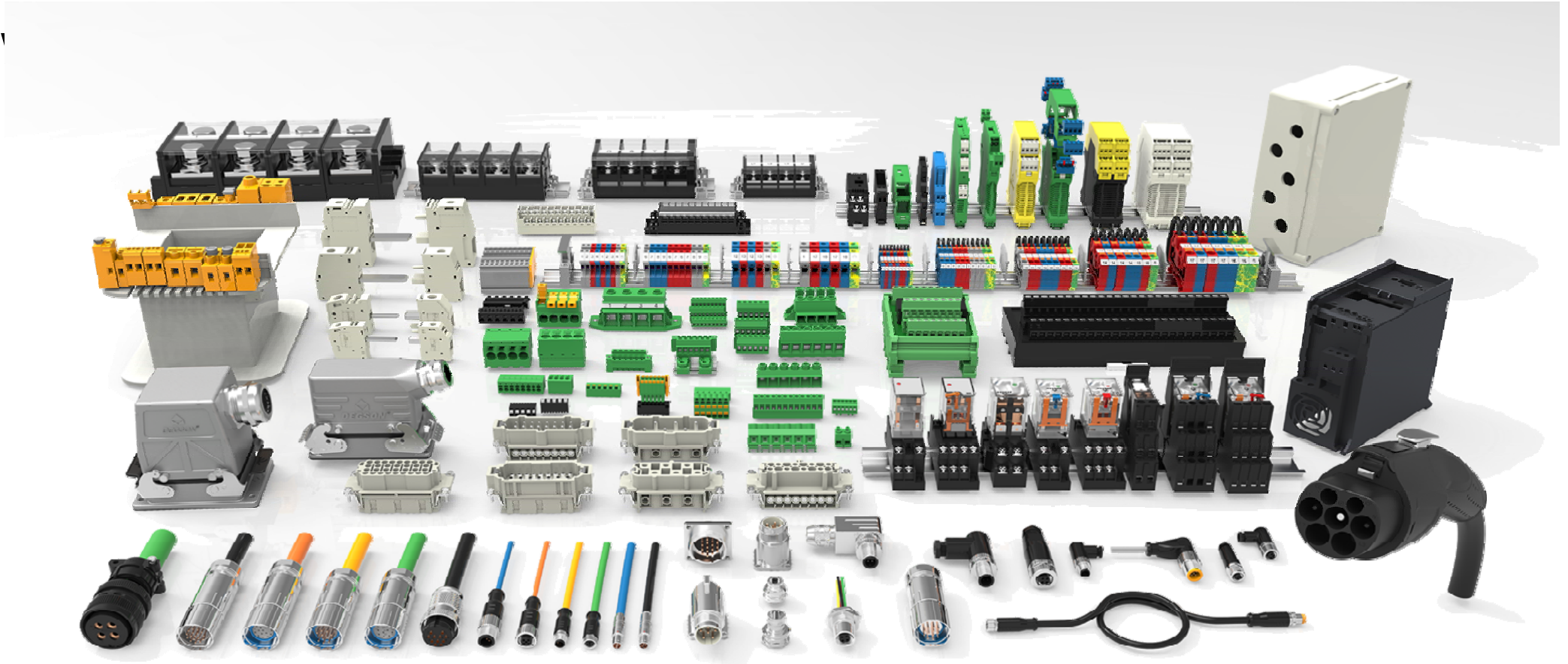




Introduction to circular connector





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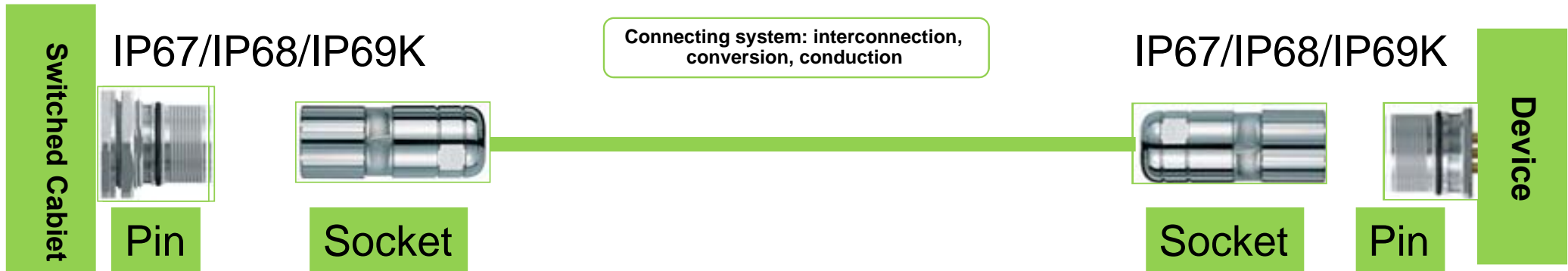




Introduction to circular connector product

DEGSON has invested in the development of circular connectors since 2016, Now we have launched three series products of circular connectors M5, M8 and M12 in line with IEC-61076 standard. There are a total of thousands of standard models, including assembly, socket, molding cable products.

