

GYHC Controller

Analogue

AC
GPM
**Noise
Cancel**

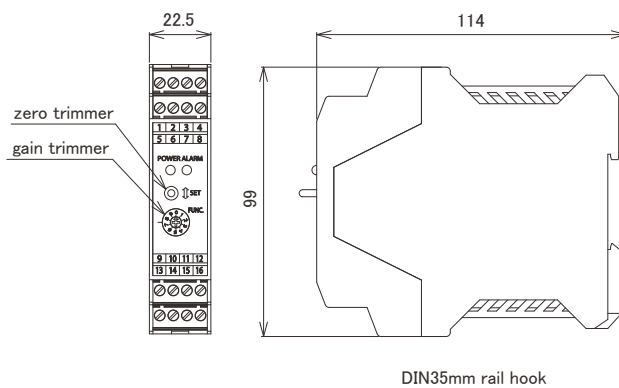
High accuracy analogue controller



GYHC controller outputs 0~10V or 4~20mA for position and $\pm 10V$ (or 4~20mA) for velocity. Using digital process inside, fine resolution is possible (1/65536). With option, putting 2 pcs magnets on one probe and detecting each magnet position or relative distance between 2 magnets are possible. It has toggle switches on front face for zero/gain adjustment, mounting with DIN rail. With the captive software (GPM), zero and gain adjustment is possible at user side.

Dimensions

Controller



Connection

Pin number	Function	Pin number	Function
1		9	OUT1(+)
2		10	OUT1(-)
3		11	OUT2(+)
4		12	OUT2(-)
5		13	power(+)
6		14	power(-)
7		15	alarm(+)
8		16	alarm(-)

Wiring for probe. Please refer to each manual.

Specifications

Resolution (position)	16bit (1/65536) (*1)
	$\leq 0.01\%FS$ (*2)
Position(OUT1) (OUT2: option)	0~10V (Max.5mA, Min.2k Ω) or 4~20mA (load: Max.500 Ω)
Velocity(OUT2) (option)	$\pm 10V$ or 4~20mA
Alarm(*3)	Open collector 0.1A 30VDC(*3)
Power supply	Std: +24VDC $\pm 5\%$ ($\leq 150mA$)(*4) Option: +15VDC $\pm 5\%$ ($\leq 250mA$)(*5)
Sampling freq. (*6)	Std 1kHz (up to stroke 1000mm)
Temp. drift	$\leq \pm 10ppmFS/^{\circ}C$
Operating temp.	0 $^{\circ}C$ ~+65 $^{\circ}C$
Storage temp.	-20 $^{\circ}C$ ~+85 $^{\circ}C$

*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.

(*1) associated probe: GYMR6, GYSE-R, GYcRS, GYMR5, GYFRS, GYKMR, GYRHP-MR6

(*2) associated probe: GYMS, GYGS, GYPM, GYPE2K, GYPMR, GYcRP, GYHTR, GYHR

(*3) Cable disconnection and magnet missing

(*4) In case of adding analogue output ⑥, the consumption current is 170mA.

(*5) The associated probe is GYcRP only. The total rod length is less than 1500mm.

In case of adding analogue output ⑥, the consumption current is 270mA.

(*6) Sampling frequency is Max. 3.75kHz. It depends on the total rod length (model⑧), and the consumption current increases.

[Auto calibration function]

◆ In combination with the probe (GYMR6, GYSE-R, GYKMR, GYRHP-MR6) having auto calibration function, a difference in the output when you change the probe is adjusted automatically.

■ Controller

GYHC-□-□□□□-**Z**□-□-□/□-□-□

①

②

③

④

⑤

⑥

⑦

⑧

① Probe

MR6 :GYMR6	GS :GYGS
SR :GYSE-R	PM :GYPM
RS :GYcRS	P2 :GYPE2K
RP :GYcRP	PR :GYPMR
R5 :GYMR5	KMR :GYKMR
FS :GYFRS	PMR6 :GYRHP-MR6
HTR :GYHTR	ETS :EX-GYdT-R
HR24 :GYHR	ESP :EX-GYdS-R
MS :GYMS	I4 :IGY4

② Effective stroke (mm)

③ Head dead zone

S:20mm / 30mm / 50mm(STD)

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

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

It's different in the standard dead zone length depending on connected probes.

④ Associated magnet or float

<magnet>

MG0 :No.Φ
M0SM :No.Φ SPM
M0LM :No.Φ LPM
M2P :No.2P
M2PN :No.2PN
M3 :No.3
M11 :No.11
M11N :No.11N
T142 :No.T14-M2
T144 :No.T14-M4
T162 :No.T16-M2
T163 :No.T16-M3
BA :No.2KYN-17-LG

<float>

F28S :Φ28 SS316L
F30S :Φ30 SS316L
F40S :Φ40 SS316(B)
F42S :Φ43 SS316L
F50S :Φ50 SS316L
F54S :Φ54 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.

⑤ Position 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】

⑥ Option : Analogue output (OUT2)

•N:without option(STD)

•Position output:select from ⑤

•Velocity output(Note1)

VA[]:±10V

WB[]:4~20mA

[]:max velocity (1.00~999mm/sec)

(ex.9R99: max velocity=9.99mm/sec)

(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.

⑦ Power supply

24S:+24VDC(STD)

15S:+15VDC(Option) (GYcRP probe only)

⑧ Option

2ME:2 magnets, each magnet position (analog output)(*)

2MR:2 magnets, relative distance between 2pcs(*)

(OUT1 only, analog output)

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)

HS:resin coating against humidity

(*) When using standard magnets, Min. proximity distance between 2 magnets is 75mm. When using other magnets, please consult us.