

GYAF1 Probe

Analogue

Flat head, analogue output



GYAF1 probe is an all-in-one sensor with the flange shape. You can get a voltage or current analog signal proportional to magnet position only by applying a 24VDC power supply directly to it. Reversed output or bipolar output can be supported as well. The flat head permits a miniaturized application, and the flange makes the installation easier, compared with the conventional screw type probes.

Specifications

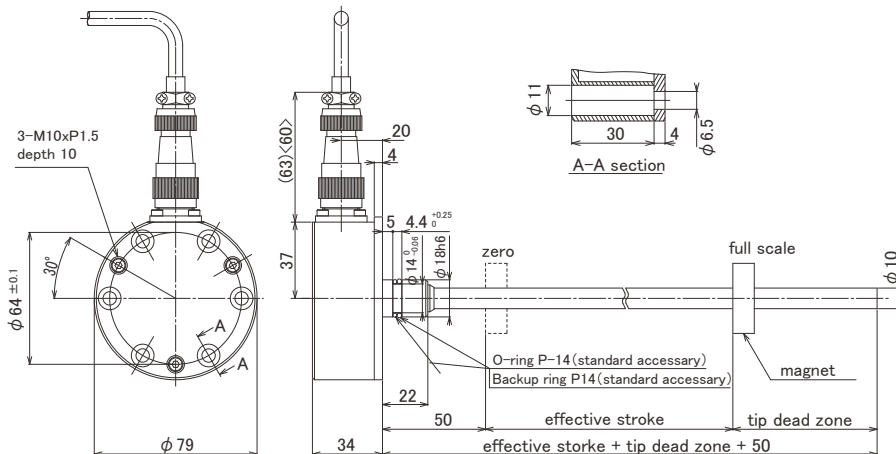
Accuracy	Non-linearity	$\leq \pm 0.025\%FS$ TYP
	Resolution	$\leq 0.01\%FS$
	Repeatability	$\leq \pm 0.01\%FS$
	Temp. drift	$\leq \pm 40ppmFS/^{\circ}C$
Output	Voltage output	0~10V or 10~0V (output current : Max.5mA, load : Min.2k Ω)
	Current output	4~20mA or 20~4mA (load : Max.500 Ω)
	Alarm output	not available
Power supply		+24(± 2)VDC (100mA)
Sampling freq.		Std 1kHz (up to stroke 1000mm)
Environment	Max. Pressure	35MPa (probe rod)
	Operating temp.	-20 $^{\circ}C$ ~+80 $^{\circ}C$
	Storage temp.	-40 $^{\circ}C$ ~+80 $^{\circ}C$
	Vibration	6G (or 40Hz 2mmPP)
	Shock	50G (2msec)
	IP grade	IP67 (option : IP68)

* 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

Connector type (Code: CN) <WPCN>

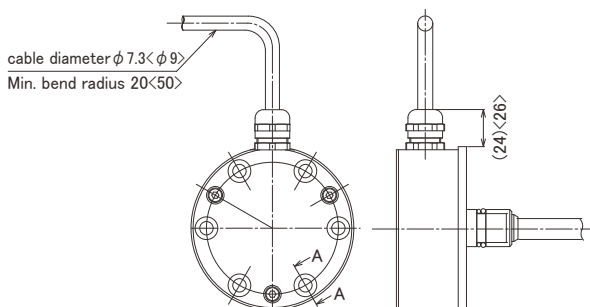


Cable

Cable color	Pin number	Function
red	1	+24VDC
shield	2	shield
white	3	0V
green	4	COM
black	5	Voltage
blue	6	(Current)
brown	7	N.C.
yellow		N.C.

* shield should be connected with 0V at user side.

Pigtail type (Code: G*) <WP3G*>



- Material probe head : SS304, probe rod : SS304
- Magnet : Select one from group GG on page 109.
- The tip dead zone length depends on the selected magnet or float type.
- cable length : Max.10m (0~10V output), Max.100m (4~20mA output)
- connector CN type : Sanwa SNW-1607-PCF (Material: zinc alloy fluoroplastic), connector WPCN type : Tajimi TC1108-12A10-7F(8.6) (Material: brass with Ni plating)
- Applied cable diameter : $\phi 6.6 \sim \phi 7.5$ (Model code : G*), Wire size : $\leq 0.5mm^2$
- The figure in $< >$ is the figure of IP68 type (WPCN, WP3G*).
- Applicable O ring type is P-14. Back-up ring is strongly suggested in usage.
- Water proof option (WP3G*) has a protection tube. Please refer the dimensions on P.107

■ Probe

GYAF1- **-** **/** **-F-**

① ② ③ ④ ⑤ ⑥ ⑦

① Effective stroke

15~3000mm

② Head dead zone

S: 50mm (STD)

: mm (option) (specified by customers)

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

③ Tip 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 M3, M11N, BA	F28N
90mm		
100mm	T144, T163	F40S, F42S, F50S, F54S

: mm (option) (specified by customers)

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

④ Mount/Rod diameter

F : flange, rod Φ 10 (STD)

⑤ Associated magnet or float

<magnet>

M2PN : No.2PN (STD)

M3 : No.3

M11N : No.11N

T144 : No.T14-M4

T163 : No.T16-M3

BA : No.2KYN-17-LG

<float>

F40S : Φ 40 SS316 (B)

F42S : Φ 42.5 SS316

F50S : Φ 50 SS316L

F54S : Φ 54 SS304

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.

⑥ Cable connection

CN : connector (STD)

G F : pigtail / cable end : free

G A : pigtail / cable end : with connector for relay

(: cable length (m), Max.10m) (*)

<Water proof option> (recommendation : pigtail (WP3G))

WPCN : submersible connector type

WP3G F : pigtail / cable end : free

WP3G A : pigtail / cable end : with connector for relay

(: cable length (m), Max.10m) (*)

(*) 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 112.

• In case that you need loose mating connector, ordering connector (straight only) separately is necessary.

⑦ Position output

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)

CD : bipolar output ($-\square$ V ~ $+\square$ V)

(for example CD10 : -10V ~ +10V)

CR : bipolar output ($+\square$ V ~ $-\square$ V)

(for example CR05 : +5V ~ -5V)