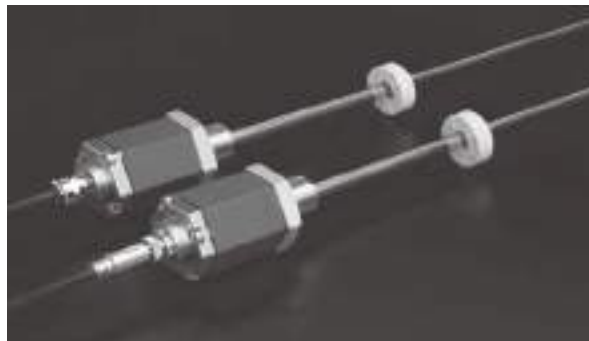


GYSE-R Probe

AC

RS422

High accuracy type (detachable probe element)



Between probe and controller, RS-422 differential line driver transmission, providing robustness against electrical noise, is used. In combination with a digital output controller, Min.1 μ m resolution is possible. The inside probe element can be detached from the outer housing. And by auto calibration function, a difference in the output when you change the probe is adjusted automatically.

Specifications

Accuracy	Non-linearity	$\leq \pm 0.025\%$ FS TYP
	Resolution	(analogue) 16bit (digital) Min.1 μ m
	Repeatability	$\leq \pm 0.001\%$ FS
	Temp. drift	$\leq \pm 20$ ppmFS/ $^{\circ}$ C
Environment	Max. Pressure	35MPa (probe rod)
	Operating temp.	-20° C $\sim$ $+75^{\circ}$ C
	Storage temp.	-40° C $\sim$ $+75^{\circ}$ C
	Vibration	15G (20 $\sim$ 100Hz)
	Shock	100G (2msec)
	IP grade	IP67

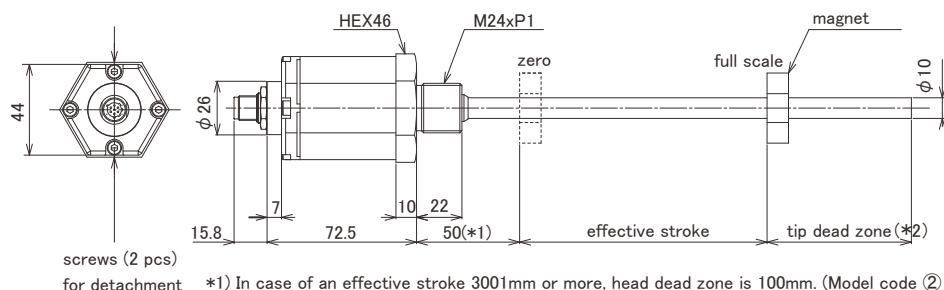
- The above mentioned accuracy applies to sensors with an effective stroke of 300mm or more.
- The specification of stroke less than 300mm is equal that of stroke 300mm.

◆ associated controller

- analogue output : GYHC (page 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.
- DC-Q (page 60) : MELSEC-Q built-in unit

Dimensions

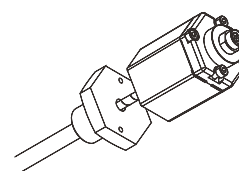
■ Probe



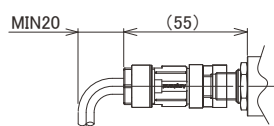
*1) In case of an effective stroke 3001mm or more, head dead zone is 100mm. (Model code ② : 100)

*2) In case of an effective stroke 3001mm or more, tip dead zone is "standard length + 30mm". (Model code ③ : 100/120/130)

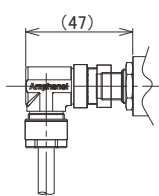
■ detachable probe element



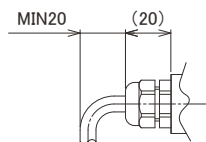
■ Connector type (straight)



■ Connector type (L-shaped)



■ Pigtail type



In case of connector type, connector dimensions are different from the existing product. Please refer to page 109 for the existing one.

- materials ; Probe head : Al alloy, 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 : Amphenol (materials : glass fiber reinforced plastic)
- Suitable cable diameter : $\Phi 4.0 \sim \Phi 7.0$, Wire size : 0.14 $\sim$ 0.82mm²

■ Cable

Wire color	Pin number	Function
red	1	Sensor power
white	2	0V
blue	3	Start(-)
green	4	Start(+)
brown	5	Stop(-)
black	6	Stop(+)
yellow	7	N.C.

• shield should be connected to FG of user's unit.

■ Probe

GYSE-R- **-** **/** **-** **-** **-** **-00-**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Effective stroke

15~7500mm

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

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

Z : EF (flexible element) only (without outer housing)

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.

⑥ Cable connection

8P : 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)

CN : existing connector (Please refer to P.109 of option.)

(*) In case of using extension cable

sensor cable (m) + extension cable (m) $\leq$ 200m

• Please consider extension cable on page 114.

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

⑦ Output

00 : depends on external controller

⑧ Option

blank : without option

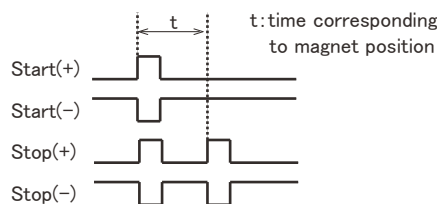
SRT : SRT option

• Please confirm the details of SRT option 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.



【Auto calibration function】

◆ In combination with the controller (GYDC-S1, GYDC-05, GYHC) having auto calibration function, a difference in the output when you change the probe is adjusted automatically.