

Compact Probe with controller

GYMS Probe

Compact



The design of GYMS makes the sensor head compact. Its linearity is $\leq \pm 0.025\%FS$ and its protection is IP67.

Specifications

Accuracy	Non-linearity	$\leq \pm 0.025\%FS$ TYP
	Resolution	(analogue) $\leq 0.01\%FS$ (digital) 0.1mm
	Repeatability	$\leq \pm 0.01\%FS$
	Temp. drift	$\leq \pm 40ppmFS/^{\circ}C$
Environment	Max. Pressure	35MPa (probe rod)
	Operating temp.	$-20^{\circ}C \sim +80^{\circ}C$
	Storage temp.	$-40^{\circ}C \sim +80^{\circ}C$
	Vibration	6G (or 40Hz 2mmPP)
	Shock	50G (2msec)
	IP grade	IP67

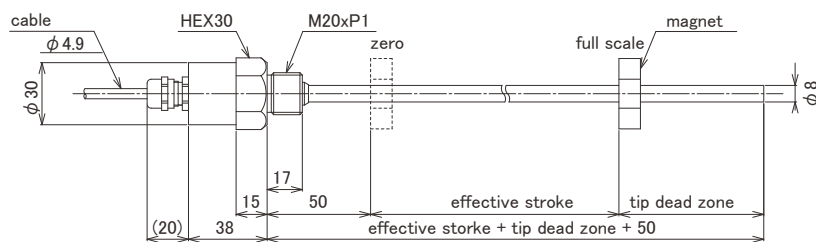
- The above mentioned accuracy applies to sensors with an effective stroke of 300mm or more.
- The specification of stroke less than 300mm is equal that of stroke 300mm.

◆ associated controller

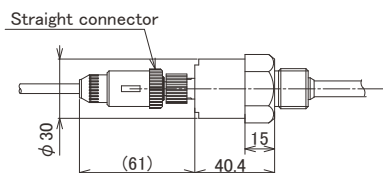
- analogue output: GYHC (page 52, 53)
- digital output: GYDC-S1 (page 56, 57), GYDC-05 (page 58, 59)
- IRDS-GY (page 61): When using the IRDM, you can connect with CC-Link, CC-Link IE Field, PROFIBUS, EtherNet/IP, and EtherCAT.

Dimensions

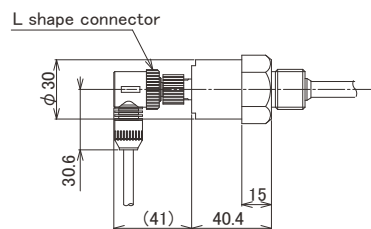
■ Probe



■ Straight connector type



■ L shape connector type



- 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.
- Connector: Omron XS2C-D4S1 (straight type) or D4S2 (L type) (Material: PBT plastic)

■ Cable (robot cable)

Wire color	Pin number	Function
	1	N.C.
white	2	sensor signal
black	3	0V
red	4	sensor power

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

■ Probe

GYMS- **-** **/** **-** **-** **-** **-00**

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, M0SM, M0LM, M3, M11N, BA	F25N, F28N
90mm		F28S, F30S
100mm	T144, T163	F40S, F42S, F50S, F54S

: mm (option) (specified by customers)

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

④ Thread/Rod diameter

J8 : M20xP1.0, rod Φ 8 (STD)

L8 : M16xP2.0, rod Φ 8

E8 : M20xP1.5, rod Φ 8

N : M18xP1.5, rod Φ 10

U : 3/4-16UNF-3A, rod Φ 10

K6 : M16xP1.5, rod Φ 6

• In case of an effective stroke 1001mm or more, the rod Φ 10 should be used.

⑤ Associated magnet or float

<magnet>

M2PN : No.2PN (STD)

M0SM : No. Φ SPM

M0LM : No. Φ LPM

M3 : No.3

M11N : No.11N

T144 : No.T14-M4

T163 : No.T16-M3

BA : No.2KYN-17-LG

<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.
- In case of an effective stroke 2001mm or more, "No.2KYN-17-LG" magnet (page 110) would be recommended.

⑥ Cable connection

G☐F: pigtail / cable end : free

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

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

CN: connector

(*) In case of using extension cable

sensor cable (m) + extension cable (m) $\leq$ 100m

• Please consider extension cable on page 113.

• In case that you need loose mating connector, ordering connector (straight or L-shaped) separately is necessary.

⑦ Output

00: depends on external controller (total rod length : $\leq$ 1400mm)

24: depends on external controller (total rod length : $\geq$ 1401mm)