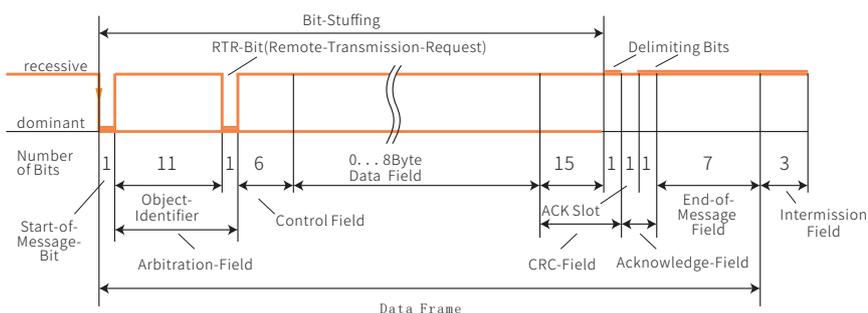




# GA-CANopen

## GA-pressure resistant outer tube



- + 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
- + Linear displacement, absolute value output
- + Easy to use, standard signal output, maintenance-free
- + Maximum durability, continuous non-contact
- + Full scale adjustable, 100% adjustable zero and full scale



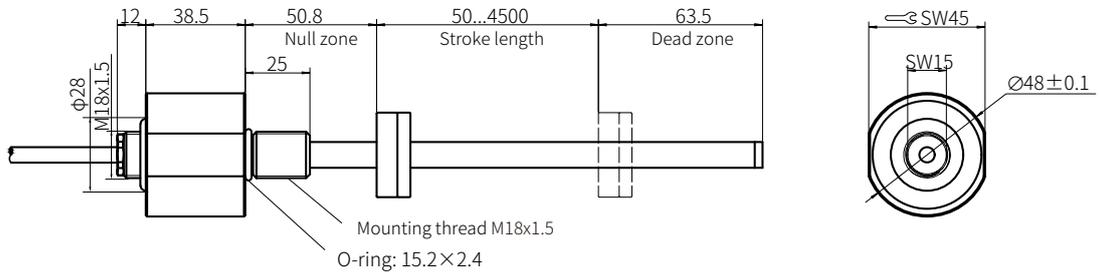
Document Number:  
GA-C(V1.0)-EN

## TECHNICAL PARAMETER

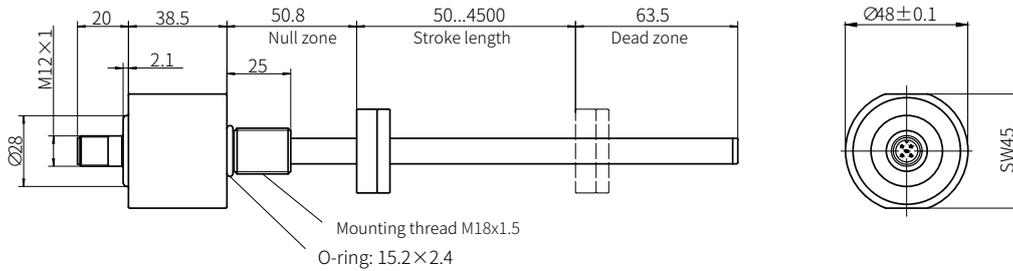
Input											
Measured data	Position/Velocity										
Measurement range	50...4500mm										
Output											
Communication protocols	CAN bus system protocol, ISO11898,CAN open CIA standard DS-301 V3.0 encoder profile DS-406 V3.1										
Transmission rate	<table border="1"> <tr> <td>Rate (kbit/s)</td> <td>1000</td> <td>500</td> <td>250</td> <td>125</td> </tr> <tr> <td>Cable length (meter)</td> <td>&lt; 25</td> <td>&lt; 100</td> <td>&lt; 250</td> <td>&lt; 500</td> </tr> </table>	Rate (kbit/s)	1000	500	250	125	Cable length (meter)	< 25	< 100	< 250	< 500
Rate (kbit/s)	1000	500	250	125							
Cable length (meter)	< 25	< 100	< 250	< 500							
Resolution											
Resolution:position	2/5/10/100μm										
Resolution: velocity	1mm/s										
None-Linearity	< ±0.04%F.S.										
Repeatability	< ±0.005%F.S										
Update time	<table border="1"> <tr> <td>Stroke length</td> <td>≤ 1200mm</td> <td>≤ 2400mm</td> <td>≤ 4500mm</td> </tr> <tr> <td>Update time</td> <td>0.5ms</td> <td>1ms</td> <td>2ms</td> </tr> </table>	Stroke length	≤ 1200mm	≤ 2400mm	≤ 4500mm	Update time	0.5ms	1ms	2ms		
Stroke length	≤ 1200mm	≤ 2400mm	≤ 4500mm								
Update time	0.5ms	1ms	2ms								
Temperature coefficient	< 30ppm/°C										
Mounting											
Mounting position	Any										
Thread	Metric M18x1.5										
Design/Material											
Electronics housing	Stainless steel 304										
Measuring rod	Stainless steel 304、316L										
Magnet	Standard magnet										
Operating pressure ratings	35MPa (continuous) ,70MPa (peak)										
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 velocity	Any										
Operating temperature	-40...85°C										
Humidity	90 % relative humidity, no condensation										
Ingress protection	IP68										
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										

