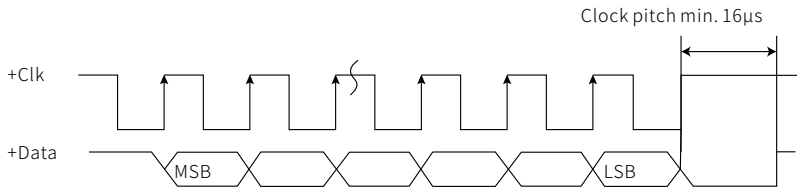
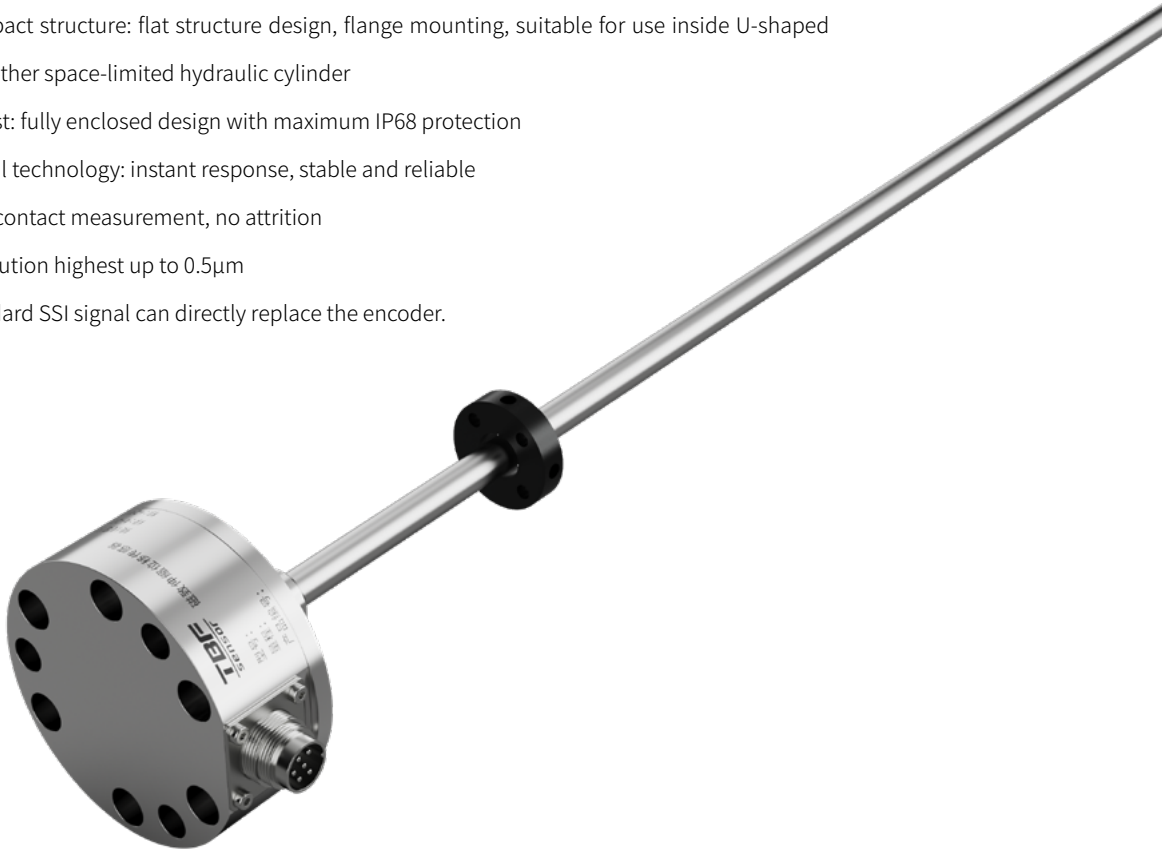
GB-SSI

