-F
M12 B-coded Female Backend Mount Connector with Wire			5	M12-05-B-S-2-S-B-W
M12 B-coded Female Front Mount Connector with Wire			5	M12-05-B-S-2-S-F-W



## M12 B-coded Field Wireable Connectors

M12 B-coded field wireable connectors provide flexibility for on-site wiring. This allows for quick assembly and disassembly, reducing downtime during maintenance. Additionally, these connectors save cable costs when replacements are needed because only the connector needs to be replaced, not the entire cable. Metabee offers both metal shells with EMC shielding and plastic bodies to suit your specific needs.


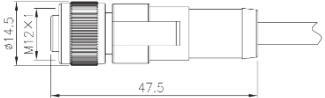

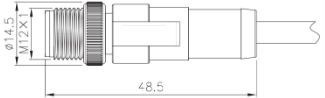
- Screwing termination contacts.
- Degree of protection IP67.
- Only 5 pins are available.
- Operating voltage 60V, current 4A.
- PA+GF Housing/ Metal shell.

Name	Picture	Drawing	Contacts	Part No.
M12 Straight B-coded Female Plastic Plug with Screw Termination			5	M12-05-B-S-3-S
M12 Straight B-coded Male Plastic Plug with Screw Termination			5	M12-05-B-P-3-S
M12 Straight B-coded Female Metal Plug with Screw Termination			5	M12-05-B-S-4-S
M12 Straight B-coded Male Metal Plug with Screw Termination			5	M12-05-B-P-4-S

## M12 B-coded Molded Cables (Cordsets)

M12 B-coded molded cables are popular for factory automation thanks to their reliable connection in harsh environments. These connectors follow the standard IEC 61076-2-101 and feature a 12mm metric thread locking mechanism for secure connections. Metabee have designed and manufactured these M12 B-coded cables with superior quality for the reliable connections in harsh environments.


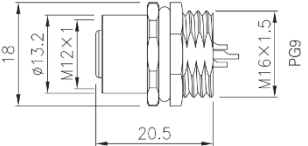

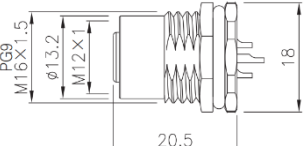

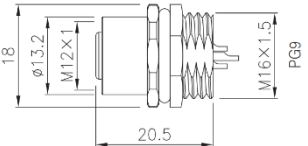

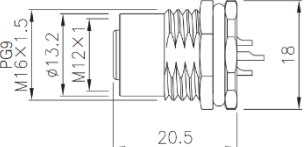
- Cable length base on customer requesting.
- Protection degree IP67.
- 5 poles per connector.
- Operating voltage 60V; Current range: 4A.
- Anti-vibration locking screw design.

Name	Picture	Drawing	Contacts	Part No.
M12 Straight B-coded Female Molded Cable			5	M12-05-B-S-2-S-W
M12 Straight B-coded Male Molded Cable			5	M12-05-B-P-2-S-W

## M12 D-coded Panel Receptacles

M12 D-coded panel mount receptacles are industrial connectors ideal for data transmission between controllers and devices. They ensure reliable and deterministic communication, enabling devices to trigger events based on set schedules. Metabee offers M12 D-coded connectors alongside M12 X-coded and RJ45 options, all known for their ruggedness and performance.

- Soldering contacts and PCB contacts for option.
- Degree of protection IP67.
- Temperature range: -40°C to +125°C.
- UL94-V0 flame retardant degree.
- Ground Pin available for option.

Name	Picture	Drawing	Contacts	Part No.
M12 D-coded Female Solder/PCB Backend Mount Connector			4	M12-04-D-S-1-S-B
M12 D-coded Female Solder/PCB Front Mount Connector			4	M12-04-D-S-1-S-F
M12 D-coded Female Backend Mount Connector with Wire			4	M12-04-D-S-2-S-B-W
M12 D-coded Female Front Mount Connector with Wire			4	M12-04-D-S-2-S-F-W

## M12 D-coded Field Wireable Connectors

In addition to M12 A-coded and B-coded connectors, Metabee offers M12 D-coded field-installable connectors as cable plugs. These connectors provide greater flexibility for on-site assembly and disassembly when you need different cable lengths or connector replacements. The simple screw-driving mechanism allows for quick and easy wire termination in the field.