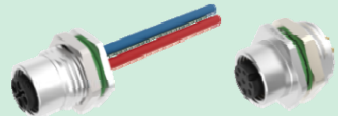

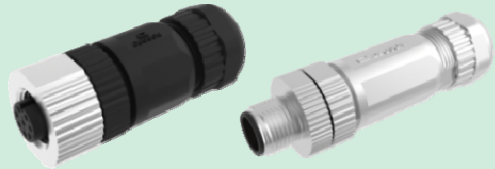
It is suitable for all kinds of equipment connection in industrial environment to realize different functions such as signal transmission, power supply and data transmission, and to meet the requirements of waterproof and vibration resistance for the connection between equipment.





Circular connectors product categories

Standard Series (M Series Design Standard **IEC 61076-2** Test Standard **IEC 61984**)

	Panel type	Molding type	Field assembly type
M5 (Specification of mutual thread M5*0.5)			/
M8 (Specification of mutual thread M8*1.0)			
M12 (Specification of mutual thread M12*1.0)			





Performance parameter

Series	Coded	3PIN	4PIN	5PIN	6PIN	8PIN	10PIN	12PIN	17PIN
M5 A-Coded		1A/60V	1A/60V	/	/	/	/	/	/
M8 A-Coded		3A/60V	3A/60V	/	1.5A/30V	1.5A/30V	/	/	/
M8 B-Coded		/	/	3A/30V	/	/	/	/	/
M12 A-Coded		4A/250V	4A/250V	4A/60V	2A/30V	2A/30V	1.5A/30V	1.5A/30V	1.5A/30V
M12 B-Coded		/	/	4A/60V	/	/	/	/	/
M12 D-Coded		/	4A/250V	/	/	/	/	/	/
M12 X-Coded		/	/	/	/	0.5A/48V	/	/	/
M12 S-Coded		12A/630V	12A/630V	/	/	/	/	/	/
M12 T-Coded		12A/63V	12A/63V	/	/	/	/	/	/





