

GYKMR Probe

AC
RS422

High accuracy with external controller



GYKMR is replacement model of GYKM-RS which head part became slim. And it was added auto calibration function. By the 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 (with GYHC) (digital) Min.1 μm (with GYDC-05)
	Repeatability	$\leq \pm 0.01\%FS$
	Temp. drift	$\leq \pm 20ppmFS/^{\circ}C$
Environment	Operating temp.	0 $^{\circ}C \sim +65^{\circ}C$
	Storage temp.	-20 $^{\circ}C \sim +65^{\circ}C$
	Vibration	3G (or 40Hz 2mmPP)
	Shock	10G (2msec)
	IP grade	IP53, IP64, 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.
- resolution depends on associated controller.

- Mounting brackets are supplied.
stroke < 600mm : 4 pcs
600~1000mm : 6 pcs
1001~1500mm : 8 pcs
1501~2500mm : 10 pcs

◆ 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

Model

■ Probe

GYKMR-□□□□-S/S-□-□-00-□

①
⑤
②
③
④
⑥

① Effective stroke

- 15mm~2000mm (rod type, T, U)
- 15mm~500mm (both end universal joint types)
- 15mm~2500mm (TS, TW)

② Magnet

- R: rod $\Phi 6$ (M5 thread) (Standard) <IP53>
- R2: rod $\Phi 6$ (M5 thread) <IP64>
- R88: rod $\Phi 8$ (M8 thread) <IP64>
- R85: rod $\Phi 8$ (M5 thread) <IP64>
- RW88: Both end universal joint type (rod $\Phi 8$)
- U: Slide magnet <IP65>
- T: Floating magnet (gap 1mm) <IP65>
- TS: Floating magnet (gap 4mm) <IP65>
- TW: Floating magnet (gap 8mm) <IP65>
- U-FX65: Slide magnet + rod $\Phi 6$ (M5 thread) with linkball joint <IP65>
- U-FX88: Slide magnet + rod $\Phi 8$ (M8 thread) with linkball joint <IP65>

③ Cable connection

- $\Delta G \square F$: pigtail / cable end : free
- $\Delta G \square A$: pigtail / cable end : with connector for relay
($\square$: cable length (m), Max.10m) (*)
- (Δ : cable type
S: standard, H: high temp. cable, R: robot cable)

(*) In case of using extension cable, sensor cable (m) + extension cable (m) $\leq 200m$

- Please consider extension cable on page 111.

④ Output

- 00: depends on external controller

⑤ Dead zone

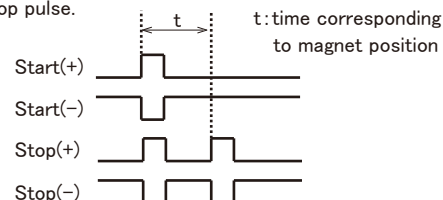
- In case of an effective stroke 2001mm or more for floating magnet TS or TW, dead zone length for tip side is 80mm (standard length + 15mm). Model code of dead zone will be the actual length (mm).
- S/S : standard
- S/80: 2001mm~ (TS, TW type)

⑥ Clamp

- K38 : with mounting brackets
- F50 : with fixing clamps
- N : without mounting brackets and fixing clamps

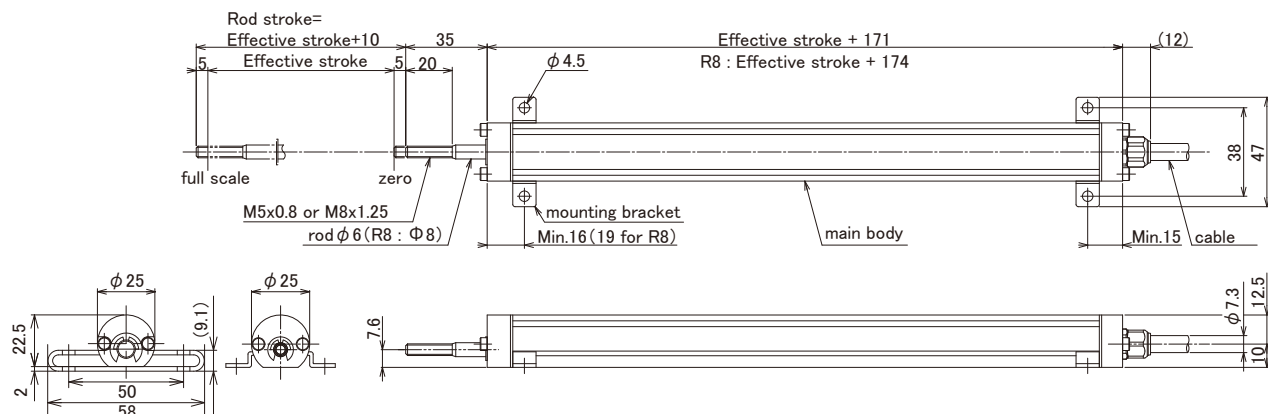
[Start/Stop-Interface]

- ◆ 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.