GB-Series Data Sheet



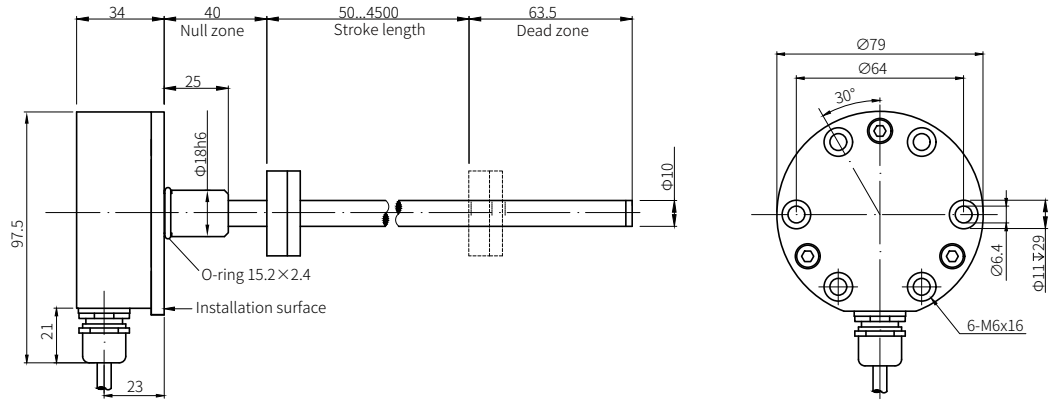
- Compact structure: flat structure design, flange mounting, suitable for use inside U-shaped and other space-limited hydraulic cylinder
- Durust: fully enclosed design with maximum IP68 protection
- Digital technology: instant response, stable and reliable
- Non-contact measurement, no attrition
- Resolution highest up to 0.5µm
- Standard SSI signal can directly replace the encoder.



ITEM	CATEGORY	PARAMETER
Input	Measured data	Position
	Measurement range	50...4500mm
Output	Interface	SSI synchronous serial interface
	Data format	Binary or Grey code, parity check and alarm bit optional
	Data length	8...32 bit
	Data speed	70kBd...1MBd depending on cable length: Cable length(m) | ＜3 | ＜50 | ＜100 | ＜200 | ⩽400 Baud rate(kBd) | 1000 | ＜400 | ＜300 | ＜200 | ＜100
	Update frequency	Stroke length(mm) | ＜300 | ＜750 | ＜1000 | ＜2000 | ⩽4500 Update frequency (kHz) | 3.7 | 3.0 | 2.3 | 1.2 | 0.5
Resolution	Position resolution	0.5/1/2/5/10/20/50/100μm
	None-Linearity	＜ ±0.02%F.S. (min. ±50μm)
	Repeatability	＜ ±0.005%F.S. (min. ±20μm)
	Temperature coefficient	<30ppm/°C
Mounting	Mounting position	Any
	Mounting	Tight sealed flange Φ18h6, 6 screw mounting holes
Design/ Material	Electronics housing	Stainless steel 304
	Measuring rod	Stainless steel 304/316L
	Operating pressure ratings	35MPa (continuous) ,70MPa (peak)
Electrical connection	Wiring connection	Straight out cable or 7 pin M16 aviation plug
	Operating voltage	12VDC...36VDC
	Polarity protection	Up to -36VDC
	Overvoltage protection	Up to +36VDC
	Power consumption	＜ 90mA (varies with range size)
	Dielectric strength	500 VDC (DC ground to machine ground)
Operating conditions	Magnet velocity	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