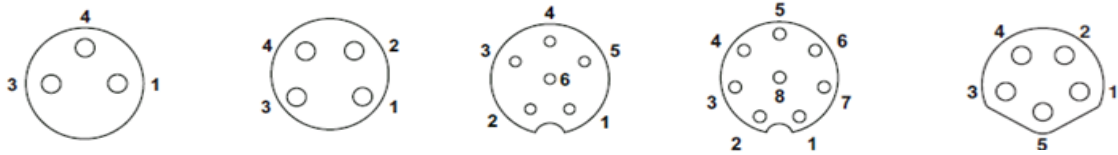
Coded

M5 Coded



A-coded

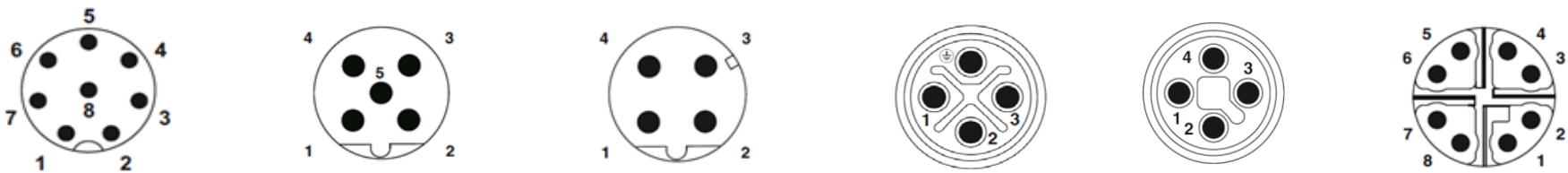
M8 Coded



A-coded

B-coded

M12 Coded



A-Coded :
Sensor /actuator

B-Coded :
INTERBUS/PROFIBUS

D-Coded :
Ethernet/PROFINET

S-Coded :
3+PE AC

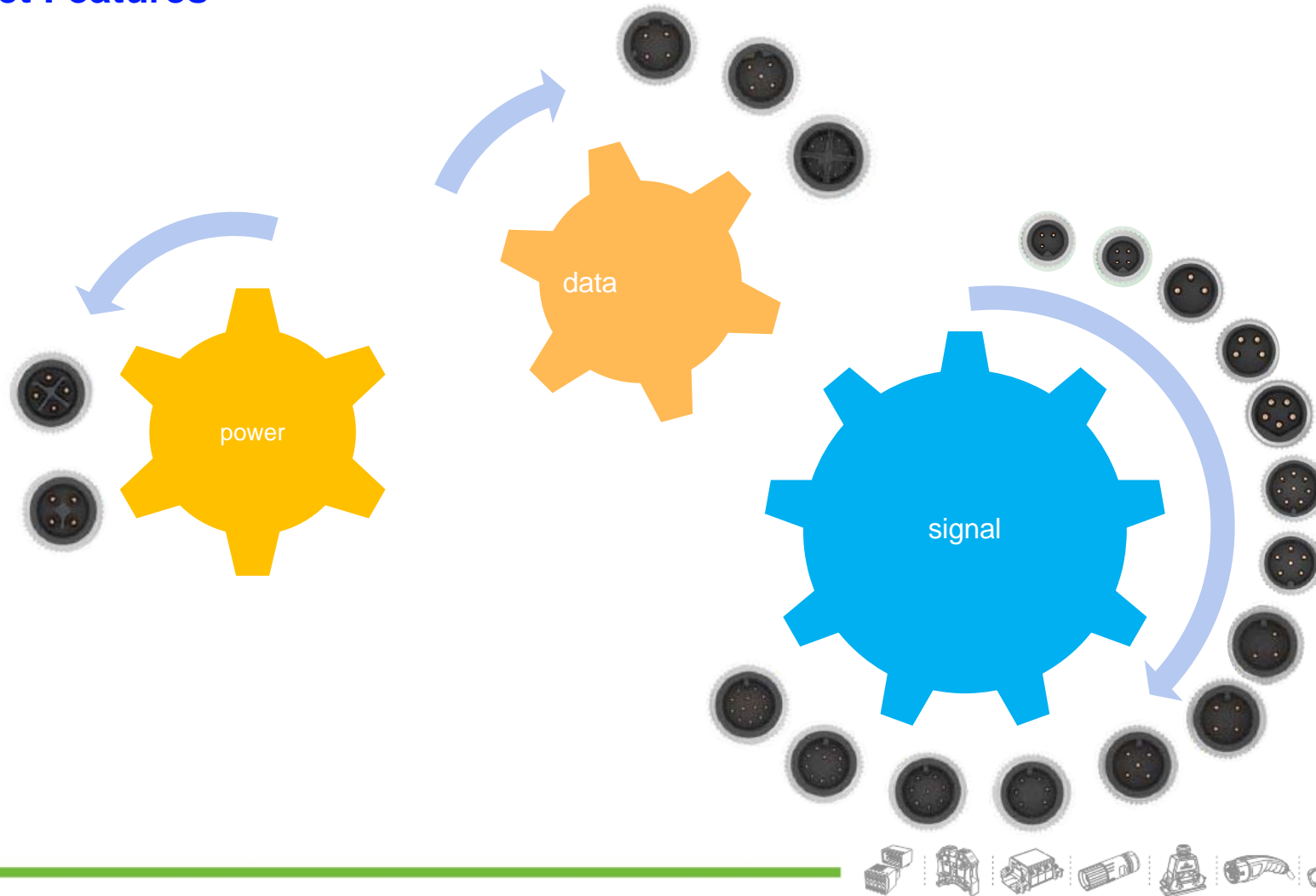
T-Coded :
4Pin DC

X-Coded :
10G Ethernet





Product Features





level of protection

➤ IP (Ingress Protection) Definition of protection level (DIN EN 60529-1)

IP69

Prevent Sundries or dust entry and contact

Prevent water intrusion

	Prevention contact	Prevention sundries intrusion
0	No protection	No protection
1	Body or other area (hand)	Larger sundries (> 50mm)
2	Finger	Middle sundries (> 12mm)
	Tool and wire (>2.5mm)	Small sundries (> 2.5mm)
4	Tool and wire (>2.5mm)	Granular (> 1.2mm)
5	Prevention contact totally	Dust stacking
6	Prevention contact totally	Dust intrusion
7		
8		

0	No protection
1	prevent water vertical intrusion
2	Prevents the effects of water drops falling vertically
3	Prevent the impact of 60° deviation from the vertical direction
4	Prevent water droplets from splashing in any direction
5	Prevent water column (10l/min)
6	Prevent strong water column (100l/min)
7	Prevent intrusion in water temporary (30min , 1m)
8	Prevent intrusion in water for long time (>30min , 1m)
9	Prevent downward high pressure and high temperature injection (80)





