# Linear profile Series

# **GYSE-S-PF Probe**





### **SSI output** (detachable probe element)



This is the linear profile version of GYSE-S. GYSE-S probe outputs displacement of the magnet as SSI (Synchronous Serial Interface). SSI is output of a serial communication-type and outputs the position data of 24 - 27 bit. When using SSPC-03 of separate sale, you can convert SSI to parallel data. So you can get the data in the I/O unit. 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.

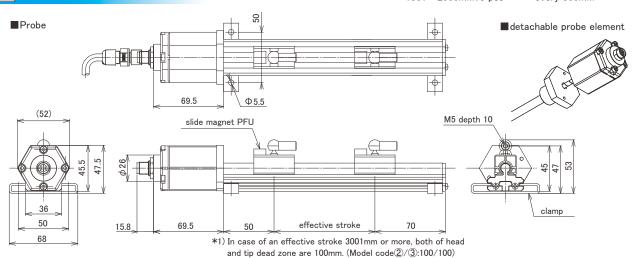
# **Specifications**

Accuracy	Non-linearity	≦±0.025%FS TYP	
	Resolution	0.1mm~0.001mm specified	
	Repeatability	$\leq \pm 0.001\%$ FS (Min. $\pm 3 \mu$ m)	
	Temp. drift	±15ppmFS/℃以	
Output	Position	SSI(Synchronized Serial Interface),	
	(STD)	24~27bit, Binary(STD) or Gray	
	Velocity	not available	
	(Option)		
	Alarm	Open drain 50V 0.1A (for lost magnet)	
Power supply		+24(±2)VDC (70mA)	
Sampling freq.(*)		Std 1kHz(total body length:up to 1250mm)	
Environment	Operating temp.	−20°C~+75°C	
	Storage temp.	-40°C~+75°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.
- (\*) Sampling frequency: Max. 3.75kHz (It depends on the total body length (shows in Model ①), and the consumption current increases.)
- •Fixing clamps are supplied. stroke < 600mm: 2 pcs

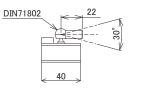
600~1000mm:3 pcs

1001~1500mm:4 pcs One clamp is added 1501~2000mm:5 pcs every 500mm





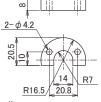
**Dimensions** 



materials: MC nylon  $2 - \phi 4.2$ 

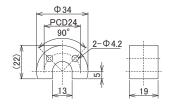
floating magnet

model: No.5N-UK



\*materials; Probe head: Al alloy, body: Al alloy

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



### ■ Cable

	Wire	Pin	Function
	color	number	runction
	red	1	+24VDC
	white	2	0V
	blue	3	DATA+
	green	4	DATA-
	brown	5	CLK+
	black	6	CLK-
	yellow	7	Alarm

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

# ■ Probe

#### **GYSE-S-**-PF-**(2**) **(6) (7) 1** (3) **(5) 9** (10) **(4**) **(8)** (11) **(12)**

#### **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.

### **3Tip 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 :No.5N-UK :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

 $\Delta G \square F$ : 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 cable 10m or more, please use extension cable.

- •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 Resolution

D5: 0.005mm D2:0.1mm D3:0.05mm D7:0.002mm D4:0.01mm(STD) D8:0.001mm

### **7** Direction

D: When magnet moves toward tip, output increase R: When magnet moves toward tip, output decrease

#### ® Number of bits

4:24bit (STD)

5:25bit

6:26bit

7:27bit

### Output code

B:Binary(STD)

G: Gray

#### **10**Synchronous

5A: asynchronous SSI 5S:synchronous SSI

#### **11**Option

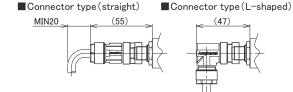
blank:without option

X2:2kHz sampling (total body length: Max. 750mm) X3:3kHz sampling (total body length: Max. 600mm) X4:3.75kHz sampling (total body length: Max. 450mm)

#### **12**Clamp

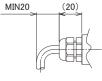
F50: with fixing clamps N: without fixing clamps

#### [Cable connection]



# MIN20 (20)

■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)

# Accessary (option): SSPC-03

loose output connector: STD accessary 3m cable with the connector is availabe by option

converts SSI into parallel  $(power: +24VDC(\pm 5\%), 50mA)$ 

Without SSI unit in your PLC, you can get position data from SSPC-03.

