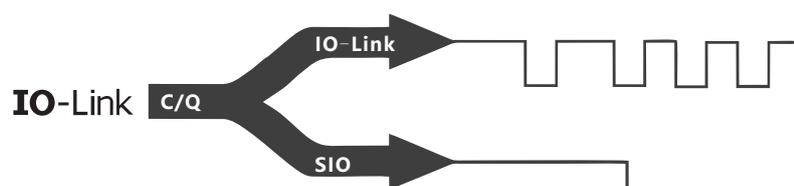




GA-IO-Link

GA-pressure resistant outer tube



- + Compact structure: suitable for use inside U-shaped and other space-limited hydraulic cylinder
- + Durable: fully enclosed design with maximum IP67 protection
- + Linear displacement, absolute value output
- + Maximum durability, continuous non-contact
- + Full scale adjustable, 100% adjustable zero and full scale
- + IO-Link signal output



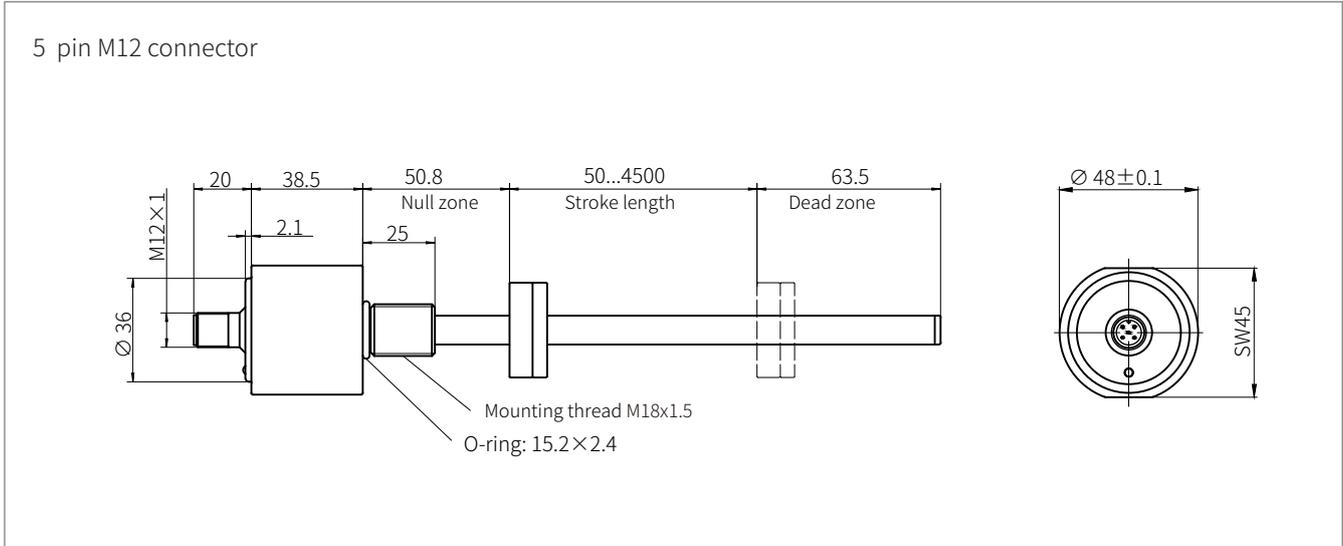
Document Number:
GA-L(V1.2)-EN

TECHNICAL PARAMETER

Input				
Measured data	Position/Velocity			
Position measurement range	50mm...4500mm			
Velocity measurement range	0.01...10m/s			
Output				
Interface	IO-Link 1.1			
Data format	32-bit signed			
Process data	0 Byte			
Master – Device				
Transmission rate	Rate(bit/s)	4800	38400	230400
	Port	COM1	COM2	COM3*
Resolution				
Position resolution	1/2/5*/10/20/50/100μm			
None-Linearity	< ±0.01%F.S. (min. ±50μm)			
Repeatability	< ±0.002%F.S. (min. ±10μm)			
Update time	Stroke length	≤ 1200mm	≤ 2400mm	≤ 4800mm
	Update time	0.5ms	1ms	2ms
Temperature coefficient	< 30ppm/°C			
Mounting				
Mounting direction	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	5 pin M12 connector			
Operating voltage	+24VDC(-15/+20%)			
Polarity protection	Up to -36VDC			
Overvoltage protection	Up to +36VDC			
Power consumption	< 40mA (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			
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

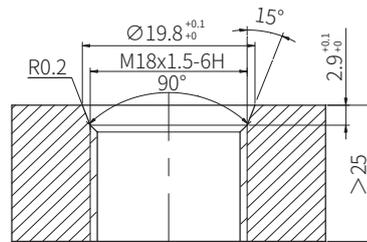
TECHNICAL DRAWING



MECHANICAL MOUNTING DIAGRAM

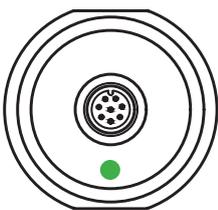
Thread fixation

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

Enhanced monitoring and diagnostic functions



light	Function
Red	Magnet cannot be measured, nor magnet number is correct
Green	Normal work
OFF	Communication exception

