

GYcAT Probe

Analogue

Noise
Cancel



Standard analogue output



You can get a voltage or current analog signal proportional to magnet position only by applying a 24VDC power supply directly to GYcAT. It has alarm output and is equipped with noise cancellation functions. By the option, it is available with the high speed sampling, SRT, and high temperature (rod parts only).

Specifications

Accuracy	Non-linearity	$\leq \pm 0.05\%FS$ 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	Open collector 30V 0.1A
Power supply		+24(± 2)VDC (50mA)
Sampling freq. (*)		Std 1kHz (total rod length : up to 1250mm)
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 (10kPa, 30min)

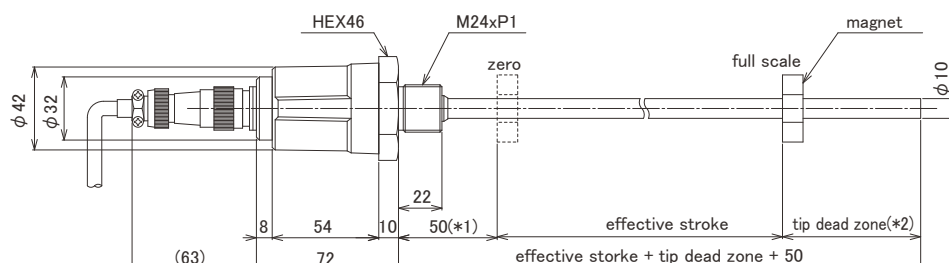
* The above mentioned accuracy applies to sensors with an effective stroke of 300mm or more.

* The specification of stroke less than 300mm is equal that of stroke 300mm.

(*) Sampling freq. is available to Max. 8kHz by option. It depends on the total rod length (shows in Model ⑧), and the consumption current increases.

Dimensions

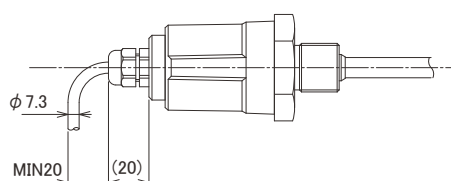
probe



*1) In case of an effective stroke 2001mm 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)

Pigtail type



- Material probe head: Al diecast, probe rod: SS304
- magnet : Select one from group B on page 110
- The tip dead zone length depends on the selected magnet or float.
- Connector: Sanwa SNW-1607-PCF (Material: zinc alloy fluoroplastic)
- Suitable cable diameter: $\phi 6.6 \sim \phi 7.5$, Wire size: Less than 0.5mm²
- cable length : Max.10m (0~10V output), Max. 100m (4~20mA output)

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	Alarm
yellow		N.C

• Shield should be connected with 0V at user side.

■ Probe

GYcAT- **-** **/** **-** **-** **-** **-**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Effective stroke

15~3500mm

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	M2P, M0, M11	F25N, F28N
90mm		F28S, F30S
100mm	T142, T162	F40S, F42S, F50S, F54S

: mm (option) (specified by customers)

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

④ Thread/Rod diameter

M : M24xP1.0, rod Φ 10 (STD)

N : M18xP1.5, rod Φ 10

U : 3/4-16UNF-3A, rod Φ 10

M8 : M24xP1.0, rod Φ 8

N8 : M18xP1.5, rod Φ 8

U8 : 3/4-16UNF-3A, rod Φ 8

M14: M24xP1.0, rod Φ 13.8

⑤ Associated magnet or float

<magnet>

M2P : No.2P (STD)

MG0 : No. Φ

M11 : No.11

T142 : No.T14-M2

T162 : No.T16-M2

<float>

F28S : Φ 28 SS316L

F30S : Φ 30 SS316L

F40S : Φ 40 SS316(B)

F42S : Φ 43 SS316L

F50S : Φ 50 SS316L

F54S : Φ 54 SS304

F25N : RF-A10 plastic

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

Δ GF: pigtail / cable end: free

Δ GA: pigtail / cable end: with connector for relay

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

(Δ : cable type

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

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

WPCN: submersible connector type

WP3GF: pigtail / cable end: free

WP3GA: pigtail / cable end: with connector for relay

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

• P107 shows the detailed information

(*) 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)

⑧ Option

blank: without option

12S: Power supply +12VDC (total rod length L $\leq$ 630mm)

output: 0~5V or 4~20mA (load: Max.500 Ω)

SRT: SRT option

(($\textcircled{6}$ cable connection: pigtail type only (SG))

H0: probe rod 100°C

X2: 2kHz sampling (total rod length: Max.750mm)

X4: 4kHz sampling (total rod length: Max.450mm)

X8: 8kHz sampling (total rod length: Max.300mm)

• Please confirm the details of options on page 106~108.