RD Split Displacement Sensor

Technical Characteristics

- Rugged and fully enclosed design
- Non-wear, non-contact measurement method
- Linear measurement, absolute output
- Sealing grade up to IP68
- Low power consumption design effectively reduces system heating
- Ultra-high temperature sensing rod (up to + 125℃)
- Multiple interfaces available: Analog、SSI、Profibus-DP、CANopen、Start-Stop、Profinet、EtherCAT

Product Parameters

• Input

Measurement data	Position Magnet ring
Stroke length	25mm~5500mm，customized according to customer needs

• Output

Interface	Analog、SSI、CANopen、Profibus-DP、Start-Stop、Profinet、EtherCAT
Resolution	Analog: 16-bit D/A or 0.0015% of full scale (min. 1μm) Bital: 0.5 / 1 / 2 / 5 / 10 / 20 / 40 / 50 / 100 μm
Nonlinearity	< ± 0.01% of full scale, Min. ± 50μm
Repetition accuracy	< 0.001% for full-scale taxis, Min. ± 1μm
Hysteresis	＜10μm
Update time	1KHz（range≤1m） 500Hz（1m＜range≤2m） 250Hz（2m＜range≤3m），customizable
Temperature coefficient	＜30ppm/℃

• Working conditions

Magnet ring velocity	Arbitrary
Protection level	IP68（Sensor Lever）
Operating temperature	Sensor rod -40℃ ~ +125℃，electronic bin-40℃ ~ +85℃
Humidity/dew point	100%， relative humidity
Shock index	GB/T2423.5 100g(6ms)
Vibration index	GB/T2423.10 20g/10~2000Hz
EMC test	GB/T17626.2/3/4/6/8，Grade 4/3/4/3/3，Class A, CE Certification

• Electrical connection

Input voltage	+24Vdc±20%
operating current	＜100mA（varying with range）
Polarity protection	Max.-30Vdc
Overpressure protection	Max.36Vdc
Insulation resistance	＞10MΩ
Insulation strength	500V

• Structure and materials

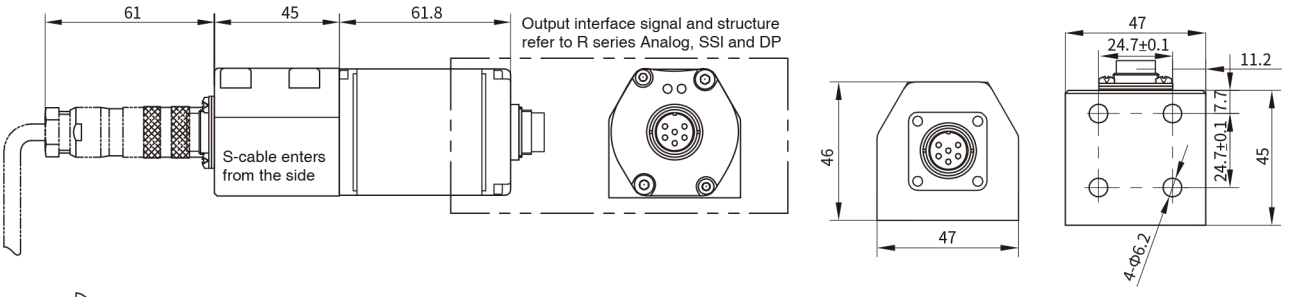
Fault indication	Electronic bin cover with LEDs display
Electronic bin	Aluminum alloy
Measuring rod	304 stainless steel
Outer tube pressure	35MPa (continuous)/70MPa (peak) or 350bar (continuous)/700bar (peak)
Position magnet	Standard Magnet ring and various magnet rings
Mounting thread form	M18×1.5（customizable）
Installation direction	Any direction
Cable outlet mode	Cable outlet cable or connector

