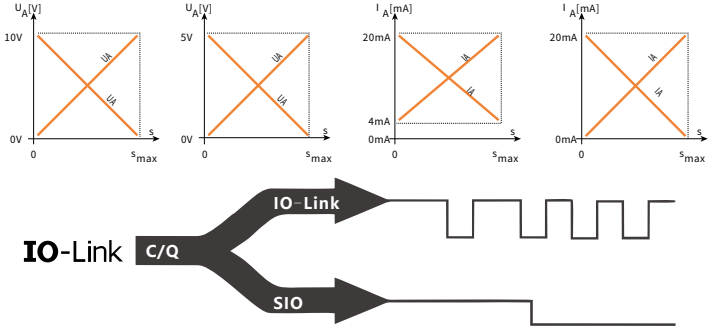
GP

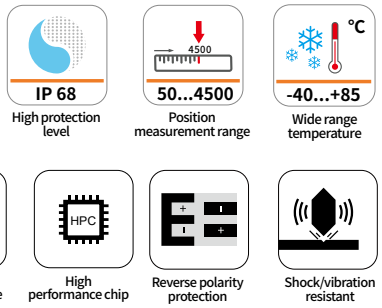
GP2-Series

GP2-Analog(+IO-Link)

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
- Output Analog+IO-Link



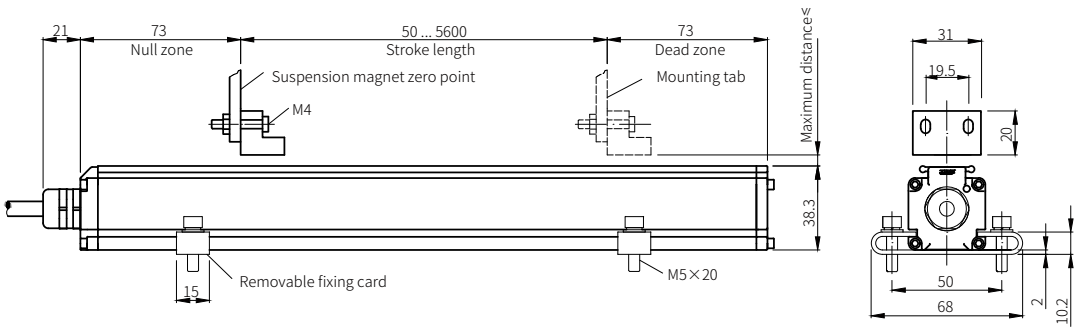
TECHNICAL PARAMETER

Input	
Measured data	Position/Speed
Measurement range	50mm...5600mm
Output	
Voltage	0...10VDC, 10...0VDC, 0...5VDC, 5...0VDC (Controller min. load impedance >5KΩ)+IO-Link
Current	4...20mA, 20...4mA, 0...20mA, 20...0mA (min./max. load 0/750Ω)+IO-Link
Transmission rate (IO-Link)	Rate(bit/s): 4800 / 38400 / 230400 Port: COM1 / COM2 / COM3*
Resolution	
Position resolution	Analog: 16 bit D/A IO-Link: 1/2/5*/10/20/50/100μm
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 direction	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	+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)
Operating conditions	
Magnet speed	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

Note: “*” as default

Straight out cable

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



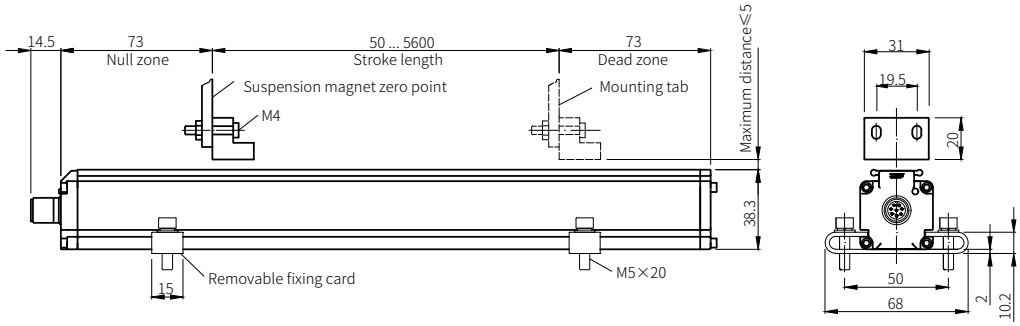
FUNCTION

Color	Brown	White	Yellow	Red	Green	Pink*	Gray*
Function	24VDC (-15/+20%)	GND	SGND 1	C/Q (communication line)	Signal output 1	Signal output 2*	SGND 2

