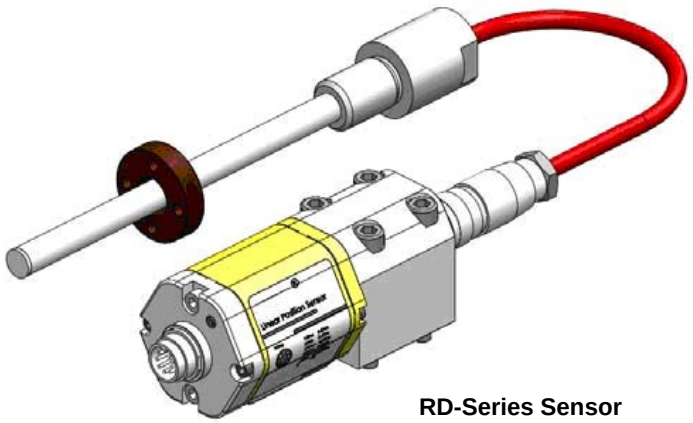
High accuracy, separated body design



RD-Series Sensor

Features

- High accuracy, separated body design, small space installation required.
- Rugged and reliable, oil fouling resistant
- No zero, absolute displacement output
- Easy to diagnosis, LED lamp real-time display
- Low power design, reduce the heat

RD series products with measuring rod head size Ø26.9x32 mm, is suitable for installation space which has the strict request built-in measuring occasions, measuring rod part of the protection class IP69, applied to wind power, engineering machinery, etc high demand field.