产品简介

产品分类

特征与品质

行业及应用

选型要素

竞争对手

联系信息

Waterproof degree

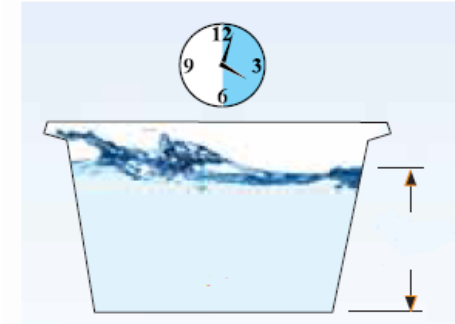


DEGSON®

M series IP67/68

IP67 Under water protection :
30 min/ 1m

IP68 Under water protection :
(1m; 24 h) > IP67





Product characteristics and quality of circular connectors

- ▶ According to IEC 61076 standard, perfectly compatible with international brands
- ▶ Waterproof grade up to IP68
- ▶ Flexible wiring, easy insertion, reliable connection
- ▶ Suitable for harsh working conditions
- ▶ It can meet different certification requirements
- ▶ Provide customized services and supporting solutions





Main industries and applications of circular connector products

Applications

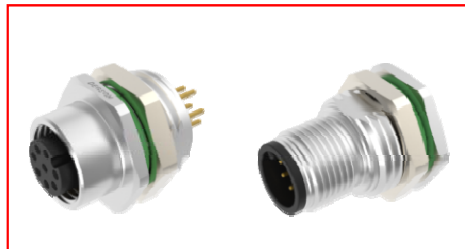
Servo drive



Small servo motor



M12 Series



Products : M12 A Code
Function : Signal control and power supply
Features: Waterproof and shock resistant





Applications



video surveillance



video surveillance



M12 Series



Products : M12 D Code
Function : signal transmission
Features : Waterproof and anti-interference



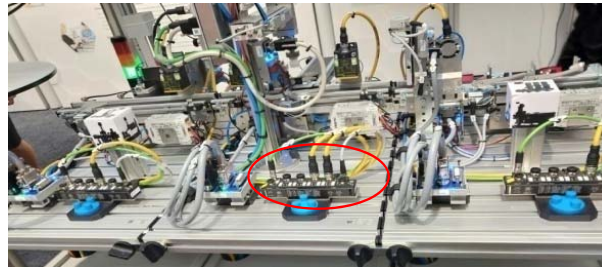


Applications

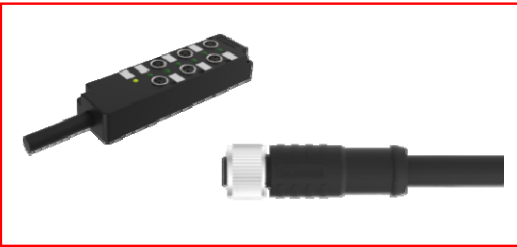
Industrial automation



Industrial automation



M Series



Products: M12 series, M8 distribution box
Function: Automatic production line and related control system for signal control
Features: Waterproof and shock resistant





Applications

Industrial automation



Encoder



sensor



M Series



Product: M12 A Code
Function: Signal transmission
Features: Waterproof, anti-interference





Applications



Outdoor lighting



Street lamp



M12 Series



产品: M12 S CODE
功能: 电流传输
特点: 高电流, 防水





Round connector product selection elements

Technology selection

- Core/Electrical: Select from electrical requirements
- Functional application: select from the actual application environment
- Product structure: from the structure of space, customer on-site wiring requirements to select

Being shown a picture and asked to identify the object

- Identify the product model from the picture or the real thing





Technology selection

(1) . Technology selection—Core number, electrical selection guidance

A-coded									
B-coded	/	/		/	/	/	/	/	
D-coded	/		/	/	/	/	/	/	
Number of Pins	3	4	5	6	8	10	12	17	
Rated current	4A			2A			1.5		
Rated voltage	250V		60V	30V					
Wire range	Different types of products have different cable specifications, please refer to the catalogue or product drawings for details								





(2) . Technology selection——Function application selection guidance

a. A、 B-Coded

Mainly used in **sensor, brake wiring, signal transmission, low voltage power supply**, there are two kinds of shielded and non-shielded, current less than 4A.

b. D、 X-Coded

It is mainly applied to **industrial Ethernet with higher protection level**, corresponding to the requirements of RJ45 connector. **D-coded** transmission rate is **100M** Ethernet data transmission. **X-Coded** Transfer Rate **10GB** Ethernet Data Transfer.