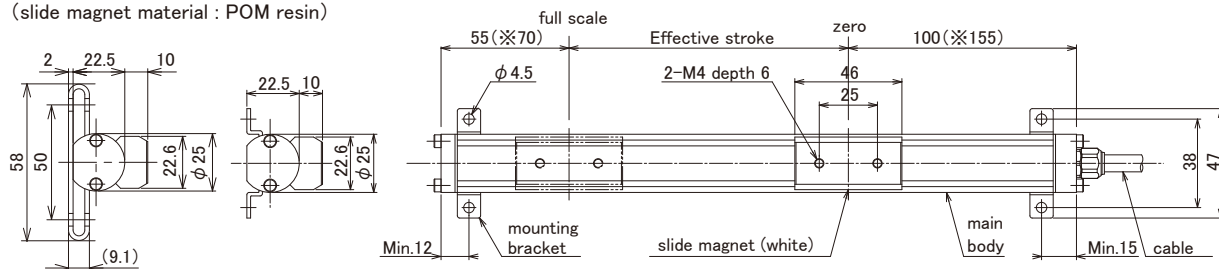


(rod material)

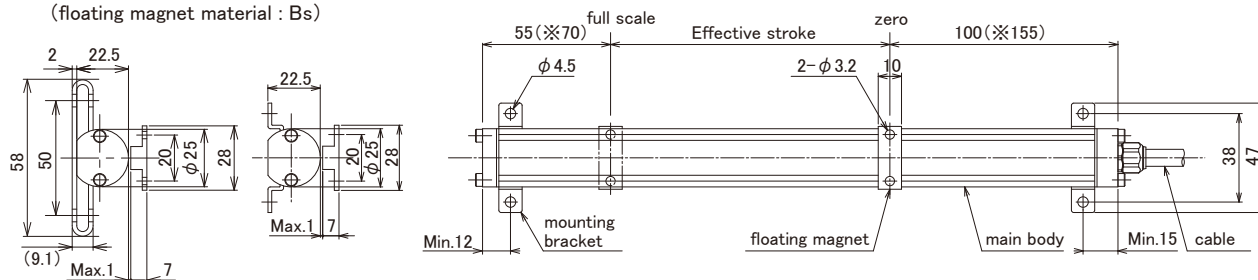
Main body material is Aluminum



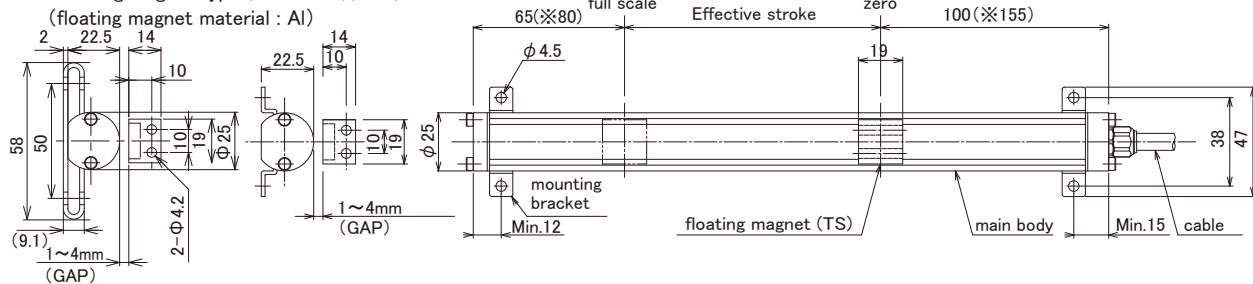
(slide magnet material : POM resin)



(floating magnet material : Bs)

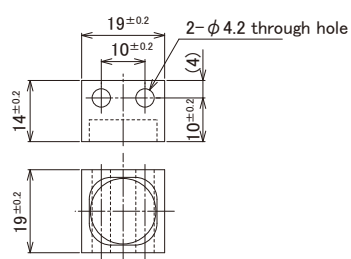


(floating magnet material : Al)

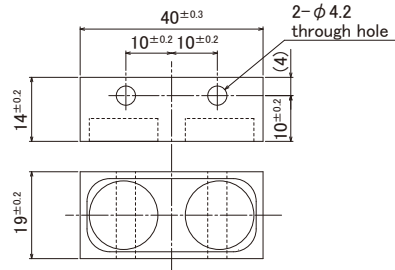


- (※70): In case of stroke 2001mm or more, dead zone length for tip side is 70mm.
- (※80): In case of stroke 2001mm or more, dead zone length for tip side is 80mm for TS, TW type.
- (※155): In case of 1001mm or more, dead zone length for connector side is 155mm.

material : Al (GAP:1~4mm)



(material : BS) (GAP:4~8mm)



■ Cable

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

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

Rod cap extended to 21mm, double packing used, IP64 grade protection is now available.