Analog/SSI Output

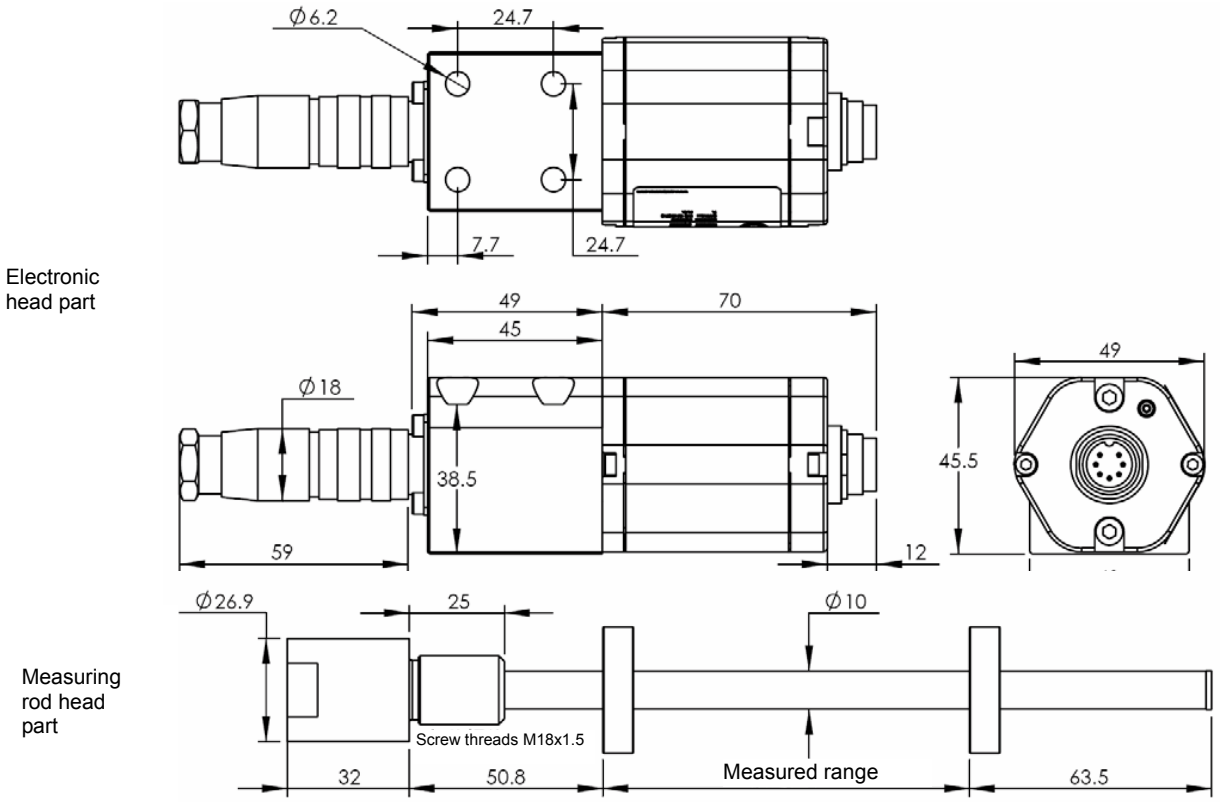
PARAMETERS SPECIFICATIONS

	Analog output	*SSI output*
Measuring parameters		
Measured range:	50mm-1500mm	50mm-1500mm
Output :	Current 4-20mA(**Load resistance**: ≤500Ω) Voltage 0- 10Vdc (**Load resistance:** >5kΩ)	SSI signal : 24,25,26 bit binary/Gray code Transmission speed: 70kBd-1Mb
		Wire length: <3 <50 <100 <200 <400 m Speed: 1000<400 <300 <200 <100 kBd
Resolution:	16 bit D/A(no limit)	2/5/10/20/50/100 um
Non-linearity :	<±0.01% of full stroke(Min.50um).	<±0.01% of full stroke(Min.40um).
Repeatability:	<±0.002% of full stroke.(Min.2um)	<±0.002% of full stroke.(Min.1 bit)
Updated time:	>1 KHz	stroke 300 750 1000 2000 5000 （mm） Frequency 3.7 3.0 2.3 1.2 0.5 （kHz）
Operation conditions		
Operating Temperature:	-40℃ to +85℃	-40℃ to +85℃
Temperature coefficient:	<30ppm℃	<30ppm℃
Relative humidity:	90% no condensation	90% no condensation
Electronic protection:	IP69 for measuring rod IP67 for electronic head	IP69 for measuring rod IP67 for electronic head
Mounting and attachment		
	Mounting type: screw threads M18x1.5 or by custom Mechanical assembly: O-sealing ring 15.3x2.2 mm, FPM75, Magnet type: Ring magnet OD33, OD25.4	Mounting type: screw threads M18x1.5 or by custom Mechanical assembly: O-sealing ring 15.3x2.2 mm, FPM75, Magnet type: Ring magnet OD33, OD25.4
Electrical characteristics		
	Wiring type: Integral cable or 6 pin Aviation connector Operating voltage: 24Vdc(-15/+20%) Polarity protection: up to -30Vdc Overvoltage protection: up to 36Vdc Fault display: Fed, Green dual LED displayer	Wiring type: Integral cable or 7 pin Aviation connector Operating voltage: 24Vdc(-15/+20%) Polarity protection: up to -30Vdc Overvoltage protection: up to 36Vdc Fault display: Fed, Green dual LED displayer

Analog/SSI Output

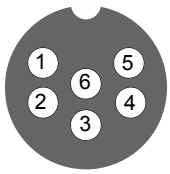
Model RD sensor dimension reference

Model RD Sensor: Drawing is for reference only, contact applications engineering for tolerance specific information



Electronic wiring

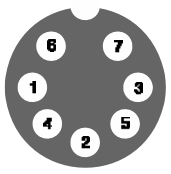
Analog Output type



Male connector
(Face to sensor head)

Pin	Color	Description
1	Gray	Output Signal(0-20mA, 0-10V)
2	Pink	Output(GND)
3	Yellow	(+) Communication interface
4	Green	(-) Communication interface
5	Brown	(+) Power +24Vdc(-15/+20%)
6	White	(GND) Power

SSI Output type



Male connector
(Face to sensor head)

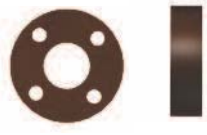
Pin	Color	Description
1	Gray	(-)Output Signal
2	Pink	(+)Output Signal
3	Yellow	(+) Clock
4	Green	(-) Clock
5	Brown	(+) Power +24Vdc(-15/+20%)
6	White	(GND) Power
7	N.C.	

Analog/SSI Output

Standard magnet selections

MAGNET MAGNET(OD33)

with holes(Ø4.3) for fixing



Material: Ferrite PA

O.D.: 33mm(1.3 in.)

I.D.: 13.5mm(0.53in.)

Thickness: 8mm(0.31in.)

RING MAGNET(OD25.4)

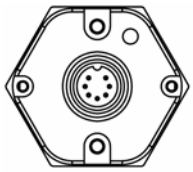
Material: Ferrite PA

O.D.: 25.4mm(1 in.)

I.D.: 13.5mm(0.53in.)

Thickness: 8mm(0.31in.)

Status indicator



Status	Description
Green on	Normal working
Green flash	Programming mode
Red flash	Magnet out of range
Red on	Magnet not detected

Ordering Information

Analog Output type

R D M ☐☐ – ☐☐☐☐ M – ☐☐☐ – ☐☐☐

MOUNTING SCREW

M = screw threads M18x1.5, HEX23

MEASURING ROD CONNECTION

D1 = PUR cable, length 250mm
D2 = PUR cable, length 400mm
D3 = PUR cable, length 600mm
E1 = PVC cable, length 250mm
E2 = PVC cable, length 400mm
E3 = PVC cable, length 600mm

STROKE LENGHT

0050 to 1500 mm in 5mm step

OUTPUT

A10 = Current 4-20mA
A11 = Current 20-4mA
V10 = Voltage 0-10V
V11 = Voltage 10-0V

CONNECT TYPE

Aviation connector
D60 = 6 pin analog output connector
D70 = 7 pin SSI output connector

Waterproof cable: (unit m)
S_ _ = standard cable + cable length
T_ _ = high temperature cable + cable length

SSI Output type

R D M ☐☐ – ☐☐☐☐ M – ☐☐☐ – S ☐☐☐☐

MOUNTING SCREW

M = screw threads M18x1.5, HEX23

MEASURING ROD CONNECTION

D1 = PUR cable, length 250mm
D2 = PUR cable, length 400mm
D3 = PUR cable, length 600mm
E1 = PVC cable, length 250mm
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STROKE LENGHT

0050 to 1500 mm in 5mm step

CONNECT TYPE

Aviation connector
D60 = 6 pin analog output connector
D70 = 7 pin SSI output connector

Waterproof cable: (unit m)
S_ _ = standard cable + cable length
T_ _ = high temperature cable + cable length

OUTPUT FORMAT

1G = 25 bit Gary 1B = 25 bit binary
2G = 24 bit Gary 2B = 24 bit binary
3G = 26 bit Gary 3B = 26 bit binary

RESOLUTION

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

OUTPUT DIRECTION

0 = positive
1 = negative