c. S、 T-Coded

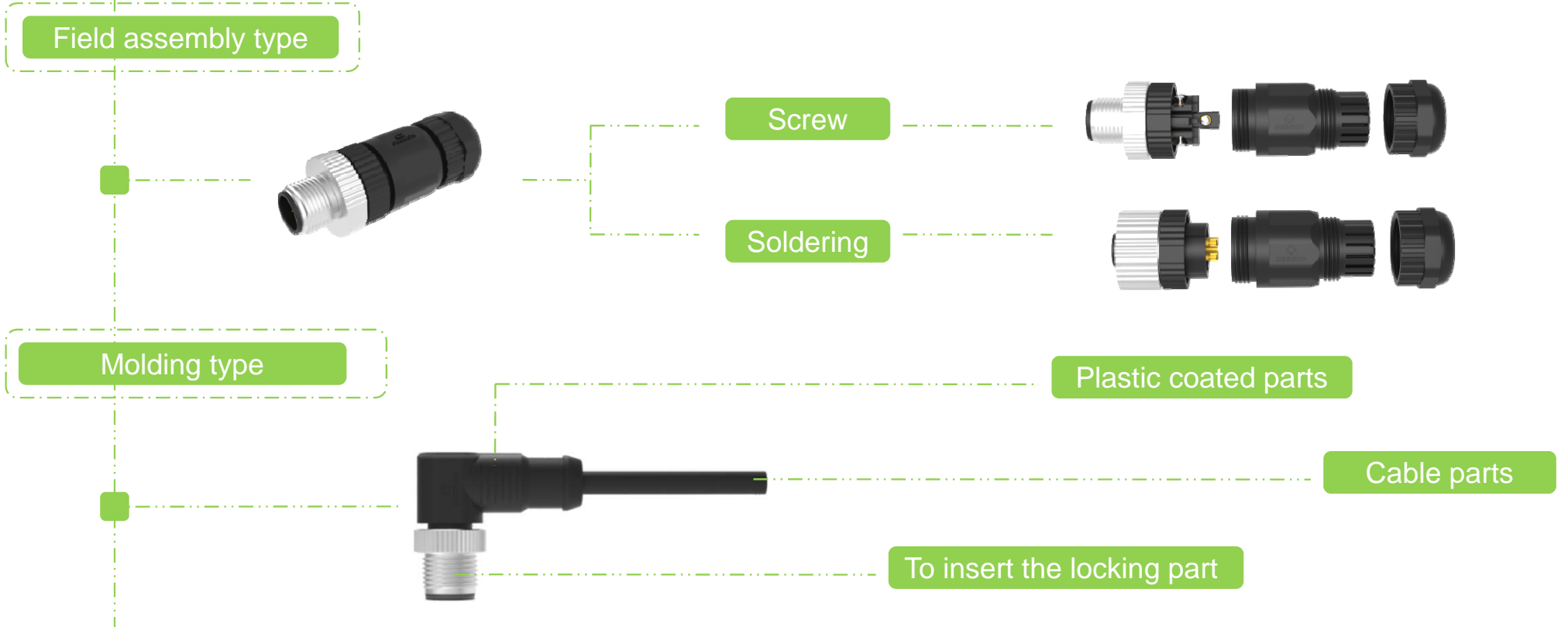
Mainly used in **current transmission**, the maximum current up to **12A**.





(3) . Technology selection—Product structure selection guidance

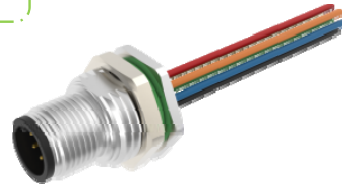
Product structure—Plug diagram





Product structure—Socket diagram

Pre-cast electronic wires



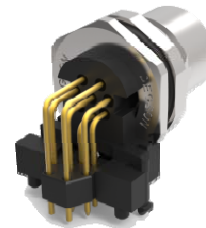
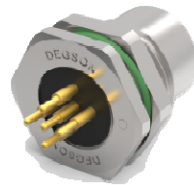
Pin tail pre-cast electronic wire

Solder connector



The end of the pin is the welding cup mouth

PCB



The end of the pin is a round needle





Being shown a picture and asked to identify the object (Discover the type information hidden in the physical object)

See an object or picture, how to decompose the specific model of the product from a picture?

What are the components of an M12 connector ? Which parts need to be confirmed to get the specific model?

Being shown a picture and asked to identify the object——Plug

Field assembly type

■ A, B, D code, others?

■ Pin numbers 3, 4, 5, 6, 8, others?

