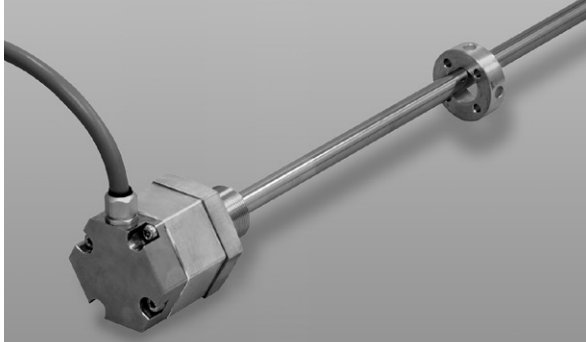


High performance probe with controller

GYHTR Probe

RS422

High ambient temperature (120°C),
high accuracy type(detachable probe element)



GYHTR probe is designed to operate at high ambient temperature up to 120°C, including sensor head. Between probe and controller, RS-422 differential line driver transmission, providing robustness against electrical noise, is used. The inside probe element can be detached from the outer housing.

Specifications

Accuracy	Non-linearity	$\leq \pm 0.1\%FS$ (Min. $\pm 50 \mu m$)
	Resolution	(analogue) 16bit (digital) Min. $50 \mu m$
	Repeatability	$\leq \pm 0.05\%FS$
	Temp. drift	$\leq 70ppmFS/^{\circ}C$
Environment	Max. Pressure	35MPa (probe rod)
	Operating temp.	$-5^{\circ}C \sim +120^{\circ}C$
	Storage temp.	$-40^{\circ}C \sim +120^{\circ}C$
	Vibration	15G (20~100Hz)
	Shock	100G (2msec)
	IP grade	IP67

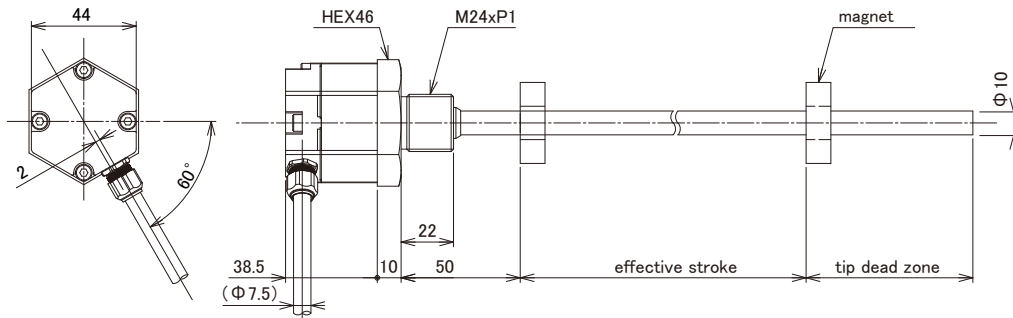
- The above mentioned accuracy applies to sensors with an effective stroke of 300mm or more.
- The specification of stroke less than 300mm is equal that of stroke 300mm.

◆ associated controller

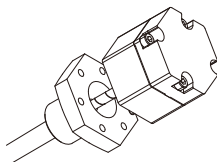
- analogue output: GYHC (page 50-51)
- digital output: GYDC-S1 (page 54-55), GYDC-05 (page 56-57)
- IRDS-GY (page 59) : When using the IRDM, you can connect with CC-Link, CC-Link IE Field, PROFIBUS, EtherNet/IP, and EtherCAT.
- DC-Q (page 58) : MELSEC-Q built-in unit

Dimensions

■ Probe



■ Detachable probe element



- materials : probe head : Al alloy, probe rod : SS304
- magnet : Select one from group GG on page 109.
- The tip dead zone length depends on the selected magnet or float.

■ Cable

Cable color	Function
red	Sensor power
white	0V
blue	Start(-)
green	Start(+)
brown	Stop(-)
black	Stop(+)
yellow	N.C.

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

■ Probe

GYHTR-□□□□-□/□-□□□-□□□-□□□-00-□

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Effective stroke

15mm~1000mm

② Head dead zone

S: 50mm (STD)

□: □mm (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	BA	
90mm		F28S, F30S
100mm	T144, T163	F40S, F42S, F50S, F54S

□: □mm (specified by customers)

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

④ Thread/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>	<float>
T144 : No.T14-M4	F28S : Φ28 SS316L
T163 : No.T16-M3	F30S : Φ30 SS316L
BA : No.2KYN-17-LG	F40S : Φ40 SS316(B)
	F42S : Φ42.5 SS316
	F50S : Φ50 SS316L
	F54S : Φ54 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

HG□F: pigtail / cable end : free

HG□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) ≤ 200m
- Please consider extension cable on page 111.

⑦ Output

00: depends on external controller

⑧ Option

blank: without option

SRT: SRT option

• Please confirm the details of options on page 108.

【Start/Stop-Interface】

◆ In case of using probe only,
probe outputs digital signals (start/stop) using RS422 differential line drivers. In response to user's interrogation (start) pulse, probe provides stop pulse.

