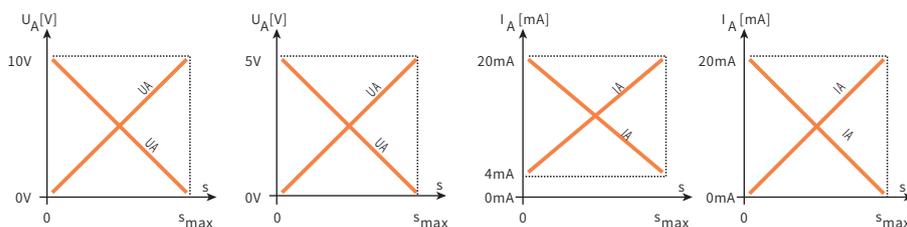




# ZF-Analog

## Data Sheet



- + Integrated profile, miniaturized design, suitable for small space installation
- + Easily installed: integrated design, no protruding electronics housing
- + Easy to use: standard signal output, maintenance free
- + Widely applied in forging, building materials, rubber and plastic machinery and other fields

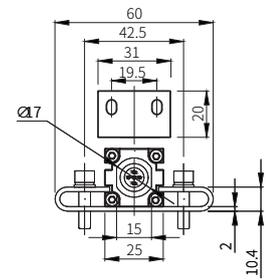
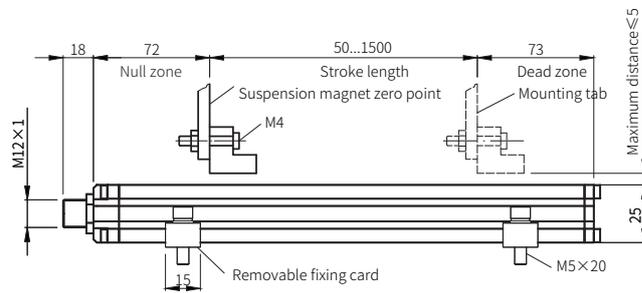
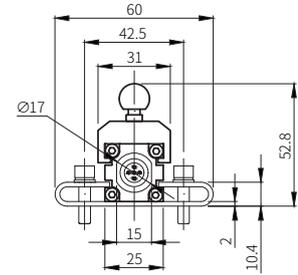
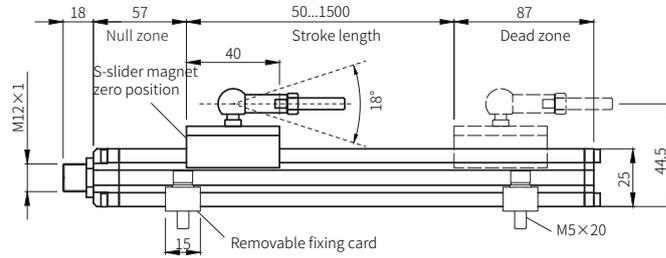


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ZF-A(V1.2)-EN

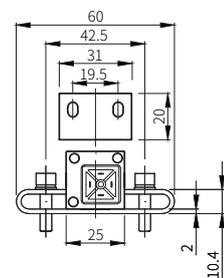
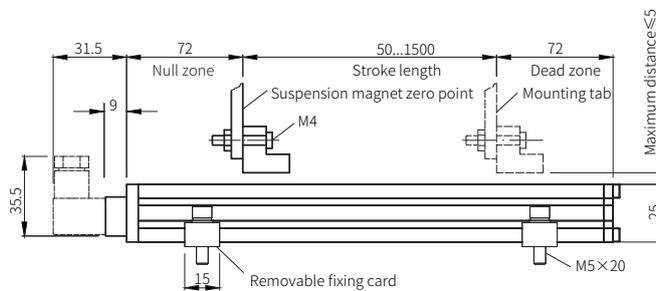
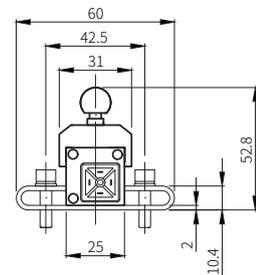
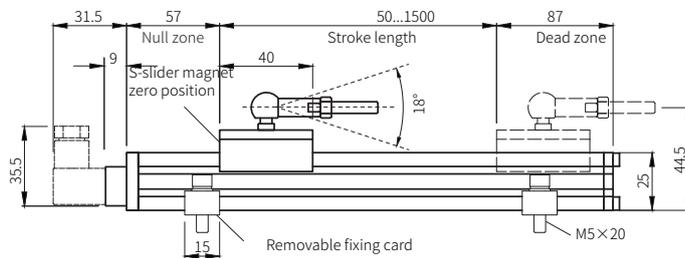
## TECHNICAL PARAMETER