■ Plastic shell (Unshielded)
■ Metal shell (Shielded)



■ male, female

■ Lock material: M12 zinc alloy nickel plated
■ M8 copper alloy nickel plated

■ Straight 、 angle

■ Cable outlet:
Unshielded 001 :OD 4.5~7.5mm
Shielded 001 : OD 4.5~6mm
002 : OD 6~7.5mm





Molding type

- Lock material: M12 zinc alloy nickel plated
M5, M8copper alloy nickel plated

- Male, female

- Straight, angle



- Shielded cable
Unshielded cable

- Cable material :
PVC
PUR

- A, B, D code, others?

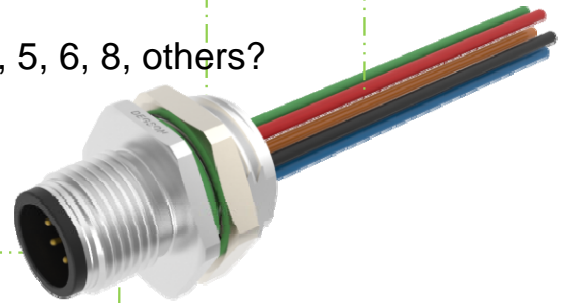
- Pin numbers 3, 4, 5, 6, 8, others?





Being shown a picture and asked to identify the object—Socket

Socket



- A, B, D code, others?
- Pin numbers 3, 4, 5, 6, 8, others?

■ Mounting thread

■ **With wires** : **D 15** - indicates the length of welding wire type 150mm
 Note: Standard line length is 500mm, other length can be customized

■ **Solder** : **D** Represents the welded type pin, and the wire shall be welded by the customer

■ **PCB** : PCB dip - soldered pin for circuit boards

P—Straight Pin

R—Bend Pin

■ Male, female

■ Installation method:

F: plate rear mounting plate front lock (plate front lock)

H: Install plate rear lock in front of plate (plate rear lock)

