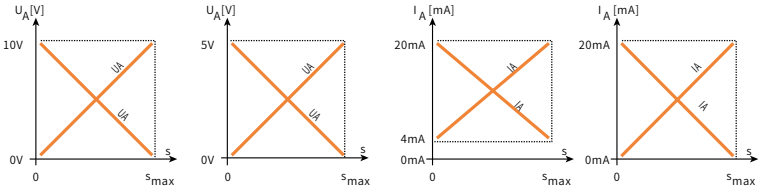
GP

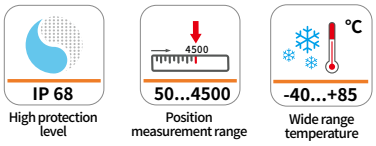
GP2-Series

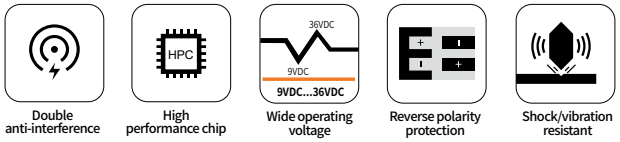
GP2-Analog

GP2-Series Data Sheet



- Updated new generation: stronger performance
- Easily installed: integrated design, no protruding electronics housing
- Easy to use: standard signal output, maintenance free
- Widely applicated in forging, building materials, rubber and plastic machinery and other fields



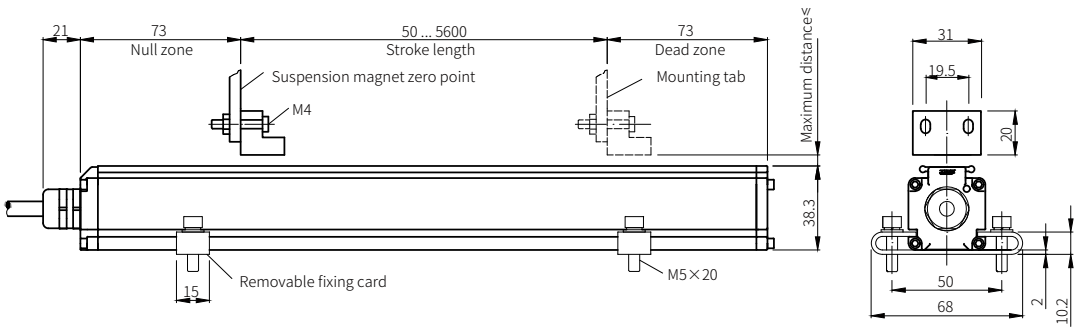


TECHNICAL PARAMETER

ITEM	CATEGORY	PARAMETER
Input	Measured data	Position/Velocity
	Measurement range	50mm...5600mm
Output	Voltage	0...10VDC, 10...0VDC, 0...5VDC, 5...0VDC (Controller min. load impedance >5KΩ)
	Current	4...20mA, 20...4mA, 0...20mA, 20...0mA (min./max. load 0/750Ω)
Resolution	Resolution	16 bit D/A
	None-Linearity	＜ ±0.02%F.S. (min. ±50μm)
	Repeatability	＜ ±0.005%F.S. (min. ±20μm)
	Update time	Stroke length: ⩽ 1200mm / ⩽ 2400mm / ⩽ 5600mm Update time: 0.5ms / 1ms / 2ms
	Temperature coefficient	＜ 30ppm/°C
Mounting	Mounting position	Any
	Fixation	Removable fixing card
Design/ Material	Sensor cap	Aluminum alloy/Zinc alloy
	Sensor profile	Aluminum alloy
Electrical connection	Wiring connection	Straight out cable or aviation plug
	Operating voltage	9VDC...36VDC
	Polarity protection	Up to -36VDC
	Overvoltage protection	Up to +36VDC
	Power consumption	＜ 50mA (varies with range size)
	Dielectric strength	500 VDC (DC ground to machine ground)
Operating conditions	Magnet velocity	Slider magnet ⩽ 10m/s; suspension magnet, any.
	Operating temperature	-40...85°C
	Humidity	90 % relative humidity, no condensation
	Ingress protection	IP67 (when connector is fitted)/IP68 (straight out cable)
	Shock	100 g (single shock) IEC standard 60068-2-27
	Vibration	15g/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

Straight out cable

GP2- ____- **RP_ _ - _____**
GP2- ____- **RT_ _ - _____**



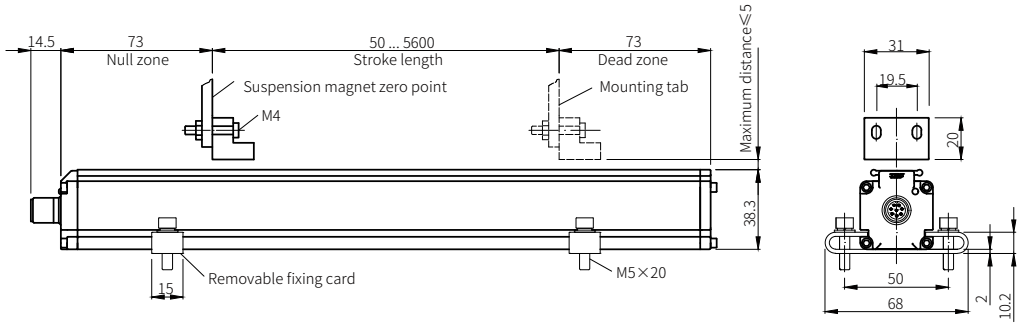
FUNCTION

Color	● Brown	○ White	● Yellow	● Green	● Gray*	● Pink*
Function	9VDC...36VDC	0 VDC(GND)	Signal ground 1	Signal output 1	Signal output 2*	Signal ground 2