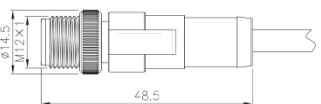
- Screwing termination contacts.
- Protection degree IP67.
- Temperature range: -40°C to +125°C.
- UL94-V0 flame retardant degree.
- EMI shielded metal housing.

Name	Picture	Drawing	Contacts	Part No.
M12 Straight D-coded Female Plastic Plug with Screw Termination			4	M12-04-D-S-3-S
M12 Straight D-coded Male Plastic Plug with Screw Termination			4	M12-04-D-P-3-S
M12 Straight D-coded Female Metal Plug with Screw Termination			4	M12-04-D-S-4-S
M12 Straight D-coded Male Metal Plug with Screw Termination			4	M12-04-D-P-4-S

## M12 D-coded Molded Cable (Cordsets)

The M12 D-coded molded cable with 12mm metric thread locking mechanism, based on IEC 61076-2-101 standard, it is the most commonly used connector in the factory automation and industrial Ethernet. Metabee developed these industrial Ethernet cables with M12 D-coded connectors, which meet the demands of the Ethernet/IP, EtherCAT, Powerlink. The designing of the connectors have already considered various industrial stringent application environments, such as waterproof, harsh temperature shocking, hydrolysis resistant, oil resistant, and anti-chemical, corrosion resistance, UV resistance, abrasion resistance, plug mating force and endurance performance.


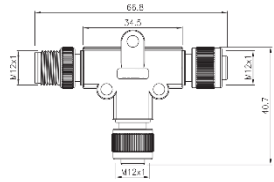

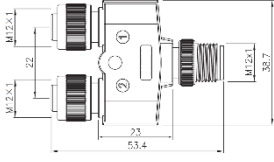
- LAN CAT 5e 2 Pair twisted, SFTP cable.
- Cable length can be customized.
- EMI shielding design available.
- IP67 protection degree.
- Standard IEC 61076-2-101 D-coded 4 pin connection interface.
- Operating voltage 250V; Current range 4A.
- Anti-vibration design.

Name	Picture	Drawing	Contacts	Part No.
M12 Straight D-coded Female Molded Cable			4	M12-04-D-S-2-S-W
M12 Straight D-coded Male Molded Cable			4	M12-04-D-P-2-S-W

## M12 Y-splitters and T-splitters

Metabee provides M12 Y-splitters and T-splitters. These adapters split wires into 2 separate connectors, allowing installation of two single-channel input or output devices to each port of hardwired distribution box. Connectors are available with parallel circuits, which allow input or output signals to run or trigger devices simultaneously.


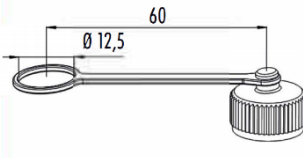

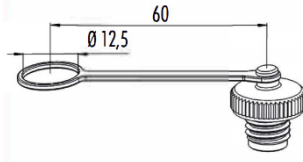
- 3, 4, 5, 8 pins are available.
- Operating voltage 250V-AC/ 60V/30V, Rated current 4A, 2A.
- Temperature range: -40°C-+80°C.
- Protection degree IP67.

Name	Picture	Drawing	Contacts	Part No.
M12 T Type Connector, 1 Male to 2 Female			3	M12-3T
			4	M12-4T
			5	M12-5T
			8	M12-8T
M12 Y Type Splitter, 1 Male to 2 Female			3	M12-3Y
			4	M12-4Y
			5	M12-5Y
			8	M12-8Y

## M12 Dust Caps

The M12 connector dust caps are available for both male and female connectors using when it is under the unplugged open status, which can keep it from dust or water invading.

- Nylon cap and TPU strips.
- For both Panel receptacle connectors and extension cable connectors.
- IP65, IP67 Protection degree.

