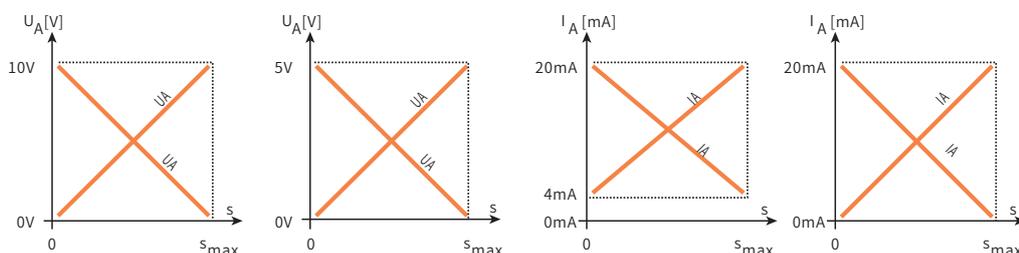




GR-Analog

GR - External Aluminum Housing -type sensor



- + Easy to install: push-pull rod type, quick installation
- + Linear measurement, absolute value output without zeroing
- + Easy to use, standard single output, maintenance-free
- + High resolution: resolution up to $1\mu\text{m}$
- + Widely used: printing, papermaking, rubber and plastic machinery and other fields



Document Number:
GR-A (V1.1)-EN

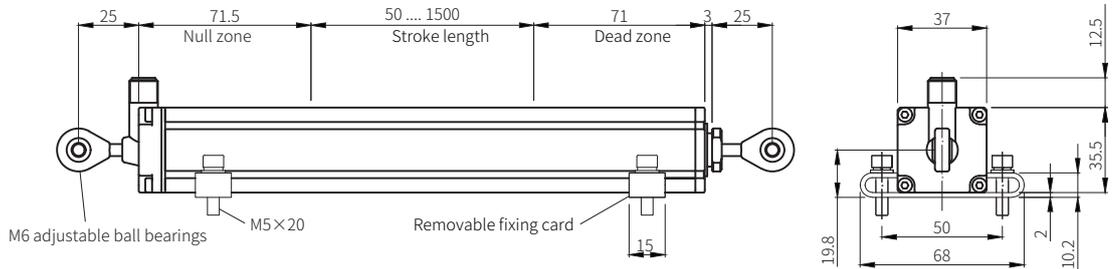
www.tbfsensor.com

TECHNICAL PARAMETER

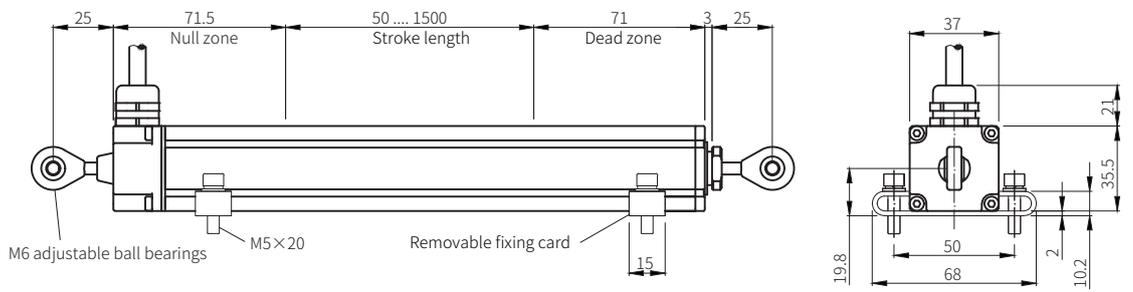
Input							
Measured data	Position						
Measurement range	50mm...1500mm						
Output							
Voltage	0...10VDC, 10...0VDC, 0...5VDC, 5...0VDC (Controller min. load impedance >5K Ω)						
Current	4...20mA, 20...4mA, 0...20mA, 20...0mA (min./max. load 0/750 Ω)						
Resolution							
Position resolution	16 bit D/A (internal resolution 1 μ m)						
None-Linearity	< $\pm 0.02\%$ F.S. (min. $\pm 50\mu$ m)						
Repeatability	< $\pm 0.005\%$ F.S. (min. $\pm 20\mu$ m)						
Update time	<table border="1"> <thead> <tr> <th>Stroke length</th> <th>≤ 1200mm</th> <th>≤ 1500mm</th> </tr> </thead> <tbody> <tr> <td>Update time</td> <td>0.5ms</td> <td>1ms</td> </tr> </tbody> </table>	Stroke length	≤ 1200 mm	≤ 1500 mm	Update time	0.5ms	1ms
Stroke length	≤ 1200 mm	≤ 1500 mm					
Update time	0.5ms	1ms					
Temperature coefficient	< 30ppm/ $^{\circ}$ C						
Mounting							
Mounting position	Any						
Installation type	M6 ball bearings, Removable fixing card						
Design/Material							
Sensor shell	Aluminum alloy						
Push-pull rods	Aluminum alloy						
Electrical connection							
Wiring connection	Straight out cable or aviation plug						
Operating voltage	+24VDC (-15/+20%)						
Polarity protection	Up to -36VDC						
Overvoltage protection	Up to +36VDC						
Power consumption	< 70mA (varies with range size)						
Insulation strength	500 VDC (DC ground to machine ground)						
Operating conditions							
Magnet movement speed	≤ 5 m/s						
Operating temperature	-40...85 $^{\circ}$ C						
Humidity	90 % relative humidity, no condensation						
Ingress protection	IP65						
Shock	100 g (single shock) IEC standard 60068-2-27						
Vibration	5g/10...2000 Hz, IEC standard 60068-2-6 (resonant frequencies excluded)						
EMC	Electromagnetic emission according to EN 61000-6-3 Electromagnetic immunity according to EN 61000-6-2						