# TECHNICAL DRAWING

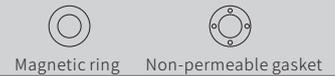
Straight out cable



5 PIN M12 connector



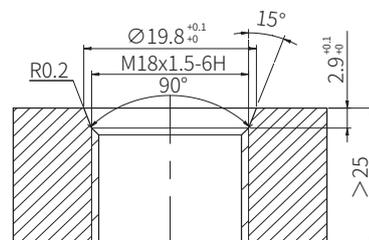
For selection of supporting magnetic rings and non-permeable gaskets, please refer to the attachment for details.



## MECHANICAL MOUNTING DIAGRAM

### Thread fixation

GA series built-in pressure resistant outer tube sensors are equipped with metric M18x1.5 threads to be fixed.

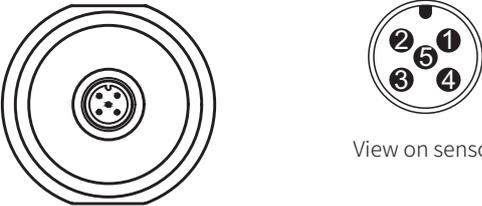


Metric M18x1.5, reference to the hole size

## Wiring

When connected with aviation plug, define by wire pin;

When connected with waterproof connector straight out cable, define by wire color.

	5 pin M12 connector	PIN	Color	Function
		1	-	NC
		2	Brown	+24VDC (-15/+20%)
		3	White	GND
		4	Yellow	CAN H
		5	Green	CAN L

## ORDER CODE

GA - - - M- - - - -				Output (Output Code)
Mounting	Stroke length	Connection type		
M Metric M18x1.5	0050...4500mm (5mm increments)	RP/T_	Straight out _ _m high performance /high temperature cable (If the cable length is less than two digits, add zeros in front.)	
R Metric M18x1.5, with M4x6 thread at tail end		D512	5 pin M12 connector	

Output Code	[1][2][3]-[4]-[5][6]	( Note: "*" as default)
[1][2][3] Resolution ratio	[4]Baud rate	[5][6] Node-ID
C01 100um*	0 1000kBit/s	5 100kBit/s
C11 5um	1 800kBit/s	6 50kBit/s
C21 2um	2 500kBit/s	7 20kBit/s
C31 10um	3 250kBit/s*	8 10kBit/s
	4 125kBit/s	

### Model selection

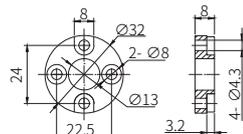
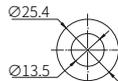
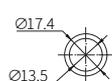
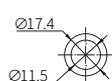
Model: GA-M-0390M-RP10-C01-3-7F

xplanation: GA series pressure resistance outer tube type, mounting thread metric M18x1.5, range 390mm, straight out 10m high performance cable ,CANopen output, resolution 100µm, baud rate 250kBit/s, node-ID 7F.



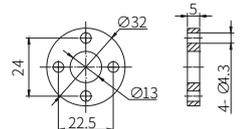
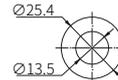
# ACCESSORIES

## CANopen



Name	Ring magnet				
Operating temperature	-40~125°C				
<b>Order code</b>	<b>12-1020</b>	<b>12-1032</b>	<b>12-1019</b>	<b>12-1024</b>	<b>12-1001</b>

Non-permeable gasket



Name	Non-permeable gasket				
Operating temperature	-40~125°C				
<b>Order code</b>	<b>12-1037</b>	<b>12-1037</b>	<b>12-1021</b>	<b>12-1025</b>	<b>12-1008</b>

■ For more customizable products, please contact us.

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