

GYSE-R-PF Probe

AC
RS422

High accuracy type
(detachable probe element)



This is the linear profile version of GYSE-R. 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 μm 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	$\leq \pm 0.025\% \text{FS TYP}$
	Resolution	(analogue) 16bit (digital) Min.1 μm
	Repeatability	$\leq \pm 0.001\% \text{FS}$
	Temp. drift	$\leq \pm 20 \text{ppmFS}/^\circ\text{C}$
Environment	Operating temp.	$-20^\circ\text{C} \sim +75^\circ\text{C}$
	Storage temp.	$-40^\circ\text{C} \sim +75^\circ\text{C}$
	Vibration	15G (20~100Hz)
	Shock	100G (2msec)
	IP grade	IP65

- 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.

• Fixing clamps are supplied.

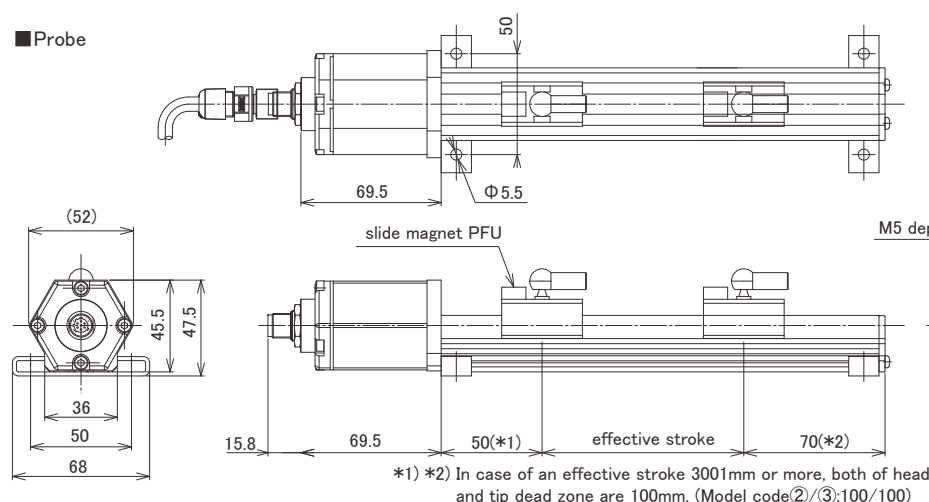
stroke	< 600mm: 2 pcs	
	600~1000mm: 3 pcs	
	1001~1500mm: 4 pcs	One clamp is added
	1501~2000mm: 5 pcs	every 500mm

◆ associated controller

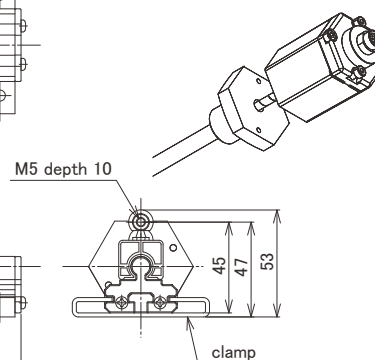
- analogue output: GYHC (page 52, 53)
- digital output: GYDC-S1 (page 56, 57), GYDC-05 (page 58, 59)
- IRDS-GY (page 61): When using the IRDM, you can connect with CC-Link, CC-Link IE Field, PROFIBUS, EtherNet/IP, and EtherCAT.
- DC-Q (page 60): MELSEC-Q built-in unit

Dimensions

■ Probe

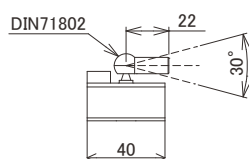


■ detachable probe element

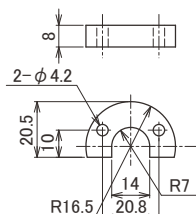


■ magnet

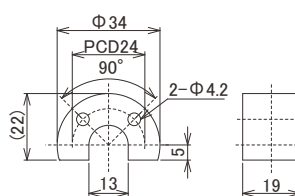
slide magnet
model: PFU
materials: polyacetal



floating magnet
model: No.5N-UK
materials: MC nylon



floating magnet
model: No.5PFT-LG
materials: SS304



■ 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.

• materials ; Probe head : Al alloy, body : Al alloy

■ Probe

GYSE-R-□□□□-□/□-PF-□□-□□-00-□

① ② ③ ④ ⑤ ⑥ ⑦

① Effective stroke

15mm~7500mm

② Head dead zone

S: 50mm (STD)

□: □mm (option) (specified by customers)

• Possible Min. length depends on the selected magnet.

③ Tip dead zone

S: 50mm (STD)

□: □mm (option) (specified by customers)

• Possible Min. length depends on the selected magnet.

④ Associated magnet

PFU : PFU slide magnet

FE : No.5N-UK

BP : No.5PFT-LG

- Please consult if you select a magnet of other than above.
- This Model code means only specifying associated magnet.
- When you need a magnet, please order separately.

⑤ Cable connection

8P: connector

△G□F: pigtail / cable end : free

△G□A: pigtail / cable end : with connector for relay

(□: cable length (m), Max.10m) (*)

(△: 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) ≤ 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.

⑥ Output

00: depends on external controller

⑦ Clamp

F50: with fixing clamps

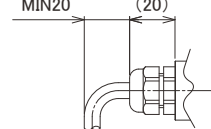
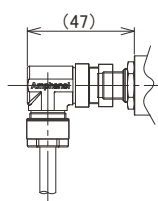
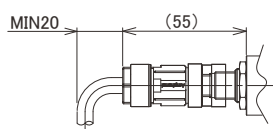
N: without fixing clamps

【Cable connection】

■ Connector type (straight)

■ Connector type (L-shaped)

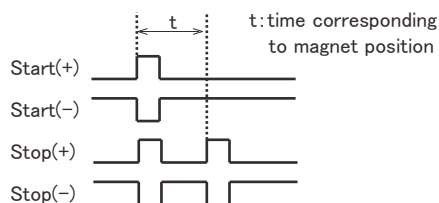
■ Pigtail type



In case of connector type, connector dimensions are different from the existing product. Please refer to page 109 for the existing one.
connector: Amphenol (materials: glass fiber reinforced plastic)

【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.