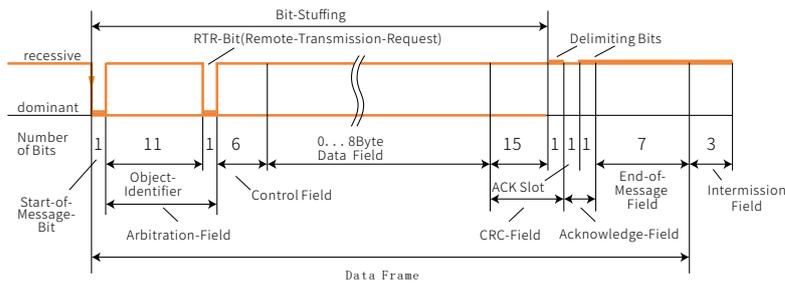




# GB-CANopen

## 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
- + Easy to use, standard signal output, maintenance-free
- + Non-contact measurement, no attrition
- + Resolution highest up to 2µm



# TECHNICAL PARAMETER

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<b>Input</b>	Measured data	Position/Velocity				
	Position measurement range	50...4500mm				
	Velocity measurement range	0.01...10m/s				
<b>Output</b>	Communication protocols	CAN bus system protocol, ISO11898 CAN open CIA standard DS-301 V3.0 encoder profile DS-406 V3.1				
	Transmission rate	Rate(kbit/s)	1000	500	250	125
		Cable length(meter)	< 25	< 100	< 250	< 500
<b>Resolution</b>	Position resolution	2/5/10/20/50/100 $\mu$ m				
	Velocity resolution	1mm/s				
	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	Stroke length	$\leq 1200$ mm	$\leq 2400$ mm	$\leq 4500$ mm	
		Update time	0.5ms	1ms	2ms	
Temperature coefficient	<30ppm/ $^{\circ}$ C					
<b>Mounting</b>	Mounting position	Any				
	Mounting	Tight sealed flange $\Phi 18$ h6, 6 screw mounting holes				
<b>Design/ Material</b>	Electronics housing	Stainless steel 304				
	Measuring rod	Stainless steel 304/316L				
	Operating pressure ratings	35MPa (continuous) ,70MPa (peak)				
<b>Electrical connection</b>	Wiring connection	Straight out cable or 6 pin M16 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)				
	Terminal resistance	120 $\Omega$ (Software-adjustable on and off)				
<b>Operating conditions</b>	Magnet velocity	Any				
	Operating temperature	-40 ~ 85 $^{\circ}$ 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				

ITEM

CATEGORY

PARAMETER

GB- \_\_\_\_ - **RP** \_\_\_\_ - \_\_\_\_

GB- \_\_\_\_ - **RT** \_\_\_\_ - \_\_\_\_

### Straight out cable

Color	● Brown	○ White	● Yellow	● Green
Function	+24VDC(-15/+20%)	0VDC(GND)	CAN H	CAN L

GB- \_\_\_\_ - **DP** \_\_\_\_ - \_\_\_\_

GB- \_\_\_\_ - **DT** \_\_\_\_ - \_\_\_\_

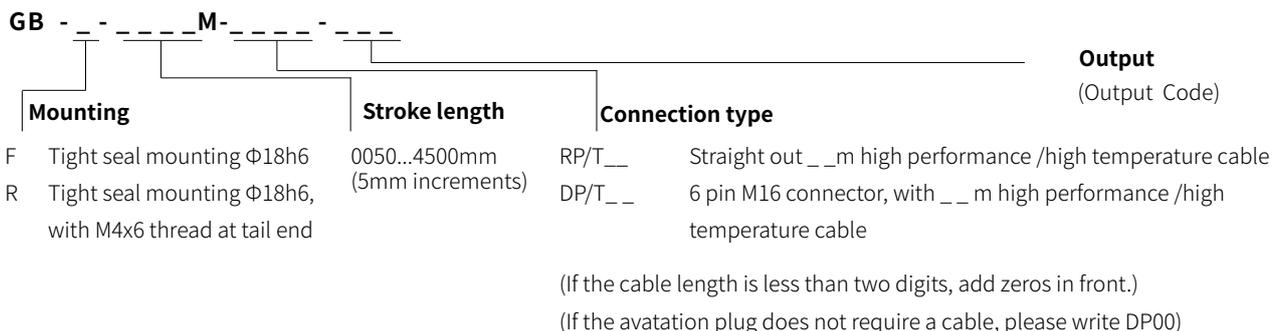
### 6 pin M16 connector

PIN-Male	1	2	3	4	5	6
Function	CAN L	CAN H	NC	NC	+24VDC (-15/+20%)	0VDC (GND)

View on sensor

**ORDER CODE**

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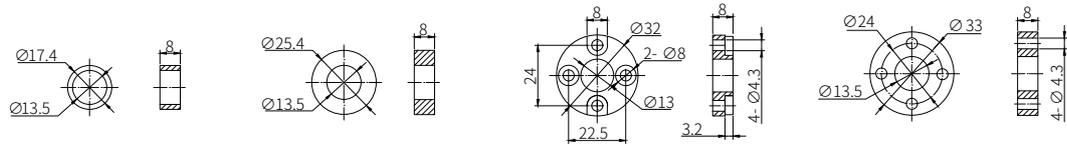
CANopen Output Code		C304[1][2][3]-[4][5] Note: “*” as default		
[1] Baud rate	[2] Resolution ratio	[3] PDO cycle	[4][5]Node-ID	
1 100kBit/s	1 5μm*	1 1ms	Hexadecimal	
2 500kBit/s	2 2μm	2 10ms*	01...7F*	
3 250kBit/s*	3 10μm	3 100ms		
4 125kBit/s	4 50μm	4 Customizable (1-65535ms)		
	5 100μm			
	7 20μm			

**Model selection** | Model: GB-F-0800M-RP05-C304312-7F

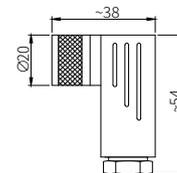
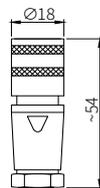
Explanation: GB series pressure resistance outer tube type, tight sealed flange 18h6, stroke length 800mm, straight out 5m high performance cable, CANopen output, baud rate 250kBit/s, resolution 5μm, PDO cycle 10ms, node-ID 7F.

**PARTS SELECTION**

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



Name	6 pin M16 female connector	6 pin M16 female connector (90 degree angle)
End view drawing		
Material	Galvanized nickel	
Fitting diameter	6...8mm	6...8mm
Connection	Welding	
<b>Order code</b>	<b>18-3001</b>	<b>18-3003</b>

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