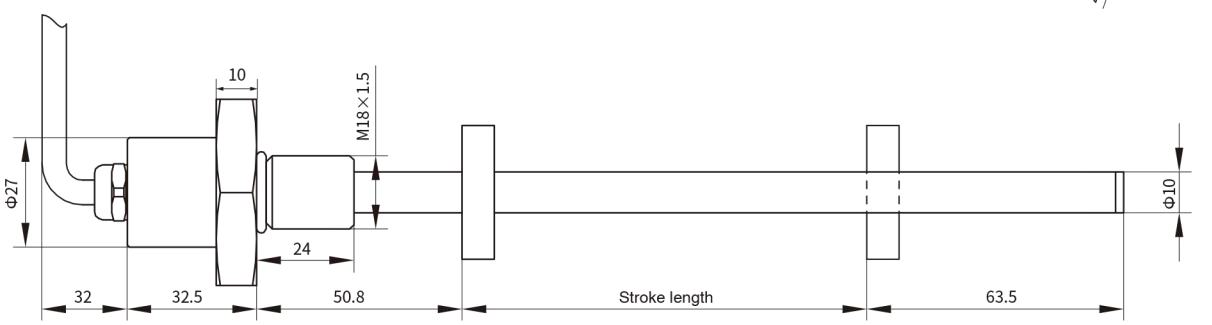
Installation and Use Instructions

Output characteristic

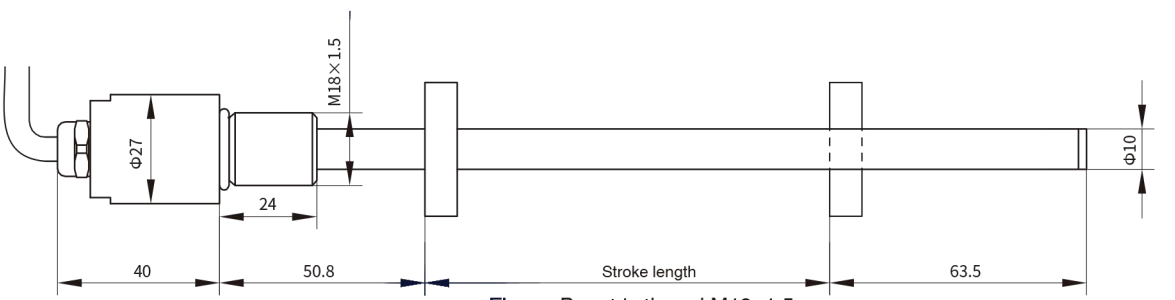
RD Series sensors are designed in a split form and are suitable for installation in cylinder, especially for cylinder applications in confined spaces. The sensor consists of two parts: a sensing rod and an electronic bin. The sensor rod is a pressure-resistant stainless round pipe with threads or flanges to provide protection for the sensing elements, and the whole sensor rod is installed in the cylinder through pistons. The temperature resistance of the sensing rod up to + 125℃, and the protection level reaches IP68, which is very suitable for harsh occasions such as high temperature, high humidity and water vapor; The electronic bin encapsulates the sensor signal processing part and the external interface together, reaching IP67 protection level, and can be connected with the sensor rod through the side or bottom of the connector plate.