■ Lock material: M12 zinc alloy nickel plated
 M5、 M8copper alloy nickel plated

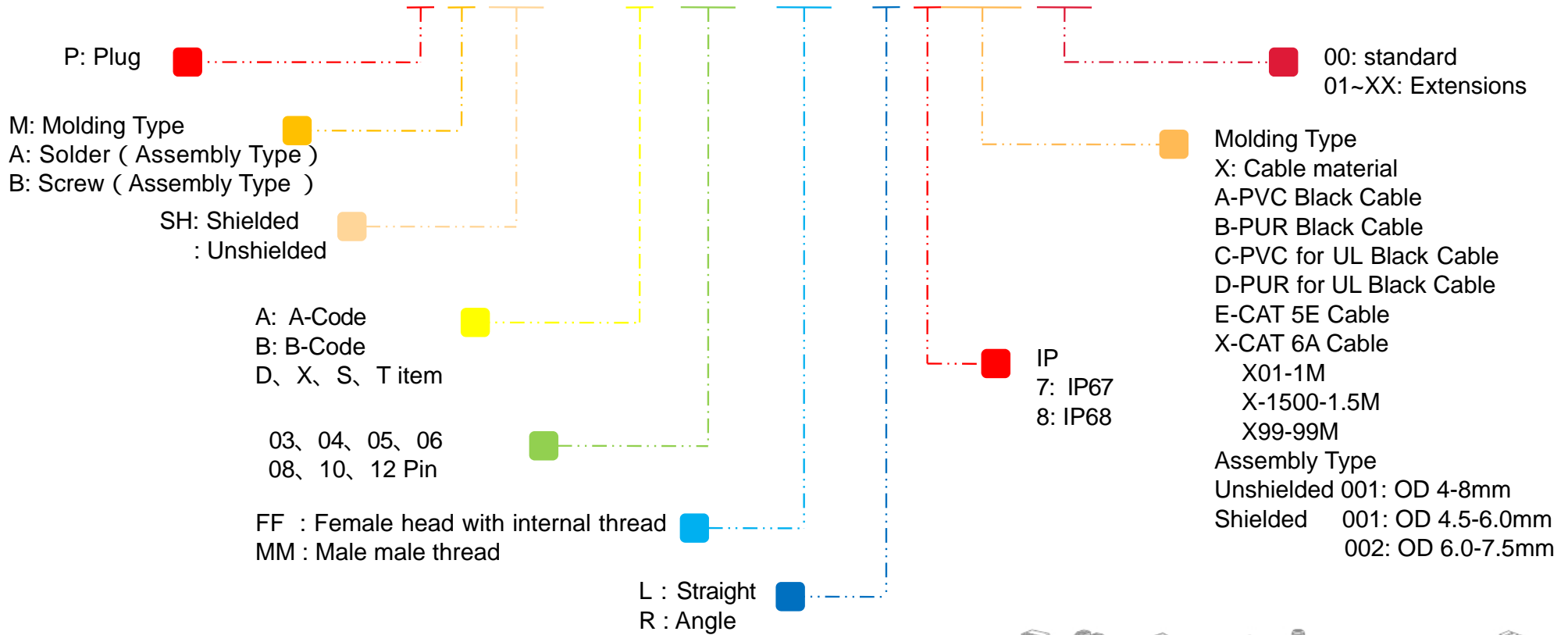




Circular Connectors Part Number Reference

M12-Plug

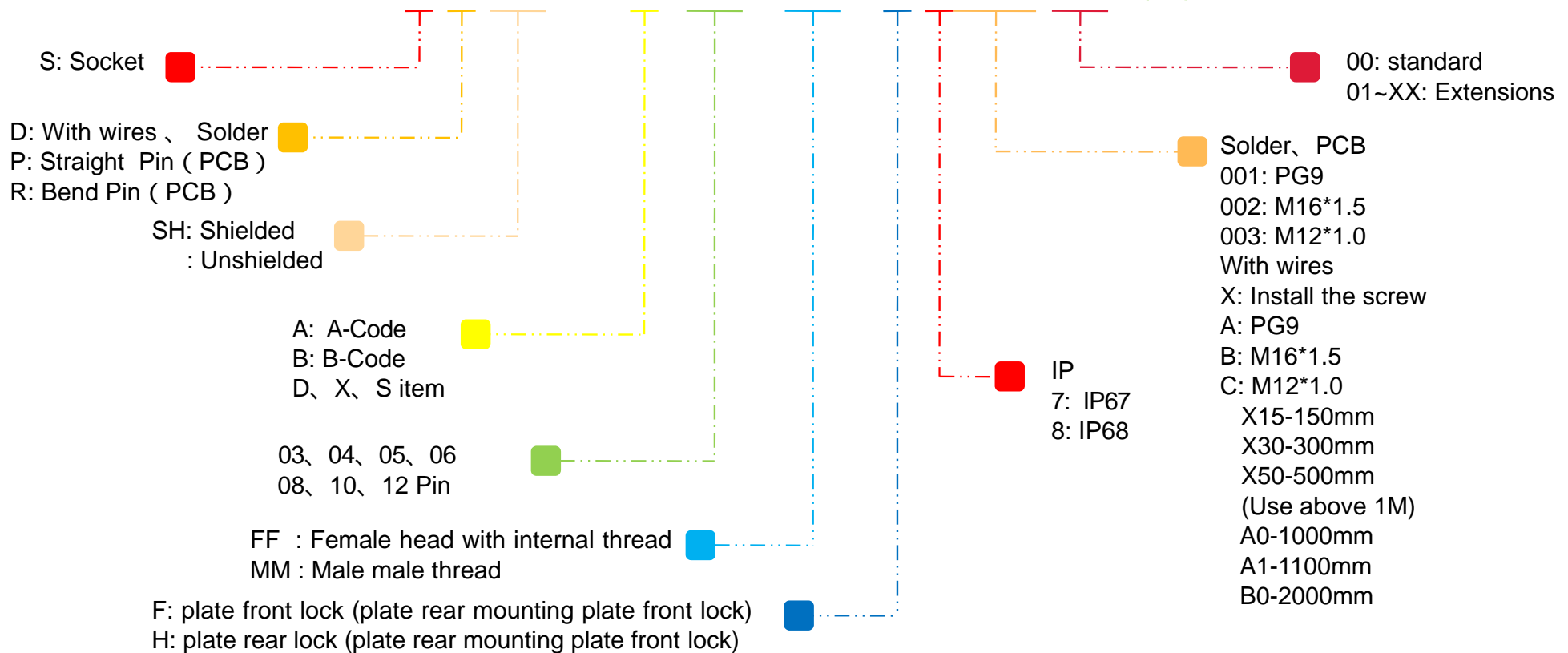
PXXX-M12X-XXP-XX-SXXXXX-XXA(H)





