Analogue

GYAF1 Probe

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.

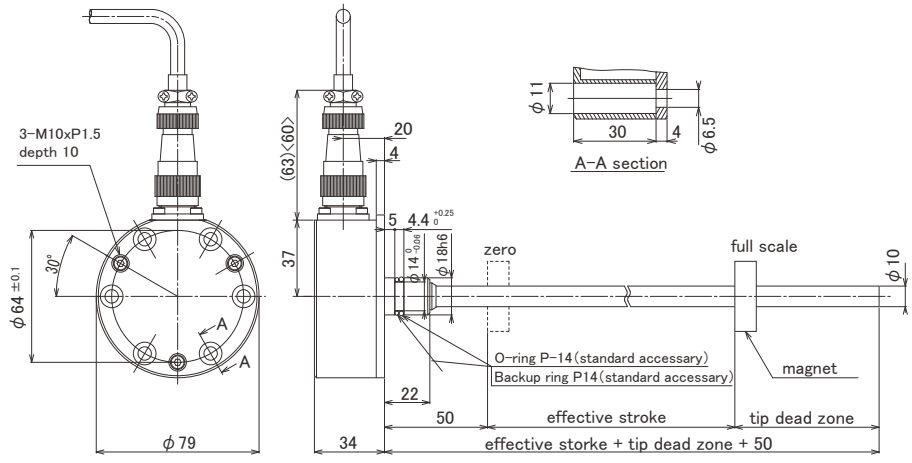
Specifications

Accuracy	Non-linearity	≦±0.025%FS TYP
	Resolution	≦0.01%FS
	Repeatability	≦±0.01%FS
	Temp. drift	≦±40ppmFS/℃
Output	Voltage output	0～10V or 10～0V (output current : Max.5mA, load : Min.2kΩ)
	Current output	4～20mA or 20～4mA (load : Max.500Ω)
	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℃～+80℃
	Storage temp.	-40℃～+80℃
	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>

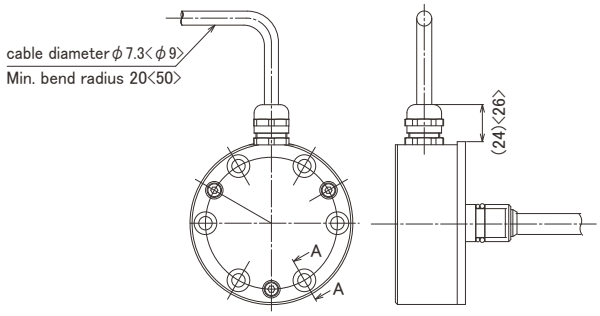


■Cable

Wire 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 110.
・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)
・Suitable cable diameter : Φ6.6～Φ7.5 (Model code : G*), Wire size : ≦ 0.5mm²
・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

①Effective stroke
15～3000mm

②Head 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 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.

④Mount/Rod diameter
F ：flange, rod Φ10（STD）

⑤Associated 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 ：Φ40 SS316（B）
F42S ：Φ43 SS316L
F50S ：Φ50 SS316L
F54S ：Φ54 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.

⑥Cable connection
CN：connector
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) ≦ 10m
Current output : sensor cable (m) + extension cable (m) ≦ 100m
・Please consider extension cable on page 112.
・In case that you need loose mating connector, ordering connector (straight only) separately is necessary.

⑦Position 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（-□V～+□V）
（for example CD10：-10V～+10V）
CR□□：bipolar output（+□V～-□V）
（for example CR05：+5V～-5V）