RD Split Sensor Installing Dimensions

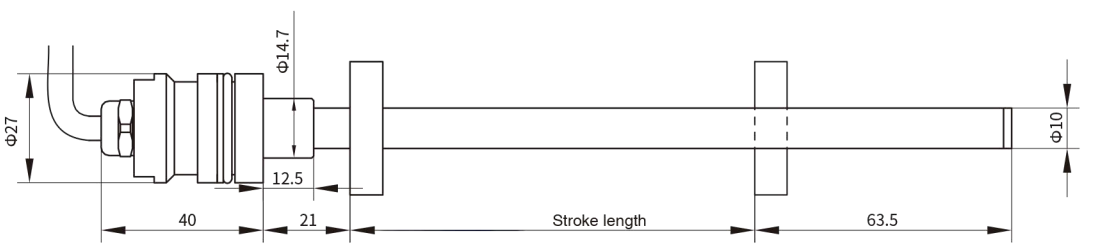




● Flange A metric thread M18×1.5 hexagon flange 46



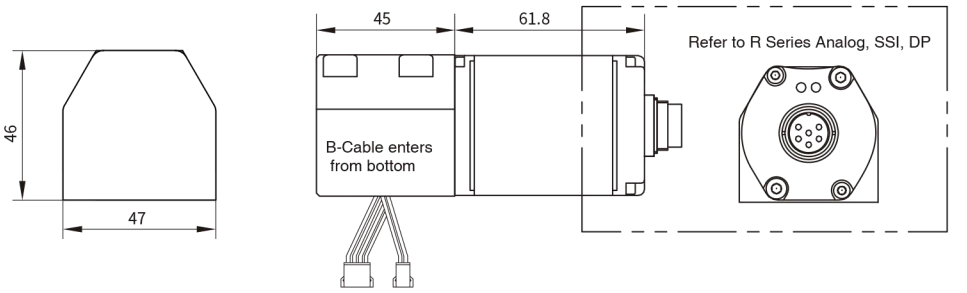
● Flange B metric thread M18×1.5

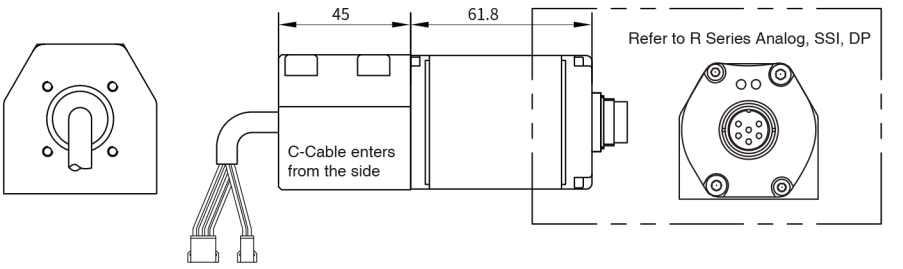


● Flange C connecting flange

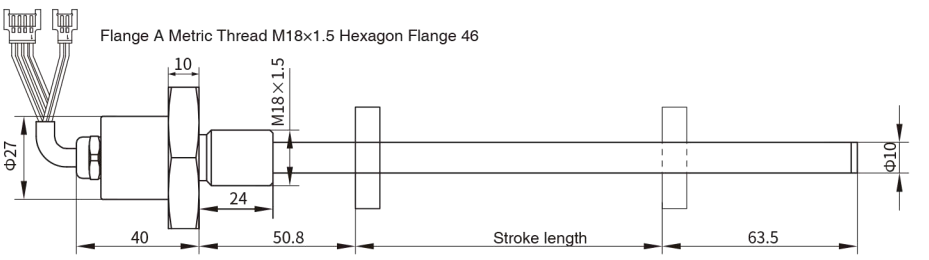
Installation and Use Instructions

- RDSplit Sensor Installing Dimensions

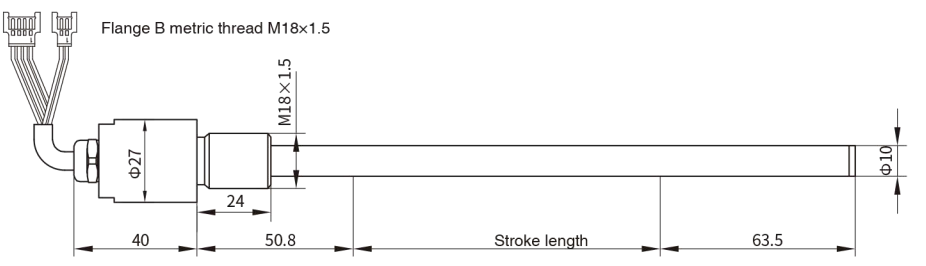




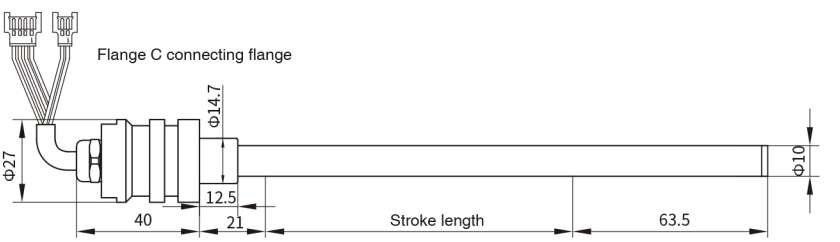
Scattered wire with plastic plug



Scattered wire with plastic plug



Scattered wire with plastic plug



Selection Guide-Analog

R	D	–	M					–		–				–					–					–		
01	02		03	04	05	06	07		08		09	10	11		12	13	14	15		16	17	18	19		20	21

01 - 02 Sensor shell form

RD	Split structure

03 - 07 Measuring range

Four digits, less than four digits are preceded by zero, M means metric system, unit mm

08 Outer tube flange

A	M18X1.5 SW46
B	M18X1.5 SW24
C	Connecting flange

09 - 11 Connection mode of outer tube

09 Cable outlet mode

S	Cable enters from the side, PUR cable
B	Cable entry from bottom, independent cable with flat plastic connector
C	Cable entry from side, independent cable with flat plastic connector

10 - 11 Cable length

M1	1m	M2	2m	M3	3m		
M4	1.5m	D1	250mm	D2	400mm		
D3	600mm	R2	65mm	R4	170mm		
R5	230mm	R6	350mm				

12 - 15 Connection form

12 - 13 Cable outlet mode

DH	PUR sheath, orange,-20~90℃, end scattered, cable color 1
DU	PVC sheath, orange,-20~105℃, end scattered, cable color 2
DB	PVC sheath, orange,-20~105℃, end scattered, cable color 3
DI	PUR sheath, orange,-20~90℃, end 6-pin connector
DV	PVC sheath, orange,-20~105℃, end 6-pin connector
DC	PVC sheath, orange,-20~105℃, end 8-pin connector

