

High performance probe with controller

GYHR Probe

High ambient temperature



GYHR probe is designed to operate at high ambient temperatures up to 100°C, including sensor head. Electronic parts inside are minimized, yet provide high performance and reliability in the application. Cable used has reinforced silicon rubber sheath which stands ambient temperatures up to 150°C. Max cable extension is 100m.

Specifications

Accuracy	Non-linearity	$\leq \pm 0.1\%FS$ TYP
	Resolution	(analogue) $\leq 0.01\%FS$ (digital) 0.1mm
	Repeatability	$\leq \pm 0.05\%FS$
Environment	Temp. drift	$\leq \pm 70ppmFS/^{\circ}C$
	Max. Pressure	35MPa (probe rod)
	Operating temp.	-5°C ~ +100°C
	Storage temp.	-40°C ~ +120°C
	Vibration	6G (40Hz 2mmPP)
	Shock	50G (2msec)
	IP grade	IP64 (probe)

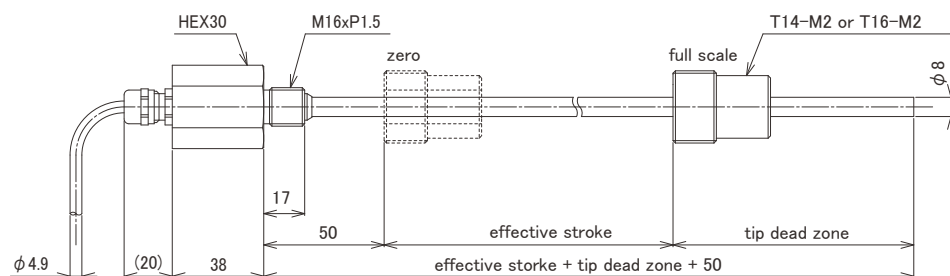
- The above mentioned accuracy applies to sensors with an effective stroke of 300mm or more.
- The specification of stroke less than 300mm is equal that of stroke 300mm.

◆ associated controller

- analogue output: GYHC (page 50-51)
- digital output: GYDC-S1 (page 54-55), GYDC-05 (page 56-57)
- IRDS-GY (page 59) : When using the IRDM, you can connect with CC-Link, CC-Link IE Field, PROFIBUS, EtherNet/IP, and EtherCAT.
- DC-Q (page 58) : MELSEC-Q built-in unit

Dimensions

■ Probe



* In case of an effective stroke of 1001mm or more, head dead zone length is 120mm and tip dead zone length is 120mm. (Model code ②/③ is 120/120)

- Material probe head: SS304, probe rod: SS304
- The tip dead zone length depends on the selected magnet or float type.

■ Cable

Cable color	Function
shield	shield
white	sensor signal
black	0V
red	sensor power

- shield should be connected to shield terminal of the controller.

■ Probe

GYHR- **-** **/** **-** **-** **-** **-00-**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Effective stroke

15~2000mm

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: 90mm/100mm (STD)

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

tip DZ	magnet	float
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

K8 : M16xP1.5, rod Φ 8 (STD)

K : M16xP1.5, rod Φ 10

• In case of stroke longer than 1001mm, rod Φ 10 should be used.

⑤ Associated magnet or float

<magnet>

T142 : No.T14-M2

T162 : No.T16-M2

<float>

F28S : Φ 28 SS316L

F30S : Φ 30 SS316L

F40S : Φ 40 SS316(B)

F42S : Φ 42.5 SS316

F50S : Φ 50 SS316L

F54S : Φ 54 SS304

- 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

G☐F: pigtail / cable end : free

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

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

(*) In case of using extension cable
sensor cable (m) + extension cable (m) $\leq$ 100m

• Please consider extension cable on page 111.

⑦ Associated controller

24 : DC-Q and IRDS-GY for every stroke or GYHC, GYDC-05,

GYDC-S1 and GYMNC for longer stroke than 400mm

00 : other cases

⑧ Option

blank : without option

H2 : probe rod only 200°C

• Please confirm the details of option on page 106