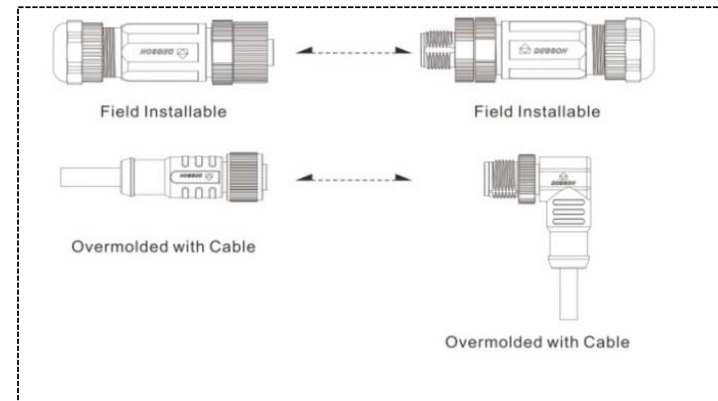
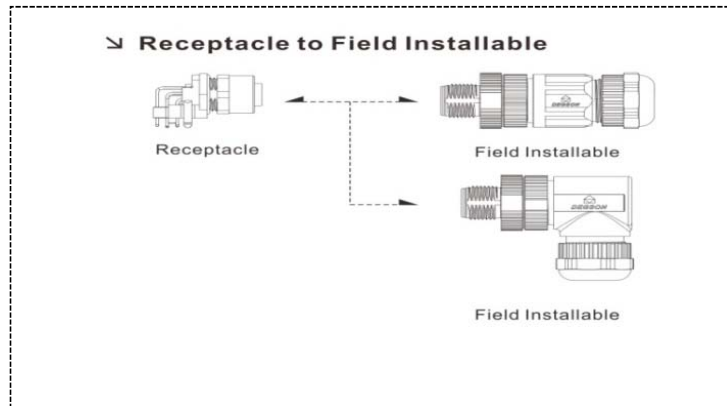
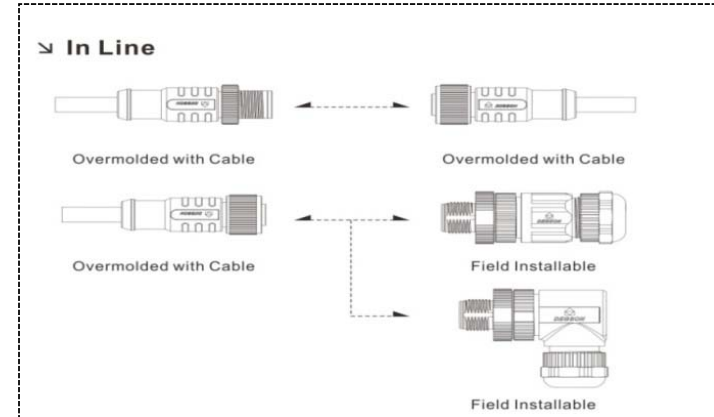
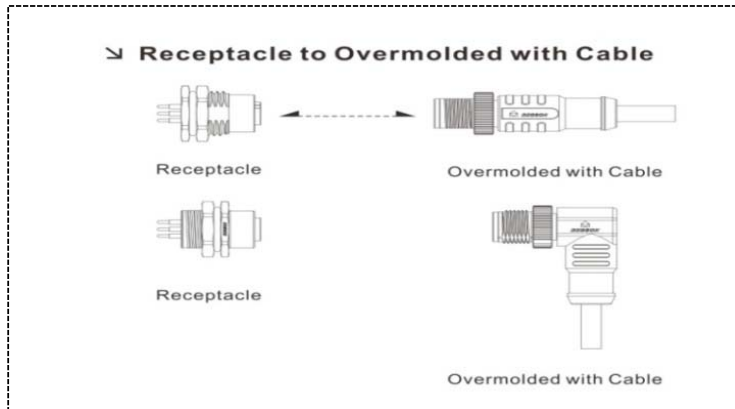
M12-Socket

SXXX-M12X-XXP-XX-SXXXXX-XXA(H)





Cooperate with the way





Major competitors

Competitors	Products	DEGSON Products	Applicable Industry	Characteristic
	M5-M58 full series, photovoltaic circular large current	M5,M8,M12,M23	Sensors, Industrial Automation, Motor, Motion Control	The product line is complete and the price is high
	M series, push-pull, power waterproof connector, D-SUB,RJ45,USB,DVI waterproof, SSL	M5,M8,M12,M23	Sensors, Industrial Automation, Motor, Motion Control, LED, New Energy, Rail Transportation, Military	The price is high, the series is complete, the application industry is wide
	PUSH-PULL the whole series	\	Medical, military, aerospace	Push-pull has a complete product line and a high price
	Snap-in,Bayonet,M5/8/9/12/18/23/25	M5,M8,M12,M23	Sensors, Industrial Automation, Motor, Motion Control, Medical	M series complete, product price and Phoenix low
	M8,M12,7/8, distributor box, agricultural machinery, D-SUB, power connector, USB3.0, adapter	M5,M8,M12,M23 , 7/8 , Junction box	Automation, communications and energy technology, mechanical engineering, agricultural and medical technology, transportation and aviation industries	





THANK YOU!