14 - 15 PVC sheath, orange,-20~105℃, end 8-pin connector

Note: For supporting cables, please refer to Analog/Start-Stop cable accessories selection

12 - 15 Connector mode

PH60	M16 male connector (6 pins)
PB80	M16 male connector (8 pins)

16 - 19 Signal output mode

16 - 17 Output form and direction

A0	Current output，4 ~ 20mA
A1	Current output，20 ~ 4mA
A2	Current output，0 ~ 20mA
A3	Current output，20 ~ 0mA
V0	Voltage output，0 ~ 10V
V1	Voltage output，10 ~ 0V
V2	Voltage output，-10 ~ +10V
V3	Voltage output，+10 ~ -10V
V4	Voltage output，0 ~ 5V
V5	Voltage output，5 ~ 0V
V6	Voltage output，-5 ~ +5V
V7	Voltage output，+5 ~ -5V

18 Number of Magnet rings

1	Single Magnet ring

19 No Magnet ring state

A	Keep the original value
B	Max. value
C	Min. value

20 - 21 Non-usable area at head and end, customizable

S0	50.8mm+63.5mm
B0	30mm+60mm

- Note: The forward output of the sensor means that when the magnet ring moves away from the electronic bin, the output value increases and decreases when the magnet ring moves in the reverse direction.
- Selection examples:RD-M0500-A-SM1-PH60-A01C-S0

  Indicates: the ordered product is split-mounted RD structure, stroke length is 500m, outer tube flange M18X1.5, SW46 electronic bin and sensor rod connecting side cable outlet, cable length is 1m. Six-pin connector, 4-20mA output, No Magnet ring output value is the Min., single magnet ring, head non-usable area 50.8 mm, end non-usable area 63.5 mm.

Selection Guide-SSI

R	D	–	M					–		–				–					–	S						–		
01	02		03	04	05	06	07		08		09	10	11		12	13	14	15		16	17	18	19	20	21		22	23

01 - 02 Sensor shell form

RD	Split structure

03 - 07 Measuring range

Four digits, less than four digits are preceded by zero, M means metric system, unit mm

08 Outer tube flange

A	M18X1.5 SW46
B	M18X1.5 SW24
C	Connecting flange

09 - 11 Connection mode of outer tube

09 Cable outlet mode

S	Cable enters from the side, PUR cable
B	Cable entry from bottom, independent cable with flat plastic connector
C	Cable entry from side, independent cable with flat plastic connector

10 - 11 Cable length

M1	1m	M2	2m	M3	3m			
M4	1.5m	D1	250mm	D2	400mm			
D3	600mm	R2	65mm	R4	170mm			
R5	230mm	R6	350mm					

12 - 15 Connection form

12 - 13 Cable outlet mode

DH	PUR sheath, orange,-20~90℃, end scattered, cable color 1
DU	PVC sheath, orange,-20~105℃, end scattered, cable color 2
DB	PVC sheath, orange,-20~105℃, end scattered, cable color 3
DI	PUR sheath, orange,-20~90℃, end 7-pin connector
DV	PVC sheath, orange,-20~105℃, end 7-pin connector
DC	PVC sheath, orange,-20~105℃, end 8-pin connector

14 - 15 Cable outlet mode: cable length, 01~99 meters

12 - 15 Connector mode

PH70	M16 male connector (7 pins)
PB80	M16 male connector (8 pins)

Note: For supporting cables, please refer to SSI cable accessories selection guide

16 - 21 Signal output mode

17 Data length

1	24bit	2	25bit	3	26bit*

*26-bit are parity bits and 25-bit are status bits

18 Data format

B	Binary	G	Gray code

19 Resolution

1	0.1mm	2	0.05mm
3	0.02mm	4	0.01mm
5	0.005mm	6	0.002mm
7	0.001mm	8	0.04mm
9	0.0005mm	0	0.0001mm

20 Direction

0	Forward	1	Reverse

21 Mode

0	Regular	1	Synchronization	2	High update rate

22 - 23 Non-usable area at head and end, customizable

S0	50.8mm+63.5mm
B0	30mm+60mm

XX Selection Guide-Profibus-DP Bus

R	D	–	M					–		–				–					–			–		
01	02		03	04	05	06	07		08		09	10	11		12	13	14	15		16	17	18		19	20

01 - 02 Sensor shell form

RD	Split structure

03 - 07 Measuring range

Four digits, less than four digits are preceded by zero, M means metric system, unit mm

08 Outer tube flange

A	M18X1.5 SW46
B	M18X1.5 SW24
C	Connecting flange

09 - 11 Connection mode of outer tube

09 Cable outlet mode

S	Cable enters from the side, PUR cable
B	Cable entry from bottom, independent cable with flat plastic connector
C	Cable entry from side, independent cable with flat plastic connector

