



IO-Link setting file (IODD) can be downloaded from our website (<https://panasonic.net/id/pidsx/global>).

1 PHYSICAL LAYER

Model No.	GX-308M(K)-A-P	GX-312M(K)-A-P	GX-318M(K)-A-P	GX-330M(K)-A-P
	GX-308ML(K)-A-P	GX-312ML(K)-A-P	GX-318ML(K)-A-P	GX-330ML(K)-A-P
Baud rate	COM3(230.4kbps)			
Minimum cycle time	0.4ms			
Process data length	2byte			
Vendor ID	834(0x0342)			
Device ID	0x70000	0x70001	0x70002	0x70003

2 PROCESS DATA(PD)

	bit							
	7	6	5	4	3	2	1	0
PD0	Monitor Output 8bit. The sensing data are output as eight bits(0-255)							
PD1	bit	Assignment	Details					
7	6	Control Output 1	0 : OFF					
	5		1 : ON					
	4		Fixed 0					
3	2	Fixed	0					
	1		0					
2	1	Instability Detection Alarm	If you set the Diagnosis Mode on Mode1 or Mode2, this bit becomes valid. 0 : Stable 1 : Unstable					
	0							
1	1	Target too Close Alarm	If you set the Diagnosis Mode on Mode1 or Mode3, this bit becomes valid. 0 : Stable 1 : Too close					
	0							
0	1	Fault (Minor error)	Diagnostic output when the sensor cannot continue operation due to a recoverable factor such as a load short-circuit or a service data error 0 : Normal 1 : Error					
	0							
0	1	Fault (Fatal error)	Diagnostic output when the sensor has an internal error and replacement is needed 0 : Normal 1 : Error					
	0							

3 SERVICE DATA(SD)

Index	Sub-Index	Name	R/W	Back up target	Format	Length	Default value	Range	Remark
0	※	Direct Parameter Page 1	R/W	—	Record	16byte	—		
1	※	Direct Parameter Page 2	—	—	—	16byte	—		Unused
2	0	System Command	W	—	UInteger	1byte	—	0x82 : Restore Factory Settings	
3	※	Data Storage	R/W	—	Record	—	—		
12	0	Device Access Locks	R/W	—	UInteger	2byte	0x0000 : Unlocked 0x0002 : Data Storage Locked		
16	0	Vendor Name	R	—	String	20byte	—		Panasonic
18	0	Product Name	R	—	String	25byte	—		Model No.
19	0	Product ID	R	—	String	25byte	—		Model No.
20	0	Product Text	R	—	String	40byte	—		Proximity Sensor
21	0	Serial Number	R	—	String	16byte	—		11000000~11FFFFFF (ASCII)
22	0	Hardware Version	R	—	String	4byte	—		
23	0	Firmware Version	R	—	String	4byte	—		
24	0	Application Specific Tag	R/W	○	String	32byte	*****	Optional	
36	0	Device Status	R	—	UInteger	1byte	—	0x00 : Operating properly 0x01 : Over approaching 0x04 : Breakdown	
37	1-6	Detailed Device Status	R	—	Record	18byte	—		
40	0	Process Data Input	R	—	Record	2byte	—		
61	1	Control output1 Switchpoint logic	R/W	○	UInteger	1byte	0x00	0x00 : NO (Normally Open) 0x01 : NC (Normally Close)	
63	1	Control output2 Switchpoint logic	R/W	○	UInteger	1byte	0x01	—	Reserved
65	1	Control output1 (Timer Mode)	R/W	○	UInteger	1byte	0x00	0x00 : Disable 0x01 : ON Delay 0x02 : OFF Delay 0x03 : One Shot	
	2	Control output1 (Timer Time)	R/W	○	UInteger	2byte	0x0005	0 ~ 16383 (Unit: 1ms)	
66	1	Control output2 (Timer Mode)	R/W	○	UInteger	1byte	0x00	—	Reserved
	2	Control output2 (Timer Time)	R/W	○	UInteger	2byte	0x0005	—	Reserved
160	0	Operating Hours	R	—	UInteger	3byte	—	0 ~ 131071 (Unit: 1h)(Note 1)	
161	0	Instability Alarm ON Delay Timer	R/W	○	UInteger	1byte	0x04	0x00 : Disable 0x01 : 10ms 0x02 : 50ms 0x03 : 100ms 0x04 : 300ms 0x05 : 500ms 0x06 : 1000ms	Applied to bit4 of process data.

Index	Sub-Index	Name	R/W	Back up target	Format	Length	Default value	Range	Remark
163	0	Diagnosis Mode	R/W	○	UInteger	1byte	0x01	0x00 : Disable 0x01 : Mode1 (Instability Detection/Target Too Close Alarm Enable) 0x02 : Mode2 (Instability Detection Alarm Enable) 0x03 : Mode3 (Target Too Close Alarm Enable)	The bit of relevant process data becomes effective.
164	0	Excessive proximity judgment distance setting	R/W	○	UInteger	1byte	0x01	0x00 : Iron 10% 0x01 : Iron 20% 0x02 : Iron 30% 0x03 : SUS 10% 0x04 : SUS 20% 0x05 : SUS 30% 0x06 : Aluminum 10% 0x07 : Aluminum 20%	(Note2)
165	0	AD value of sensor's inter-nal temperature (Present)	R	—	Integer	2byte	—	0 ~ 4095 (Note3)	
166	0	AD value of sensor's inter-nal temperature (Max)	R	—	Integer	2byte	—	0 ~ 4095 (Note3)	If start up (Turn ON) the sensor again, data is reset
167	0	AD value of sensor's inter-nal temperature (Min)	R	—	Integer	2byte	—	0 ~ 4095 (Note3)	If start up (Turn ON) the sensor again, data is reset

(Note1):The timer range is fixed on maximum value(131071h) if it's reached upper limit.

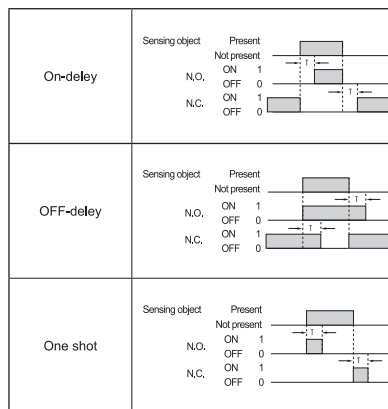
(Note2):When diagnosis mode is selected mode1 or mode3, it's possible by a combination of the excessive proximity judgment distance and the material of the sensing object to check over approach.

(Note3):Change from AD value of sensor's internal temperature (°C) to the internal temperature of sensor by following equation. ((AD value of sensor's Internal temperature) / 10) - 172.5

4 EVENT FUNCTION

Event Code	Event code	Error level	State	Action
0x1800	Breakdown	Error	The sensor might be broken internally, such as disconnection of the detection coil.	Start up (turn ON) the sensor again, If the error occurs again, replace the sensor.
0x6320	Parameter error	Error	Inconsistency has occurred on the settings (service data) written in by the IO-Link communications.	Execute the system command to "Restore the factory settings" to initialize the settings. Refer to index 2 of service data.
0x8CA0	Target too close Alarm	Normal	The distance between the sensor and the sensing object is too close.	Information notification After confirming the installation state of the sensor, please adjust the location of the sensor and the sensing object.

5 TIMER FUNCTION



T : Timer time (0~16383ms)

6 TIMING CHART