TECHNICAL DRAWING

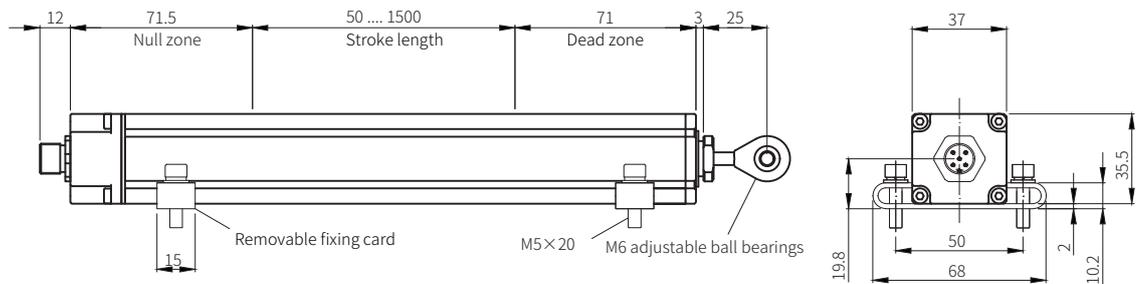
Radial outlet, 5 pin M12 connector



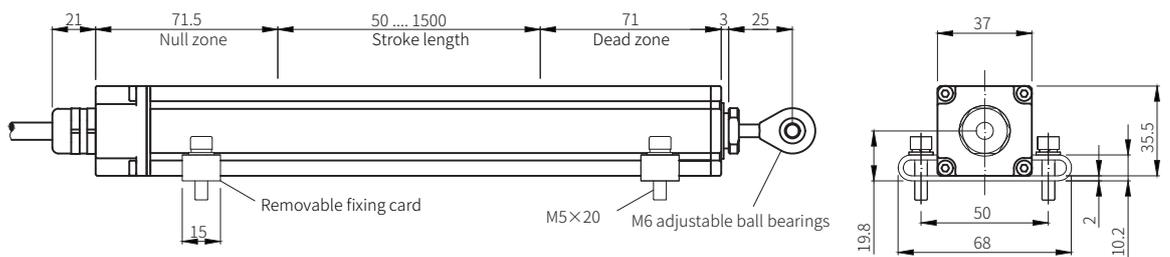
Radial outlet, Straight out cable



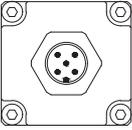
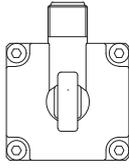
Axial outlet, 5 pin M12 connector 型

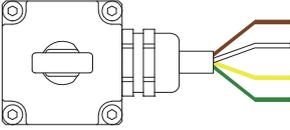
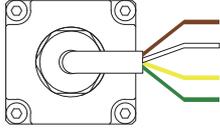


Axial outlet, Straight out cable



Wiring

5 pin M12 connector		PIN	Function
			
		1	+24VDC (-15/+20%)
		2	Signal output
		3	GND
		4	NC
		5	SGND

Side outgoing cable	Straight out cable	Color	Function
		Brown	+24VDC (-15/+20%)
		Green	Signal output
		White	GND
		Yellow	SGND

ORDER CODE

GR -	M-		Output
Outgoing direction	Stroke length	Connection type	(Output Code)
R Radial	0050...1500mm	RP/T__ Straight out __m high performance /high temperature cable	
A Axial	(5mm increments)	D5P/T__ 5 pin M12 connector, with __m high performance /temperature cable	
		D5 5 pin M12 connector	

(If the cable length is less than two digits, add zeros in front.)

Analog Output Code [1][2][3]

[1] [2] Output	[3] Magnet
A0 4...20mA (forward) V0 0...10V (forward)	1 one magnet
A1 20...4mA (reverse) V1 10...0V (reverse)	
A2 0...20mA (forward) V2 0...5V (forward)	
A3 20...0mA (reverse) V3 5...0V (reverse)	

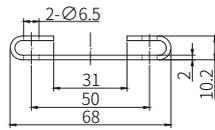
Note: Forward, data grows larger when the magnet is distant from the electronics housing;
Reverse, data grows larger when the magnet approaches the electronics housing.

Model selection	Model: GR-R-0600M-D5-A01
	Explanation: GR type , Radial outlet, stroke length 600mm, 5pin M12 aviation plug, 4...20mA (forward), single magnet.

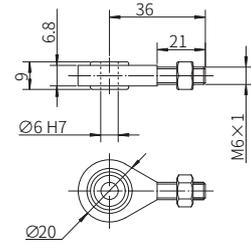


ACCESSORIES

Analog



Width:15mm



Name	Removable fixing card	M6 fish eyeball head bearing
Order code	11-1009	11-1007



Connector	5 pin M12 female connector	5 pin female connector (90 degree angle)
Name	Integral cable	Integral cable
Cable	5 wire 0.25mm ² shielded cable	5 wire 0.25mm ² shielded cable
Color/Diameter	Orange/ Ø 6	Orange/ Ø 6
End view drawing	<ul style="list-style-type: none"> 1-Brown 2-Green 3-White 4-Grey 5-Yellow 	<ul style="list-style-type: none"> 1-Brown 2-Green 3-White 4-Grey 5-Yellow
Length	5...30M	5/10/15/20/30M
Order code	16-1035	16-1040

■ For more customizable products, please contact us.

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