10 - 11 Cable length

M1	1m	M2	2m	M3	3m			
M4	1.5m	D1	250mm	D2	400mm			
D3	600mm	R2	65mm	R4	170mm			
R5	230mm	R6	350mm					

12 - 15 Connection form

12 - 13 Cable outlet mode

DA	Single cable outlet, PUR sheath, cyan,-20-80℃, end scattered
DB	Double cable outlet, PUR sheath, cyan,-20~80℃, end scattered
DC	Double cable outlet, PUR sheath, cyan,-20~80℃, end M16, 6-pin, one male connector, one female connector

14 - 15 Cable outlet mode: cable length, 01-99m

12 - 15 Connector mode

PD53	One set of 5-pin male connector (M12), one set of 5-pin female connector (M12), one set of 4-pin male connector (M8)
PD63	A set of 6-pin male connector M16 and a set of 6-pin female connector M16

Note: Please refer to Profibus-DP cable fitting selection for supporting cables

16 - 18 Signal output mode

16	Profibus Protocol
17	Number of Magnet rings (1~9 optional)
18	0-single magnet B-single/multiple Magnet rings

19 - 20 Non-usable area at head and end, customizable

S0	50.8mm+63.5mm
B0	30mm+60mm

Selection Guide-Start/Stop Output

R	D	–	M					–		–				–					–	R				–		
01	02		03	04	05	06	07		08		09	10	11		12	13	14	15		16	17	18	19		20	21

01 - 02 Sensor shell form

RD	Split structure

03 - 07 Measuring range

Four digits, less than four digits are preceded by zero, M means metric system, unit mm

08 Outer tube flange

A	M18X1.5 SW46
B	M18X1.5 SW24
C	Connecting flange

09 - 11 Connection mode of outer tube

09 Cable outlet mode

S	Cable enters from the side, PUR cable
B	Cable entry from bottom, independent cable with flat plastic connector
C	Cable entry from side, independent cable with flat plastic connector

10 - 11 Cable length

M1	1m	M2	2m	M3	3m
M4	1.5m	D1	250mm	D2	400mm
D3	600mm	R2	65mm	R4	170mm
R5	230mm	R6	350mm		

12 - 15 Connection form

12 - 13 Cable outlet mode

DH	PUR sheath, orange,-20~90℃, end scattered, cable color 1
DU	PVC sheath, orange,-20~105℃, end scattered, cable color 2
DB	PVC sheath, orange,-20~105℃, end scattered, cable color 3
DI	PUR sheath, orange,-20~90℃, end 6-pin connector
DV	PVC sheath, orange,-20~105℃, end 6-pin connector
DC	PVC sheath, orange,-20~105℃, end 8-pin connector

14 - 15 Cable length, 0199 units: meters (Cable outlet mode)

12 - 15 Cable outlet mode

12 - 15 0DR cable outlet first and end with plastic connector

0DR2	Scattered wire with plastic connector 65mm
0DR3	Scattered wire with plastic connector 170mm
0DR4	Scattered wire with plastic connector 230mm
0DR5	Scattered wire with plastic connector 350mm

12 - 15 Connector mode

PH60	M16 male connector (6 pins)
PB80	M16 male connector (8-pin)

Note: For supporting cables, please refer to the Guide for Selection of Cable Accessories

16 - 19 Signal output mode

17 Input voltage

1	+ 24Vdc （- 20% ~ + 20%）
2	+ 9 ~ 28.8Vdc

18 - 19 Output signal

01	Start/Stop， multi-Magnet ring

20 - 21 Non-usable area at head and end, customizable

S0	50.8mm+63.5mm
B0	30mm+60mm

X x Selection Guide-CAN Bus

R	D	–	M					–		–				–					–	C					–		
01	02		03	04	05	06	07		08		09	10	11		12	13	14	15		16	17	18	19	20		21	22

01 - 02 Sensor shell form

R D	Split structure

03 - 07 Measuring range

Four digits, less than four digits are preceded by zero, M means metric system, unit mm

08 Outer tube flange

A	M18X1.5 SW46
B	M18X1.5 SW24
C	Connecting flange

09 - 11 Connection mode of outer tube

09 Cable outlet mode

S	Cable enters from the side, PUR cable
B	Cable entry from bottom, independent cable with flat plastic connector
C	Cable entry from side, independent cable with flat plastic connector