"*"adaptable for dual output signal connection

8 pin M12 connector

GP2- ____- **D812- _____**



FUNCTION

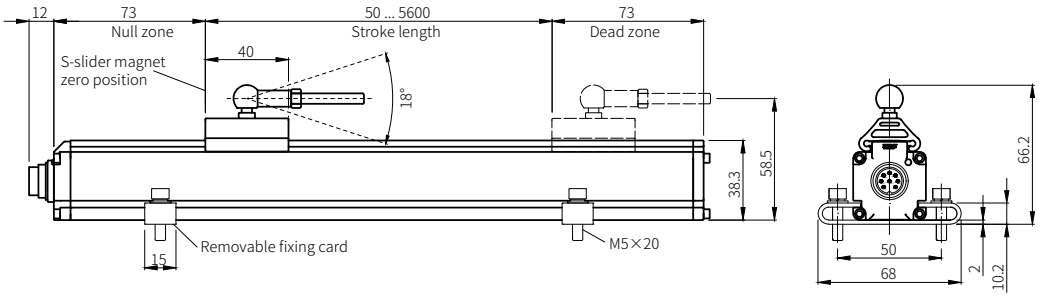
PIN-male	1*	2	3*	4	5	6	7	8
Function	Signal ground 2	Signal ground 1	Signal output 2*	NC	Signal output 1	0 V (GND)	9 ...36 VDC	NC

"*"adaptable for dual output signal connection

View on sensor

8 pin M16 connector

GP2- ____- **D816- _____**



Current signal output

PIN-Male	1	2	*3	4	5	6	7	8
Function	Current signal output1	Signal ground	*Current signal output1	NC	NC	0 V (GND)	9...36 VDC	NC

View on sensor

Voltage signal output

PIN-Male	1	2	*3	4	5	6	7	8
Function	NC	Signal ground	*Voltage signal output2	NC	Voltage signal output1	0 V (GND)	9...36 VDC	NC

Note: Pin effectiveness reponds to actual signal.
"*"adaptable for dual output signal connection

ORDER CODE

GP2 - _ - _ _ _ _M-_ _ _ _ - _____

Magnet

S Magnet slider joint at top
F Suspension magnet

Stroke length

0050...5600mm
(5mm increments)

Connection type

RP_ _ Straight out _ _m high performance cable
RT_ _ Straight out _ _m high temperature cable
(Fill in zero if less than 2 places)
D812 8 pin M12 connector
D816 8 pin M16 connector

Output

(Output Code)

Analog Output Code	[1][2]-[3][4] [5]		
[1] System	**[2] Output**	**[3][4] Current/Voltage**	**[5] Magnet**
1 Standard	1 Position	A0 4...20mA (forward)	1 one magnet
K Anti-vibration program	2 Position and velocity	A1 20...4mA (reverse)	2 two magnets
	3 Position and reverse position	A2 0...20mA (forward)	
	5 Position and temperature inside the sensor electronics housing	A3 20...0mA (reverse)	
	6 Position and rate	V0 0...10V (forward)	
		V1 10...0V (reverse)	
		V2 0...5V (forward)	
		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: GP2-F-0600M-D812-11-A01

Explanation: GP2 type II generation, Suspension magnet, stroke length 600mm, 8pin M12 aviation plug, standard, position measurement, 4...20mA (forward), single magnet.

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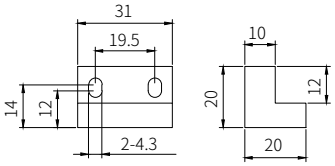
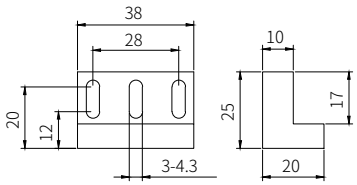
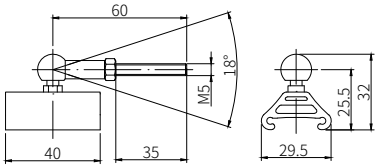
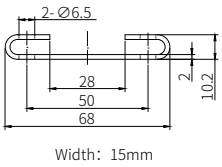
PARTS SELECTION



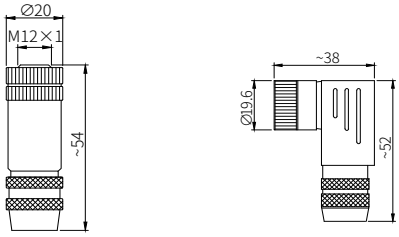


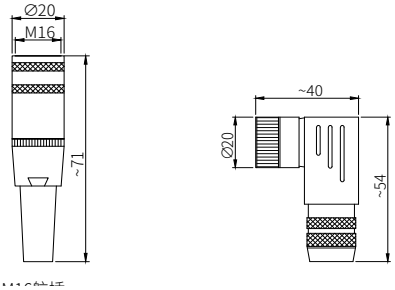
Name	Suspension magnet 31x20	Suspension magnet 38x25
Operating temperature	-40...105°C	
Order code	**12-1010**	**12-1009**





Name	Magnet slider S, joint at top	Removable fixing card
Operating temperature	-40...105°C	/
Order code	**12-1116**	**11-1060**





Name	8 pin M12 female connector	8 pin M12 female connector (90 degree angle)	8 pin M16 female connector	8 pin M16 female connector (90 degree angle)
End view drawing				
Material	Galvanized nickel			
Fitting diameter	8...10mm	6...8mm	6...9mm	6...8mm
Connection	Threaded		Welding	
Order code	**18-5004**	**18-5005**	**18-5002**	**18-5003**

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