GYSE-A Probe

Analogue

GPM | Noise Cancel | CE

High performance analogue output (detachable probe element)

GYSE-A is a high performance analog output probe, and has the high resolution of 16bit. It has also velocity output. Using two pcs of magnet on the probe as another option, detecting each magnet position or relative distance between the two is possible. The inside probe element can be detached from the outer housing, and with the captive software (GPM), zero and gain adjustment is possible at user side. The sensor inside element flexible option is available and also most suitable for the exchange when space is small.

Specifications

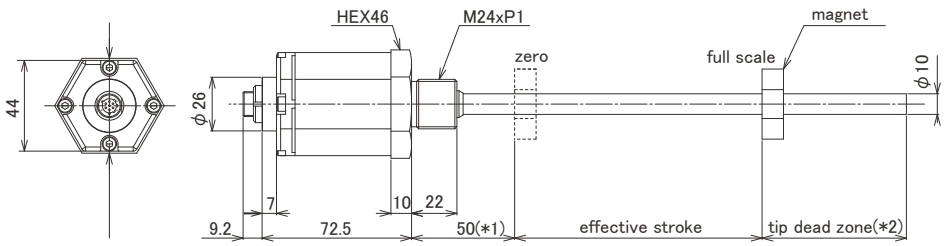
Accuracy	Non-linearity	≦±0.025%FS TYP
	Resolution	16bit(1/65536)
	Repeatability	≦±0.001%FS (Min. ±3μm)
	Temp. drift	≦±20ppmFS/℃
Output	Position (STD)	0～10V(output current : Max.5mA, load : Min.2kΩ) or 4～20mA(load : Max.500Ω)
	Velocity (Option)	±10V(output current : Max.5mA, load : Min.2kΩ) or 4～20mA(load : Max.500Ω)
	Alarm	Open drain 50V 0.1A (for magnet missing)
Power supply		+24(±2)VDC (70mA)
Sampling freq.(*)		Std 1kHz(total rod length : up to 1250mm
Environment	Max. Pressure	35MPa(probe rod)
	Operating temp.	-20℃～+75℃
	Storage temp.	-40℃～+75℃
	Vibration	15G(20～100Hz)
	Shock	100G(2msec)
	IP grade	IP67

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

(*) Sampling frequency : Max. 3.75kHz (It depends on the total rod length (shows in Model ⑨), and the consumption current increases.)

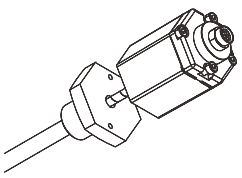
Dimensions

■Probe



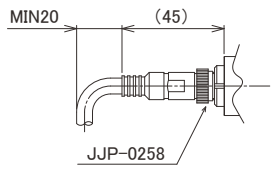
screws (2 pcs) for detachment

■detachable probe element

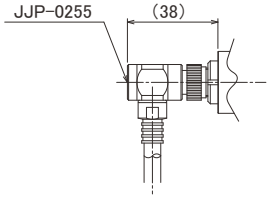


*1) In case of 3001mm or more, head dead zone is 100mm. (Model code ② : 100)
*2) In case of 3001mm or more, tip dead zone is standard length + 30mm. (Model code ③ : 100/120/130)

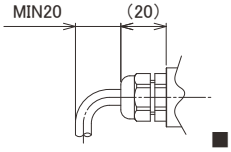
■Connector type(straight) (STD)



■Connector type(L-shaped) (option)



■Pigtail type(option)



・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.
・connector ; straight or L-sharped (housing parts : BS with Ni plating)
・Applied cable diameter: Φ6.6～Φ7.5、Wire size:0.5mm².
・cable length ; Max.10m (0-10V output), Max.100m (4-20mA output)

■Cable

Cable color	Pin number	Function
red	1	+24VDC
while	2	0V
blue	3	OUT1
green	4	COM1
brown	5	OUT2
black	6	COM2
yellow	7	Alarm

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

Model

■Probe

GYSE-A-□□□□-□/□-□□-□□-□□-□/N-□

⑩ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①Effective stroke
15～7500mm

②Head dead zone
S：50mm（STD）
□：□mm（option）（specified by customers）

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

③Tip 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.

④Thread/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)

⑤Associated magnet or float

＜magnet＞		＜float＞	
M2PN	：No.2PN（STD）	F28S	：Φ28 SS316L
M0SM	：No.ΦSPM	F30S	：Φ30 SS316L
M0LM	：No.ΦLPM	F40S	：Φ40 SS316（B）
M3	：No.3	F42S	：Φ42.5 SS316
M11N	：No.11N	F50S	：Φ50 SS316L
T144	：No.T14-M4	F54S	：Φ54 SS304
T163	：No.T16-M3	F25N	：RF-A10 plastic
BA	：No.2KYN-17-LG	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.

⑥Cable connection
CN：connector（STD）
△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）

(*) In case of using extension cable
Voltage output : sensor cable (m) + extension cable (m) ≦ 10m
Current output : sensor cable (m) + extension cable (m) ≦ 100m

・Please consider extension cable on page 112.
・In case that you need loose mating connector, ordering connector (straight or L-shaped) separately is necessary.

⑦Position output（OUT1）
AD：0～10V（When magnet moves toward tip, output increase）
AR：10～0V（When magnet moves toward tip, output decrease）
BD：4～20mA（When magnet moves toward tip, output increase）
BR：20～4mA（When magnet moves toward tip, output decrease）
CD□□：bipolar output（-□V～+□V）
（for example CD10：-10V～+10V）
CR□□：bipolar output（+□V～-□V）
（for example CR05：+5V～-5V）
V Z/F：option (specified voltage)
（for example V1/5：1～5V, V9.5/0.5：9.5～0.5V）
I Z/F：option (specified current)
（for example I5.2/20：5.2～20mA, I18/5：18～5mA）

【Z=output at zero position, F=output at full position】

⑧Option : Analogue output（OUT2）
・N：without option（STD）
・Position output：select from ⑦
・Velocity output（Note1）
VA[　]：±10V
WB[　]：4～20mA
[　]：max. velocity（1.00～999 mm/s）
<ex.9R99 : max. velocity = 9.99 mm/s>

（Note1）
VA : When magnet stops, output is 0V.
When moving toward probe tip, +10V.
WB : When magnet stops, output is 4mA.
When moving in any direction, 20mA.

⑨Option
blank：without option
SRT：SRT option（⑥Cable connection：pigtail type only）
H0：probe rod 100℃
EF：flexible element (rod Φ10 only)
X2：2kHz sampling (total rod length : Max. 750mm)
X3：3kHz sampling (total rod length : Max. 600mm)
X4：3.75kHz sampling (total rod length : Max. 450mm)

・Please confirm the details of options on page 106 - 108.
・Without EF option (standard), GYSE-A probe element is detachable though the rod parts is rigid. With EF option, as to accuracy or other specs, please consult factory.

⑩2 Magnet Option
A　：one magnet (standard)
A2MR：two magnets（relative distance between the two）
A2ME：two magnets（each magnet position）
（Please consult factory）