10 - 11 Cable length

M 1	1m	M 2	2m	M 3	3m
M 4	1.5m	D 1	250mm	D 2	400mm
D 3	600mm	R 2	65mm	R 4	170mm
R 5	230mm	R 6	350mm		

12 - 15 Connection form

12 - 13 Cable outlet mode

D A	PVC sheath, purple, 4 cores,-40℃~75℃, end scattered

14 - 15 Cable outlet mode: cable length, 01-99m

0 D R 1	PVC sheath, length 150mm, end 5-pin male connector

12 - 15 Connector mode

P D 6 0	6-pin male connector (M16)
P D 6 2	Two sets of 6-pin male connector (M16)
P D 5 0	5-pin male connector (M12)
P D 5 2	5-pin male connector (M12) and 5-pin female connector (M12)
P D 5 4	5-pin male connector (M12), 5-pin female connector (M12), 4-pin male connector (M8)

For supporting cables, please refer to CAN bus cable Accessories selection

16 - 20 Signal output mode

16 Interface

C	CAN bus

17 Protocol type

1	CANopen	2	CANBasic

18 Baud

1	1000kBit/s	2	800kBit/s
3	500kBit/s	4	250kBit/s
5	125kBit/s	6	100kBit/s
7	50kBit/s	8	20kBit/s

19 Resolution

1	0.1mm	2	0.05mm
3	0.02mm	4	0.01mm
5	0.005mm	6	0.002mm
7	0.001mm		

20 Number of Magnet rings (1~9 optional)

21 - 22 Non-usable area at head and end, customizable

S 0	50.8mm+63.5mm
B 0	30mm+60mm

Selection Guide-Profinet Output

R	D	–	M					–		–				–				–	N			–		
01	02		03	04	05	06	07		08		09	10	11		12	13	14	15		16	17	18		19	20

01 - 02 Sensor shell form

RD	Split structure

03 - 07 Measuring range

Four digits, less than four digits are preceded by zero, M means metric system, unit mm

08 Outer tube flange

A	M18X1.5 SW46
B	M18X1.5 SW24
C	Connecting flange

09 - 11 Connection mode of outer tube

09 Cable outlet mode

S	Cable enters from the side, PUR cable
B	Cable entry from bottom, independent cable with flat plastic connector
C	Cable entry from side, independent cable with flat plastic connector

10 - 11 Cable length

M1	1m	M2	2m	M3	3m		
M4	1.5m	D1	250mm	D2	400mm		
D3	600mm	R2	65mm	R4	170mm		
R5	230mm	R6	350mm				

12 - 15 Connection form

DA**	Single cable outlet, light green, PUR sheath (6 cores),-40℃~85℃ (**indicating cable length, unit: meter)
DB**	Double cable outlet, light green, PUR sheath (one set of 6 cores,-40℃~85℃; one set of 4 cores,-40℃~70℃) (**denotes cable length, unit: meters)
PD56	2 sets of 4-pin M12 female connector, 1 set of 4-pin M8 male connector

Note: For supporting cables, please refer to the Guide for Selection of Industrial Ethernet Cable Accessories

16 - 18 Communication interface

16 N	Profinet communication interface
17	Number of Magnet rings (1~9 optional)
18	0-General, customizable

19 - 20 Non-usable area at head and end, customizable

S0	50.8mm+63.5mm
B0	30mm+60mm

XX Selection Guide-EtherCAT Output

R	D	–	M					–		–				–					–	E				–		
01	02		03	04	05	06	07		08		09	10	11		12	13	14	15		16	17	18	19		20	21

01 - 02 Sensor shell form

RD	Split structure

03 - 07 Measuring range

Four digits, less than four digits are preceded by zero, M means metric system, unit mm

08 Outer tube flange

A	M18X1.5 SW46
B	M18X1.5 SW24
C	Connecting flange

09 - 11 Connection mode of outer tube

09 Cable outlet mode

S	Cable enters from the side, PUR cable
B	Cable entry from bottom, independent cable with flat plastic connector
C	Cable entry from side, independent cable with flat plastic connector

10 - 11 Cable length

M1	1m	M2	2m	M3	3m
M4	1.5m	D1	250mm	D2	400mm
D3	600mm	R2	65mm	R4	170mm
R5	230mm	R6	350mm		

12 - 15 Connection form

DA**	Single cable outlet, light green, PUR sheath (6 cores),-40°C~85°C (** indicating cable length, unit: meter)
DB**	Double cable outlet, light green, PUR sheath (one set of 6 cores,-40℃~85℃; one set of 4 cores,-40℃~70℃) (**denotes cable length, unit: meters)
PD56	2 sets of 4-pin M12 female connector, 1 set of 4-pin M8 male connector