GB- ____- **RP_ _ - _____**
GB- ____- **RT_ _ - _____**

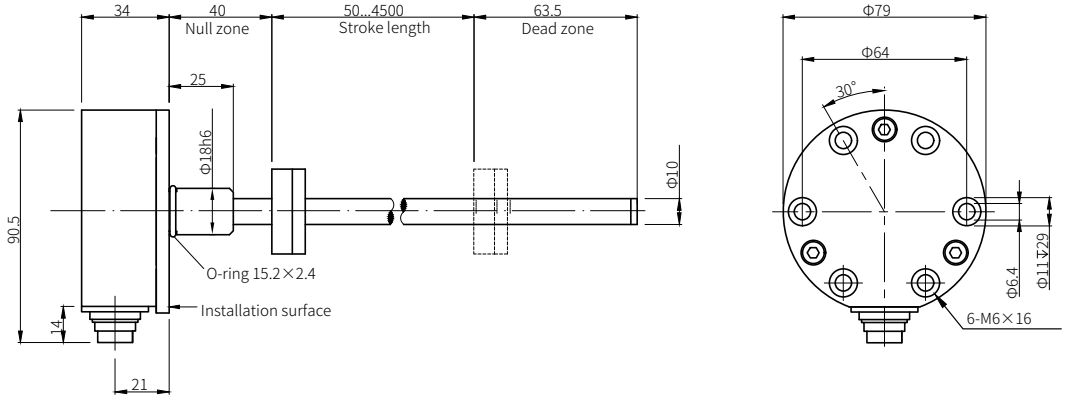
Straight out cable



Color	Grey	Pink	Yellow	Green	Brown	White
Function	Data-	Data+	Clock+	Clock-	12VDC...36VDC	0 VDC(GND)

GB- ____- **DP__- _____**
GB- ____- **DT__- _____**

7 pin M16 connector



PIN-Male	1	2	3	4	5	6	7
Function	Data-	Data+	Clock+	Clock-	12VDC...36VDC	0VDC (GND)	NC

View on sensor

ORDER CODE

GB - _ - _ _ _ _M-_ _ _ _ - _ _ _

Mounting

F Tight seal mounting Φ18h6

R Tight seal mounting Φ18h6, with M4x6 thread at tail end

Stroke length

0050...4500mm (5mm increments)

Connection type

RP/T__ Straight out _ _m high performance /high temperature cable

DP/T_ _ 7 pin M16 connector, with _ _ m high performance /high temperature cable

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

(If the avatation plug does not require a cable, please write DP00)

Output

(Output Code)

SSI Output Code **S** [1][2][3][4][5][6]

[1] Data length		[2] Format		[3] Resolution				[4] Options	[5][6] Mode	
1	25 bit	B	Binary	1	5μm	6	2μm	1 Standard	00	Forward asynchronous mode
2	24 bit	G	Gray	2	10μm	8	1μm		01	Reverse asynchronous mode
3	26 bit			3	50μm	9	0.5μm		02	Forward, synchronous mode
				4	100μm				05	Forward+alarm bit + parity check bit
				5	20μm					

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: GB-F-0800M-RP05-S1B1100

GB series pressure resistance outer tube type, tight sealed flange 18h6, stroke length 800mm, straight out 5m high performance cable, 25 bit, Binary, resolution 5μm standard, forward asynchronous mode.

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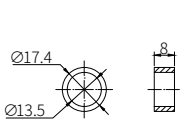
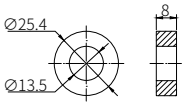
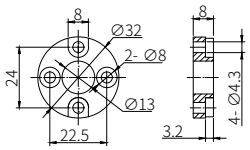
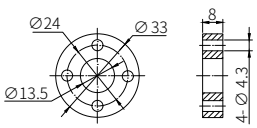
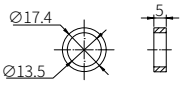
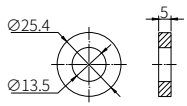
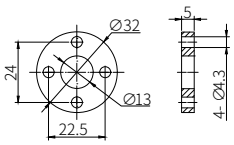
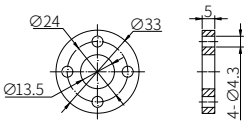
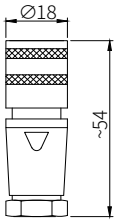
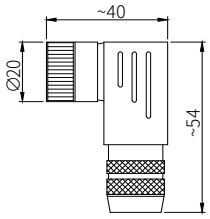
PARTS SELECTION

				
Name	Ring magnet	Ring magnet	Ring magnet	Ring magnet
Operating temperature	-40...125°C			
Order code	**12-1032**	**12-1019**	**12-1024**	**12-1001**
Fitting non-permeable gasket				
Name	Non-permeable gasket	Non-permeable gasket	Non-permeable gasket	Non-permeable gasket
Operating temperature	-40...125°C			
Order code	**12-1037**	**12-1021**	**12-1025**	**12-1008**

			
Name	7 pin M16 female connector	7 pin M16 female connector (90 degree angle)	
End view drawing			
Material	Galvanized nickel		
Fitting diameter	4...6mm	6...8mm	
Connection	Welding		
Order code	**18-4001**	**18-4002**	

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