"*"adaptable for dual output signal connection

8 pin M12 connector

GP2- ____- **D812- _____**



FUNCTION

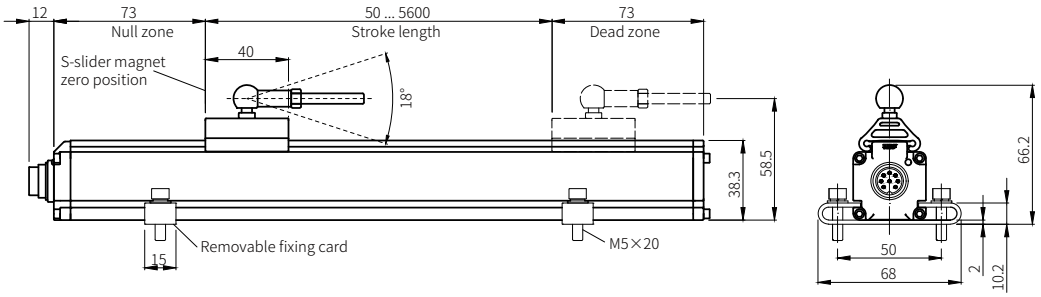
PIN-male	1*	2	3*	4	5	6	7	8
Function	SGND 2	SGND 1	Signal output 2*	C/Q (communication line)	Signal output 1	GND	24VDC (-15/+20%)	NC

View on sensor

"*"adaptable for dual output signal connection

8 pin M16 connector

GP2- ____- **D816- _____**



Current signal output

PIN-Male	1	2	*3	4	5	6	7	8
Function	Output 1 (current signal)	SGND	*Output 2 (current signal)	C/Q (communication line)	NC	GND	24VDC (-15/+20%)	NC

View on sensor

Voltage signal output

PIN-Male	1	2	*3	4	5	6	7	8
Function	NC	SGND	*Output2 (voltage signal)	C/Q (communication line)	Output1 (voltage signal)	GND	24VDC (-15/+20%)	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][6]**

[1] System

L +IO-Link (COM3)

[2]Resolution

1 5μm*
2 2μm
3 10μm
4 50μm
5 100μm
7 20μm
8 1μm

[3] Output

1 Position
2 Position and speed*
3 2 positions
4 2 positions and 2 speeds
5 Configurable outputs

(Speed： μm/s)

[4][5] Current/Voltage

A0 4...20mA (forward)
A1 20...4mA (reverse)
A2 0...20mA (forward)
A3 20...0mA (reverse)
V0 0...10V (forward)
V1 10...0V (reverse)
V2 0...5V (forward)
V3 5...0V (reverse)

[6] Magnet

1 one magnet *
2 two magnets

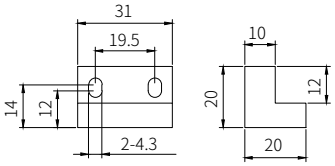
Note: forward, data grows larger when the magnet is distant from the electronics housing; reverse, data grows larger when the magnet approaches the electronics housing.

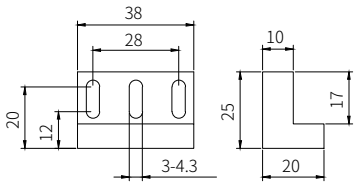
Model selection | Model: GP2-F-0600M-D812-L1-A01

Explanation: GP2 type II generation, Suspension magnet, stroke length 600mm, 8pin M12 aviation plug, Interface Analog+IO-Link, IO-Link resolution 5μm, position measurement, analog output of 4..20mA (forward), single magnet.

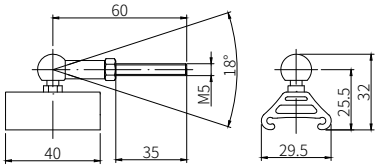
Please contact us for more customized products.
www.tbfsensor.com

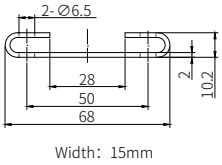
PARTS SELECTION



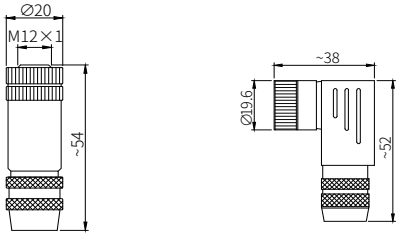


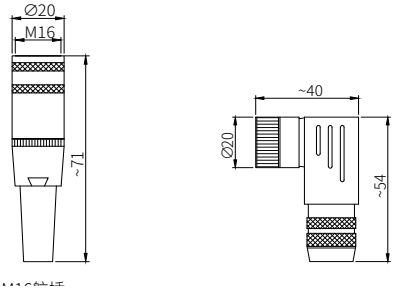
Name	Suspension magnet 31x20	Suspension magnet 38x25
Operating temperature	-40...105°C	
Order code	**12-1010**	**12-1009**





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...8mm	6...8mm
Connection	Threaded		Welding	
Order code	**18-5004**	**18-5005**	**18-5002**	**18-5003**

Building 6, Dazu Enterprise Bay,
8th yard of Liangshuihe 2nd street, BDA P.R.China

Tel: +86 10-67948976 67948916
Fax: +86 10-67948979
Technical support: +86 (0)13370126657

Beijing Tebeifu Electronic Technology Co., Ltd.

www.tbfsensor.com