GYDC-S1 Controller

Parallel

AC GPM Noise Cancel

High accuracy digital output (Parallel output)

GYDC-S1 outputs displacement of the magnet by a digital parallel output of minimum resolution 1μm. Using DIP switches in the case cover, you can change the code (binary or gray), the output direction, and the logic of the alarm output. And using pin A6 and A7 of parallel input in GYDC-S1, you can adjust zero and full points. With the captive software (GPM), zero and gain adjustment is possible at user side.

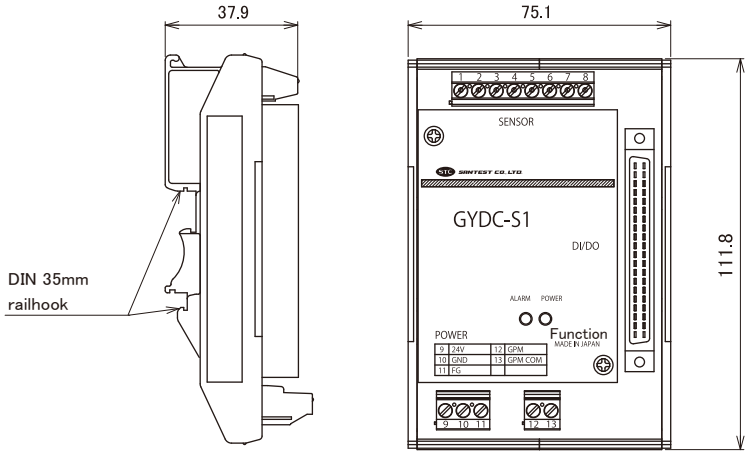
Specifications

Position (24bit)	Parallel(NPN), Binary code(*1), Negative logic(*2)
Resolution	STD 0.01mm (Min.0.001mm) (*3)
	0.1mm (*4)
Alarm	Open drain (*5)
Power supply	≦24VDC±5% (≦150mA)
Sampling freq.	Std 1kHz (up to stroke 1000mm)
Temp. drift	≦±1μm/℃ (*6)
Operating temp.	0℃～+65℃
Storage temp.	-20℃～+75℃

(*1)can be changed to Gary code at user side
(*2)Tr On = output "0"
(*3)associated probe : GYMR6, GYSE-R, GYcRS, GYMR5, GYFRS, GYKM-RS, GYKMR, GYRHP-MR6
(*4)associated probe : GYMS, GYGS, GYPM, GYHR, GYHTR GYcRP, GYKM, GYPMR, GYPE2K
(*5)cable disconnection and magnet drop
(*6)not include the temp. drift of the probe

Dimensions

■Controller



Parallel output connection

Number	Function	Number	Function
B20	D0	A20	D20
B19	D1	A19	D21
B18	D2	A18	D22
B17	D3	A17	D23
B16	D4	A16	N.C.
B15	D5	A15	LT
B14	D6	A14	STB
B13	D7	A13	ERR
B12	D8	A12	RSVO
B11	D9	A11	N.C.
B10	D10	A10	N.C.
B9	D11	A9	N.C.
B8	D12	A8	HOLD
B7	D13	A7	ZERO
B6	D14	A6	FULL
B5	D15	A5	RSVI
B4	D16	A4	COM
B3	D17	A3	COM
B2	D18	A2	N.C.
B1	D19	A1	EXT

NPN or PNP input signal can be selected by wiring

■Wiring

Pin number	Function
1	
2	
3	
4	
5	
6	
7	
8	

connection for probe
Please refer to each manual

Pin number	Function
9	+24VDC
10	0V
11	FG
12	GPM※
13	GPM COM※

※Communication connector for GPM
(Please check the manual of GPM)

With output connector : FCN-364P040-AU (FUJITSU COMPONENT)
Option : 3m cable with the output connector is available (CN-DCS1-3)

【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.

■Probe

GYDC-S1-□-□-□-Z□-□

①②③④⑤

①Resolution

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

・probe : GYMR6, GYSE-R, GYcRS, GYMR5, GYFRS, GYKM-RS, GYKMR, GYRHP-MR6 D4 is STD.
・probe : GYGS, GYMS, GYPM, GYcRP, GYHR, GYHTR, GYKM, GYPMR, GYPE2K, only D2 is available.

②Probe

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

③Effective stroke (mm)

④Head dead zone

S : 30 / 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.

⑤Associated magnet or float

<magnet>		<float>	
M2P	: No.2P (STD)	F28S	: Φ28 SS316L
M2PN	: No.2PN	F30S	: Φ30 SS316L
MG0	: No.Φ	F40S	: Φ40 SS316 (B)
M0SM	: No.ΦSPM	F42S	: Φ42.5 SS316
M0LM	: No.ΦLPM	F50S	: Φ50 SS316L
M3	: No.3	F54S	: Φ54 SS304
M11	: No.11	F25N	: RF-A10 plastic
M11N	: No.11N	F28N	: RF-A6 plastic
T142	: No.T14-M2		
T144	: No.T14-M4		
T162	: No.T16-M2		
T163	: No.T16-M3		
BA	: No.2KYN-17-LG		

・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.

<Output code / Direction of output>

◆Output code is Binary. It's possible to change to Gray by DIP switch on GYDC-S1.

◆The output increases when magnet (float) moves toward tip. It's possible to change the direction of output by DIP switch on GYDC-S1.