

# GYDC-05 Controller

## High-end Digital Controller For GY transducers

GYDC-05 controller enables digital output of 1  $\mu$  m resolution and also analogue output.

Other features are as options,

-Additional analogue output of magnet velocity

-SSI output and incremental output

GYDC-05 controller can be used with:

GYcRS/GYMR5/GYFRS/GYGS/GYPM/GYHR/GYcRP probes.

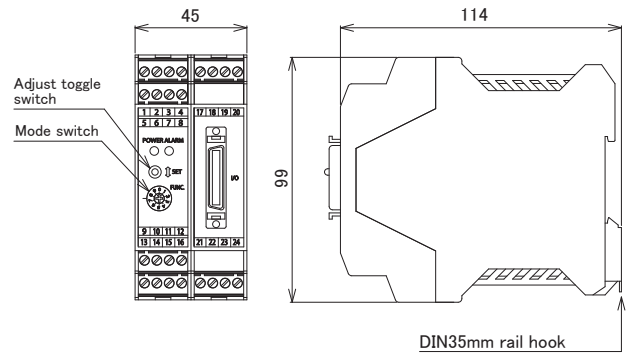


### Specifications

	Standard	Option
Digital output (position)	Parallel Binary (Gray code user-configurable)	Incremental output (RS422 line drivers)
	Negative logic (「1」 at transistor on)	SSI output
	Resolution: 0.01mm/bit (Probe: GYcRS, MR5, FRS)	0.1, 0.05, 0.005, 0.002, 0.001mm/bit
	Resolution: 0.1mm/bit (Probe: GYGS, PM, HR, cRP, KM)	0.01mm/bit (Probe: GYHR)
Analogue output (position) (OUT1)	0~10V (output current: Max.5mA, load: Min.2k $\Omega$ )	4~20mA (load: Min.500 $\Omega$ )
	Resolution: 16bit(1/65536) (Probe: GYcRS, MR5, FRS)	
	Resolution: 0.01%FS (Probe: GYGS, PM, HR, cRP, KM)	
Velocity output (OUT2)		$\pm$ 10V or 4~20mA
Alarm output	Open collector 0.1A 30VDC (Cable disconnection and magnet drop)	
Power supply	+24VDC $\pm$ 5% (< 160mA)	
Frequency resp.	Std 1kHz (depending on stroke) sampling	
Temp drift	$\pm$ 10ppmFS/ $^{\circ}$ C	
Operating Temp	0 $^{\circ}$ C~+65 $^{\circ}$ C	
Storage Temp	-20 $^{\circ}$ C~+75 $^{\circ}$ C	

\*The above mentioned accuracy applies to sensors with an effective stroke of 300mm or more.

### Dimensions



Standard: with mating connector: I0136-3000PE(Sumitomo 3M)  
Option: mating connector with 3m cable

### Model No.

GYDC-05-□-□□-□-□□□□-Z□-□/□-□  
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

#### ① Digital output

- 1: Standard (parallel, negative logic, binary code)
- 2: Incremental output (250kHz)
- 5A: SSI asynchronous
- 5S: SSI synchronous

#### ② Resolution

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

#### ③ Direction of output

- (toward probe tip)
- D: output data increase
- R: output data decrease

#### ④ Probe

- RS: GYcRS probe
- R5: GYMR5 probe
- FS: GYFRS probe
- GS: GYGS probe
- PM: GYPM probe
- RP: GYcRP probe
- KM: GYKM probe
- HR: GYHR probe

#### ⑤ Effective stroke (mm)

- ⑥ Dead zone length of probe head side (mm)

#### ⑦ Analogue position output (OUT1)

AD	0~10V (Std)
AR	10~0V
BD	4~20mA
BR	20~4mA
CD or CR□□	□□V~□□V
bipolar output [ex] CD10	-10V~+10V
CR05	+5V~-5V
V Z/F [ex] V1/5	custom order 1~5V
	9.5~0.5V
I Z/F [ex] I5.12/20	custom order 5.12~20mA
	20~5.38mA

※Z=Zero position  
F=Full scale position

#### ⑧ Option: Analogue output (OUT2)

- position output: see ⑦
- velocity output (Note1)  
VA[ ]  $\pm$ 10V  
WB[ ] 4~20mA  
[ ] : max velocity (1.00~999mm/sec)  
(ex.9R99: max velocity=9.99mm/sec)
- N: No option

#### ⑨ Magnet and Float

- M0 : No.  $\Phi$  magnet
- M0SM : No.  $\Phi$  SPM magnet
- M0LM : No.  $\Phi$  LPM magnet
- M2PN : No. 2PN magnet
- M2PN : No. 2PN magnet
- M3 : No. 3 magnet
- M11 : No. 11 magnet
- M11N : No. 11N magnet
- T142 : No. T14-M2 magnet
- T144 : No. T14-M4 magnet
- T162 : No. T16-M2 magnet
- T163 : No. T16-M3 magnet
- MG□ : other magnet
- F28S :  $\Phi$ 28SS316 float
- F30S :  $\Phi$ 30SS316 float
- F40S :  $\Phi$ 40SS316 (B) float
- F42S :  $\Phi$ 42.5SS316 float
- F50S :  $\Phi$ 50SS316 float
- F54S :  $\Phi$ 54SS304 float
- F28N : RF-A10 plastic float
- F28N : RF-A6 plastic float
- FL□ : other float

(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.