All-in-one Series

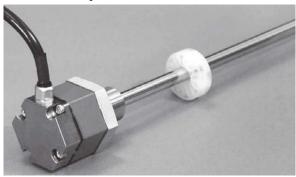
GYMRA Probe







Flat head type, analogue output (detachable probe element)



GYMRA probe is the flat head type, analog output sensor which put the thickness of the head part of a GYSE probe in 48.5mm by the latest circuit design. The output is voltage or current. With the captive software (GPM), zero and gain adjustment is possible at the user. The sensor inside element flexible option is available and also most suitable for the exchange when space is small.

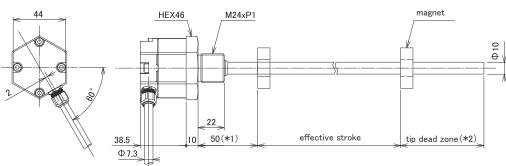
Specifications

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Accuracy	Non-linearity	≦±0.025%FS TYP	
	Resolution	≦0.1mm	
	Repeatability	≦±0.1mm	
	Temp. drift	≦±20ppmFS/°C	
Output	Voltage output	0~10V or 10~0V	
		(output current: Max.5mA, load: Min.2kΩ)	
	Current output	4~20m or 20~4mA	
		(load: Max.500 Ω)	
	Alarm output	Open drain 50V 0.1A (for magnet missing)	
Power supply		+24(±2)VDC (60mA)	
Sampling freq.		Std 1kHz(up to stroke 1000mm)	
Environment	Max. Pressure	35MPa(probe rod)	
	Operating temp.	−20°C~+75°C	
	Storage temp.	-40°C∼+75°C	
	Vibration	15G(20~100Hz)	
	Shock	100G(2msec)	
	IP grade	IP67	

- •The above mentioned accuracy applies to sensors with an effective stroke of 300mm or more.
- •The specification of stroke less than 300mm is equal that of stroke 300mm.

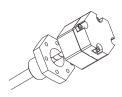
Dimensions

■Probe



- *1) In case of an effective stroke 3001mm or more, head dead zone is 100mm. (Model code ② : 100)
- *2) In case of an effective stroke 3001mm or more, tip dead zone is "standard length + 30mm". (Model code ③: 100/120/130)

■Detachable probe element



- *materials : Probe head : Al alloy, Probe rod : SS304
- •magnet : Select one from group GG on page 110
- •The tip dead zone length depends on the selected magnet or float.
- cable length: Max.10m (0-10V output), Max.100m (4-20mA output)

■ Cable

Wire	Function				
color	runction				
red	+24VDC				
while	0V				
blue	Voltage output				
green	COM1				
brown	Current output				
black	COM2				
yellow	Alarm				

- · Shield should be connected with 0V at user side.
- In case you select the voltage output, you can't use the brown and black wires.
- •In case you select the current output, you can't use the blue and green wires.

■ Probe

1 Effective stroke

15~7500mm

2 Head dead zone

S:50mm(STD)

□: □mm(option)(specified by customers)

•Possible Min. length depends on the selected magnet or float.

3Tip dead zone

S:70mm/90mm/100mm(STD)

•S (STD length) depends on the selected magnet or float in (5).

tip DZ	magnet	float	
70mm M2PN, M0SM, M0LM,		F25N, F28N	
	M3, M11N, BA		
90mm		F28S, F30S	
100mm	T144, T163	F40S, F42S, F50S	

☐:☐mm(option)(specified by customers)

•Possible Min. length depends on the selected magnet or float.

4Thread/Rod diameter

M :M24xP1.0, rod Φ10(STD)
N :M18xP1.5, rod Φ10
U :3/4-16UNF-3A, rod Φ10
M8 :M24xP1.0, rod Φ8
N8 :M18xP1.5, rod Φ8
U8 :3/4-16UNF-3A, rod Φ8
M14:M24xP1.0, rod Φ13.8

Z : EF (flexible element) only (without outer housing)

5 Associated magnet or float

<magnet></magnet>		<float></float>	
M2PN	:No.2PN (STD)	F28S	: Ф28 SS316L
M0SM	: No. Φ SPM	F30S	: Ф30 SS316L
M0LM	:No.ΦLPM		: Ф40 SS316(B)
M3	: No.3	F42S	: Ф43 SS316L
M11N	: No.11N	F50S	: Ф50 SS316L
T144	: No.T14-M4	F54S	
T163	:No.T16-M3	F25N	:RF-A10 plastic
BA	: No.2KYN-17-LG	F28N	:RF-A6 plastic

- •Please consult if you select a magnet or a float of other than above.
- •This Model code means only specifying associated magnet or float.
- •When you need a magnet or float, please order separately.

Position output (OUT1)

AD:0~10V(When magnet moves toward tip, output increase)
AR:10~0V(When magnet moves toward tip, output decrease)

BD:4~20mA(When magnet moves toward tip, output increase) BR:20~4mA(When magnet moves toward tip, output decrease)

V Z/F: option (specified voltage)

(for example $V1/5:1\sim5V$, $V9.5/0.5:9.5\sim0.5V$)

I Z/F: option (specified current)

(for example I5.2/20:5.2~20mA, I18/5:18~5mA)

[Z=output at zero position, F=output at full position]

®Option

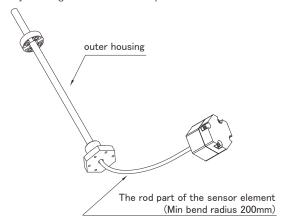
blank : without option SRT : SRT option H0 : probe rod 100°C

EF : flexible element (rod Φ10 only)

- •Please confirm the details of options on page 106 108.
- •Without EF option (standard), GYMRA probe element is detachable though the rod parts is rigid. With EF option, as to accuracy or other specs, please consult factory.

Probe inside element flexible: EF

You can remove a sensor element from outer housing (probe rod) and exchange it by GYMRA. You can't usually bend the rod part of the sensor element. You can change the rod part of a sensor element to the flexible type for easy exchange under small work space.



©Cable connection

 $\Delta G \square F$: pigtail / cable end : free

 $\triangle G \square A$: pigtail / cable end : with connector for relay

 $(\Box : cable length(m), Max.10m)(*)$

(∆:cable type

S:standard, H:high temp. cable, R:robot cable, UL:cUL cable)

(*) In case of using extension cable

Voltage output : sensor cable (m) + extension cable (m) \leq 10m Current output : sensor cable (m) + extension cable (m) \leq 100m

•Please consider extension cable on page 113.