<b>Input</b>	
Measured data	Position
Measurement range	50mm~1500mm
<b>Output</b>	
Voltage	0...10VDC, 10...0VDC, 0...5VDC, 5...0VDC (Controller min. load impedance >5K $\Omega$ )
Current	4...20mA, 20...4mA, 0...20mA, 20...0mA (min./max. load 0/750 $\Omega$ )
<b>Resolution</b>	
Resolution	16 bit D/A,
None-Linearity	< $\pm 0.2\%$ F.S. (min. $\pm 50\mu\text{m}$ )
Repeatability	< $\pm 0.01\%$ F.S. (min. $\pm 20\mu\text{m}$ )
Update time	< 2ms (Depends on the range)
Temperature coefficient	< 30ppm/ $^{\circ}\text{C}$
<b>Mounting</b>	
Mounting position	Any
Fixation	Removable fixing card
<b>Design/Material</b>	
Sensor cap	PA6
Sensor profile	Aluminum alloy
<b>Electrical connection</b>	
Wiring connection	Straight out cable or aviation plug/Rectangular connector
Operating voltage	+24VDC(-15/+20%)
Polarity protection	Up to -36VDC
Overvoltage protection	Up to +36VDC
Power consumption	< 70mA (varies with range size)
Dielectric strength	500 VDC (DC ground to machine ground)
<b>Operating conditions</b>	
Magnet velocity	Slider magnet $\leq 10\text{m/s}$ ; suspension magnet, any.
Operating temperature	-40...85 $^{\circ}\text{C}$
Humidity	90 % relative humidity, no condensation
Ingress protection	IP65
Shock	50 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

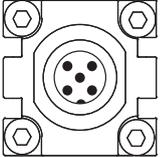
5 pin M12 connector

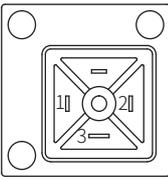
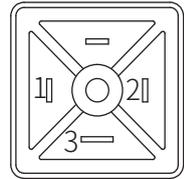


Rectangular connector



## FUNCTION

5 pin M12 connector	PIN	Color	Function
	 View on sensor	1	Brown +24VDC (-15/+20%)
		2	White 0 VDC (GND)
		3	Green Signal output
		4	- NC
		5	Yellow Signal ground

Rectangular connector	H408	PIN	Color	Function
	 View on sensor	1	Brown +24VDC (-15/+20%)	
		2	White 0 VDC (GND)	
		3	Green Signal output	
		4	Yellow NC	

## ORDER CODE

ZF - - - M- - - -	Magnet	Stroke length	Connection type	Output
S	Magnet slider joint at top	0050...1500mm (5mm increments)	H408P/T_ _ Rectangular connector, with _ _m high performance cable	(Output Code)
F	Suspension magnet		D5P/T_ _ 5 pin M12 connector, with _ _m high performance /temperature cable	
			D5P0 5 pin M12 connector	

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

Analog Output Code	[1][2] Output	[3] Magnet
A0	4...20mA (forward)	V0 0...10V (forward)
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: ZF-F-0600M-D5P0-A01

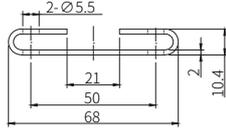
Explanation: ZF external aluminum profile displacement sensor, suspension magnet, stroke length 600mm, 5pin M12 aviation plug, output 4...20mA (forward), single magnet.

■ Please contact us for more customized products.

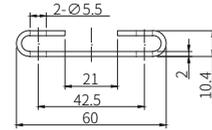


# PARTS SELECTION

## Analog

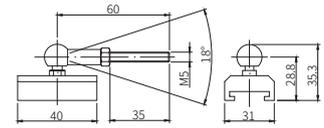
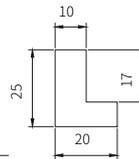
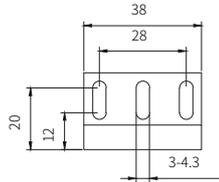
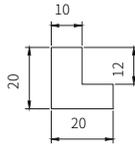
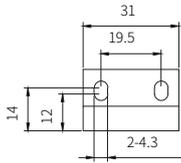


Width: 15mm



Width: 15mm

Name	Removable fixing card	Removable fixing card
<b>Order code</b>	<b>11-1020</b>	<b>11-1021</b>



Name	Suspension magnet 31x20	Suspension magnet 38x25	Magnet slider S, joint at top
<b>Order code</b>	<b>12-1010</b>	<b>12-1009</b>	<b>12-1090</b>



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

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