16 - 19 Communication interface

16 - 17 Sensor form

E1	EtherCAT, 1-9 magnets, position and speed, distributed clock optional

18 - 19 Number of Magnet rings

	01~09 optional

20 - 21 Non-usable area at head and end, customizable

S0	50.8mm+63.5mm
B0	30mm+60mm

Wiring Mode

When the sensor is a connector output, refer to the pin definition in the following table for wiring mode; when the sensor is cable outlet cable output, refer to the cable color definition in the following table for connection mode

Analog

• Pin arrangement of six-pin male connector (facing the sensor head)

Pin	Cable color 1*	Cable color 2*	Pin/wire function definition
1	Blue	Grey	No.1 Magnet position signal(+)
2	Green	Pink	Position signal of No.1 Magnet(-)
3	Yellow	Yellow	Reservation
4	White	Green	Reservation
5	Red	Brown	+24Vdc power supply (-20%~+20%)
6	Black	White	0 Vdc (power supply circuit)

Note: * Cable color 1: Cable PUR sheath, orange,-20-90℃
* Cable color 2/3: Cable PVC sheath, orange,-20-105℃

Analog

• Pin arrangement of eight-pin male connector (facing the sensor head direction)

Pin	Cable color3*	Pin/wire function definition
1	Yellow	Current output
2	Grey	0Vdc(Current/Voltage Loop)
3	Pink	Reservation
4	-	Reservation
5	Green	0...10V
6	Blue	0 Vdc (power supply circuit)
7	Brown	+24Vdc power supply (-20%~+20%)
8	White	Reservation

SSI

• Pin arrangement of seven-pin male connector (facing the sensor head)

Pin	Cable color 1*	Cable color 2*	Pin/wire function definition
1	White	Grey	Data (-)
2	Yellow	Pink	Data (+)
3	Blue	Yellow	Clock (+)
4	Green	Green	Clock (-)
5	Red	Brown	+24Vdc power supply (-20%~+20%)
6	Black	White	0 Vdc
7	-	-	Do not connect

* Cable color 1: Cable PUR sheath, orange,-20-90℃
* Cable color 2/3: Cable PVC sheath, orange,-20-105℃

SSI

• Pin arrangement of eight-pin male connector (facing the sensor head direction)

Pin	Cable color3*	Pin/wire function definition
1	Yellow	Clock (+)
2	Grey	Data (+)
3	Pink	Clock (-)
4	-	Reservation
5	Green	Data (-)
6	Blue	0 Vdc (power supply circuit)
7	Brown	+24Vdc power supply (-20%~+20%)
8	White	Reservation

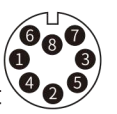
Start/Stop Output

• 6-pin male connector arrangement (facing the sensor head)

Pin	Line color 1*	Line color 2*	Pin/wire function definition
1	Blue	Grey	Stop (-)
2	Green	Pink	Stop (+)
3	Yellow	Yellow	Start (+)
4	White	Green	Start (-)
5	Red	Brown	+24Vdc power supply (-20%~+20%)
6	Black	White	0 Vdc(power supply circuit)

Note: * Line color 1: Cable PUR sheath, orange,-20~90℃
* Line color 2/3: Cable PVC sheath, orange,-20~105℃

Start/Stop Output



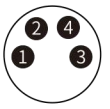
• Pin arrangement of eight-pin male connector (facing the sensor head direction)

Pin	Line color 1*	Pin/wire function definition
1	Yellow	Start (+)
2	Grey	Stop (+)
3	Pink	Start (-)
4	-	Reservation
5	Green	Stop (-)
6	Blue	0 Vdc(power supply circuit)
7	Brown	+24Vdc power supply (-20%~+20%)
8	White	Reservation

Wiring Mode

When the sensor is a connector output, refer to the pin definition in the following table for wiring mode; when the sensor is cable outlet cable output, refer to the cable color definition in the following table for connection mode

Profibus-DP bus output

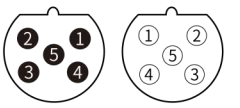


Four-pin connector socket (for power supply)

• Pin arrangement of four-pin male connector (facing the sensor head)

Pin	Cable color	Pin/wire function definition
1	Brown	+24Vdc power supply (-20%~+20%)
2	White	Do not connect
3	Blue	0Vdc(power supply circuit)
4	Black	Do not connect

Profibus-DP bus output

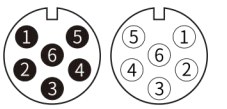


• Five-pin male connector and female connector pin arrangement (facing the sensor head direction)