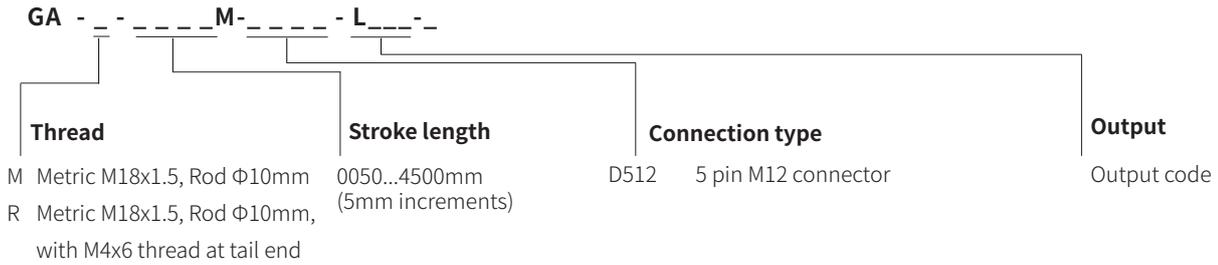
The built-in LED indicator light provides basic fault feedback and fault alarm of the sensor.

Wiring

5 pin M12 connector	PIN	Function
	1	+24VDC(-15/+20%)
	2	NC
	3	GND
	4	C/Q(communication line)
	5	NC



ORDER CODE



IO-Link Output Code	L [1][2][3]-[4]			
L Interface	[1] Resolution	[2] Output	[3] IO-Link version	[4] Magnet number
L IO-Link	1 5 μ m*	1 Position	1 V1.1, COM 1	1 one magnet *
	2 2 μ m	2 Position and velocity*	2 V1.1, COM 2	2 two magnets
	3 10 μ m	3 2 positions	3 V1.1, COM 3*	3 three magnets
	4 50 μ m	4 2 positions and 2 velocitys		
	5 100 μ m	5 Configurable outputs		
	7 20 μ m			
	8 1 μ m	(Velocity : μ m/s)		

Note: “*” as default

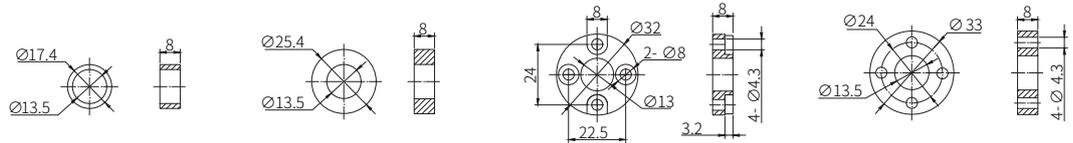
Model | GA-M-0390M-D512-L123-1

Explanation: GA series pressure resistance outer tube type, mounting thread metric M18x1.5, range 390mm, 5 pin M12 connector, IO-Link output ,resolution 5 μ m ,position and velocity measurement, V1.1,COM3,single magnet.

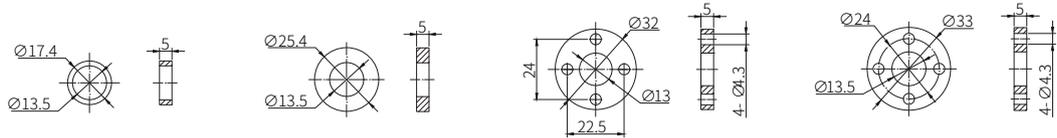


ACCESSORIES

IO-Link



Name	Ring magnet	Ring magnet	Ring magnet	Ring magnet
Operating temperature	-40~125°C			
Order code	12-1032	12-1019	12-1024	12-1001



Name	Non-magnetic gasket	Non-magnetic gasket	Non-magnetic gasket	Non-magnetic gasket
Operating temperature	-40~125°C			
Order code	12-1037	12-1021	12-1025	12-1008



Connector	5 pin M12 female connector	5 pin M12 female connector (90 degree angle)
Name	Integral cable	Integral cable
Cable	5 wire 0.25mm ² shielded cable	5 wire 0.25mm ² shielded cable
Color/Diameter	Orange/ Ø 6	Orange/ Ø 6
Plug surface	 <ul style="list-style-type: none"> 1-Brown 2-Green 3-White 4-Gray 5-Yellow 	 <ul style="list-style-type: none"> 1-Brown 2-Green 3-White 4-Gray 5-Yellow
Length	5...30M	5/10/15/20/30M
Order code	16-1035	16-1040

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