Name	Picture	Drawing	Part No.
M12 Dust Cap, Internal Thread			M12-C1
M12 Dust Cap, External Thread			M12-C2

## Specifications

### Basic Information:

<b>Standard:</b>	IEC 61076-2-101
<b>Gender:</b>	Male/Female
<b>Number of Contacts:</b>	3, 4, 5, 8, 12, 17 Pins
<b>Coding:</b>	A, B coded
<b>Termination:</b>	Soldering/PCB/Screw-joint
<b>Orientation:</b>	Straight/Right angle
<b>Coupling Method:</b>	Threaded connection
<b>Durability:</b>	>500 Cycles
<b>Wire Gauge:</b>	0.14/0.25/0.34mm <sup>2</sup> (26/24/22AWG)
<b>Temperature range:</b>	-25°C to +85°C
<b>Protection degree:</b>	IP67 or IP68

### Materials and Plating:

<b>Shell Material:</b>	Brass nickel-plated/Zinc alloy nickel-plated/PA-GF
<b>Sealing Material:</b>	Epoxy resin/Rubber
<b>Contact Material:</b>	Phosphorus copper gold-plated/Brass copper gold-plated
<b>Insulator Material:</b>	PA+GF/TPU
<b>Molding Material:</b>	TPU/PVC

### Electrical Performance:

<b>Rated voltage:</b>	60V for 3/4/5/6 pin, 30V for 8 pin
<b>Rated current:</b>	4A for 3/4/5 pin, 2A for 6 pin, 1.5A for 8 pin
<b>Insulation Resistance:</b>	≥100 MΩ
<b>Contact resistance:</b>	< 5 mΩ



## M12 Electrical Parameters

芯数 Pins	针型 Male				额定电流 Rated current	额定电压 Rated voltage		导体规格 Conductor size		孔型 Female			
	A	B	C	D		A/C	D/C	AWG	mm <sup>2</sup>	A	B	C	D
2					4A	250V	250V	22	0.34				
3					4A	250V	250V	22	0.34				
4					4A	250V	250V	22	0.34				
5					4A:A型(A-Code) B型(B-Code) 2A:C型(C-Code)	60V	60V	22	0.34				
6					2A	30V	30V	24	0.25				
8					2A	30V	30V	24	0.25				
12					1.5A	30V	30V	26	0.14				
17					1.5A	30V	30V	26	0.14				

## M12 Wiring Diagram

芯位 Pins	线芯颜色 Wire core color	
	2芯(Pins)	
1	BN	
2	-	
3	BU	

芯位 Pins	线芯颜色 Wire core color		
	3芯(Pins)		
1	BN		
2	-		
3	BU		
4	BK		

芯位 Pins	线芯颜色 Wire core color		
	6芯(Pins)		
1	BN		
2	WH		
3	BU		
4	BK		
5	-		
6	GY		
7	RD		

芯位 Pins	线芯颜色 Wire core color		
	8芯(Pins)		
1	WH		
2	BN		
3	GN		
4	YE		
5	GY		
6	PK		
7	BU		
8	RD		

芯位 Pins	线芯颜色 Wire core color					
	4芯A编码(4 Pins A-Code)		4芯B编码(4 Pins B-Code)		4芯D编码(4 Pins D-Code)	
1	BN		BN		YE	
2	WH		WH		WH	
3	BU		BU		OG	
4	BK		BK		BU	

芯位 Pins	线芯颜色 Wire core color		
	12芯(Pins)		
1	BN		
2	BU		
3	WH		
4	GN		
5	PK		
6	YE		
7	BK		
8	GY		
9	RD		
10	VT		
11	OG		
12	LTGN		

芯位 Pins	线芯颜色 Wire core color		
	17芯(Pins)		
1	BN		
2	BU		
3	WH		
4	GN		
5	PK		
6	YE		
7	BK		
8	GY		
9	RD		
10	VT		
11	OG		
12	LTGN		
13	LTBU		
14	BKWH		
15	BNWH		
16	RDWH		
17	BUWH		

## M12 PCB Pins Arrangement

Pins	2A	3A	4A	4D	5A
Male PCB Pins Arrangement					
Pins	2A	3A	4A	4D	5A
Female PCB Pins Arrangement					

# Together, We Thrive

Our team of passionate experts brings a wealth of experience to the table, ready to collaborate with you and unlock your full potential. By joining forces, we can create innovative solutions and achieve remarkable things.



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