Pin	Cable color	Pin/wire function definition
1	-	VP+5N (for end connections only) *
2	Green	RxD/TxD-N(bus)
3	-	DGnd (for end connections only) *
4	Red	RxD/TxD-P(bus)
5	Shielded wire	for end connections only

Note: * Only applicable to signal connection of sensor female connector

Profibus-DP bus output



• The pins of the six-pin male connector and female connector are arranged in the direction of the sensor head)

Pin	Cable color	Pin/wire function definition
1	Green	RxD/TxD-N(bus)
2	Red	RxD/TxD-P(bus)
3	-	DGnd (for end connections only) *
4	-	VP+5N (for end connections only) *
5	Black	+24Vdc power supply (-20%~+20%)
6	Blue	0 Vdc (power supply circuit)

Note: * Only applicable to signal connection of sensor female connector

Profinet Output

• Connector Connection Mode (Interface 1, 2)

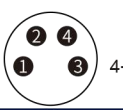
Pin	Line color	Pin/wire function definition
1	Yellow	Tx +
2	White	Rx +
3	Orange	Tx -
4	Blue	Rx -

• Single cable outlet connection mode

Pin	Line color 1*	Pin/wire function definition
1	Yellow	Tx +
2	White	Rx +
3	Orange	Tx -
4	Blue	Rx -
5	Red	24Vdc
6	Black	COM

Note: * Line color 1: light green, PUR sheath, 6 cores,-40C~85℃

Profinet Output



4-pin connector socket (for power supply)

• Connector Connection Mode (Interface 3)

Pin	Line color	Pin/wire function definition
1	Brown	+24Vdc (-20%~+20%)
2	White	Do not connect
3	Blue	COM
4	Black	Do not connect

• Double cable outlet connection mode

Pin	Line color1*	Line color2*	Pin/wire function definition
1	Yellow	Yellow	Tx +
2	White	White	Rx +
3	Orange	Orange	Tx -
4	Blue	Blue	Rx -
5	Red	-	24Vdc
6	Black	-	COM

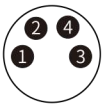
Note: * Line color 2: light green, PUR sheath, 4 cores,-40C~70℃

Wiring Mode

When the sensor is a connector output, refer to the pin definition in the following table for wiring mode; when the sensor is cable outlet cable output, refer to the cable color definition in the following table for connection mode

CAN bus output

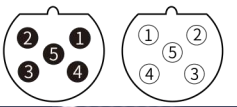
Four-pin connector socket
(for power supply)



• Pin arrangement of four-pin male connector (facing the sensor head)

Pin	Cable color	Pin/wire function definition
1	Brown	+24Vdc power supply (-20%~+20%)
2	White	Do not connect
3	Blue	0Vdc(power supply circuit)
4	Black	Do not connect

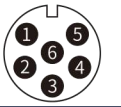
CAN bus output



• Five-pin male connector and female connector pin arrangement (facing the sensor head direction)

Pin	Cable color	Pin/wire function definition
1	-	Do not connect
2	Brown	+24Vdc power supply (-20%~+20%)
3	White	0Vdc (power supply circuit)
4	Yellow	CAN(+)
5	Green	CAN (-)

CAN bus output



• Pin arrangement of six-pin male connector (facing the sensor head)

Pin	Cable color	Pin/wire function definition
1	Green	CAN (-)
2	Yellow	CAN (+)
3	-	Do not connect
4	-	Do not connect
5	Brown	+24Vdc power supply (-20%~+20%)
6	White	0 Vdc (power supply circuit)

EtherCAT Output

• Connector Connection Mode (Interface 1, 2)

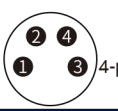
Pin	Line color	Pin/wire function definition
1	Yellow	Tx +
2	White	Rx +
3	Orange	Tx -
4	Blue	Rx -

• Single cable outlet connection mode

Line color 1*	Pin/wire function definition
Yellow	Tx +
White	Rx +
Orange	Tx -
Blue	Rx -
Red	24Vdc
Black	COM

Note: * Line color 1: light green, PUR sheath, 6 cores,-40C~85℃

EtherCAT Output



4-pin connector socket
(for power supply)

• Connector Connection Mode (Interface 3)

Pin	Line color	Pin/wire function definition
1	Brown	+24Vdc(-20%~+20%)
2	White	Do not connect
3	Blue	COM
4	Black	Do not connect

• Double cable outlet connection mode

Line color1*	Line color2*	Pin/wire function definition
Yellow	Yellow	Tx +
White	White	Rx +
Orange	Orange	Tx -
Blue	Blue	Rx -
Red	-	24Vdc
Black	-	COM

Note: * Line color 2: light green, PUR sheath, 4 cores,-40C~70℃