Panasonic® INSTRUCTION MANUAL

HG-C1000L Series INDEX LIST

IO-Link

IMJE-HGCINDEXV1EN 09/2018

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

1 PHYSICAL LAYER

Model No.	HG-C1030L3-P□	HG-C1050L3-P□	HG-C1100L3-P□	HG-C1200L3-P□	HG-C1400L3-P□
Baud rate	COM3 (230.4kbit/s)				
Minimum cycle time	1ms				
Process data length	4byte				
Vendor ID	834				
Device ID	0x028000	0x028001	0x028002	0x028003	0x028004

2 PROCESS DATA (PD)

	Bit 7	6	5	4	3	2	1	0
PD0	Measurement value **HG-C1030L3-P**□: -5100 to +5100 **HG-C1050L3-P**□: -1530 to +1530 **HG-C1100L3-P**□: -3570 to +3570 **HG-C1200L3-P**□: -816 to +816 **HG-C1400L3-P**□: -2040 to +2040							
PD1								
PD2	Scale: Sets the position of decimal point. **HG-C1030L3-P**□: -3 (0.001mm) **HG-C1050L3-P**□: -2 (0.01mm) **HG-C1100L3-P**□: -2 (0.01mm) **HG-C1200L3-P**□: -1 (0.1mm) **HG-C1400L3-P**□: -1 (0.1mm)							

Byte3	Assignment	Remarks
7 6 5 4 3 2 1 0	Control output (DO)	0: OFF 1: ON
	Fixed	0
	Fixed	0
	Emission state	0: Emission halt 1: Emission
	Zero set state	0: OFF 1: Zero set
	Information notification	0: OFF 1: ON
	Error level	0: Normal 1: Caution 2: Fault

3 SERVICE DATA (SD)

Index	Sub index	Name	R/W	Back up target	Format	Data length	Default data	Description of settings
2	0	System-Command	W		UInteger	1byte		0x4B : Limit-teaching (UP key) 0x4C : Limit-teaching (DOWN key) 0x4D : Teaching input 0x4F : Teaching cancel 0x82 : Reset setting 0xA0 : Execution of zero set function (Save in nonvolatile memory) 0xA1 : Execution of zero set function 0xA2 : Zero set function (Also releases nonvolatile memory) 0xB0 : Activation of trigger function 0xB1 : Deactivation of trigger function 0xB2 : Peak / Bottom hold release
12	0	Device Access Locks	R/W		Record	2byte	0	Local User Interface Lock 0: Unlock 8: Lock Main unit: Linked with key lock
16	0	Vendor Name	R		String	64byte		
17	0	Vendor Text	R		String	64byte		
18	0	Product Name	R		String	64byte		
19	0	Product ID	R		String	64byte		
20	0	Product Text	R		String	64byte		
21	0	Serial Number	R		String	16byte		
22	0	Hardware Version	R		String	8byte		
23	0	Firmware Version	R		String	8byte		
24	0	Application Specific Tag	R/W	○	String	32byte		
37	0	Detailed Device Status	R		UInteger	12byte		
40	0	Process-Data Input	R		UInteger	2byte		
60	1	Threshold Value Setting 1 (Note)	R/W	○	Integer	2byte	-	Threshold value 1_SL
	2	Threshold Value Setting 2 (Note)	R/W	○	Integer	2byte	-	Threshold value 2_SL
61	1	Output Operation Setting of C/Q Output	R/W	○	UInteger	1byte	0	0: Light-ON 1: Dark-ON
	2	Sensing Output Setting of C/Q Output	R/W	○	UInteger	1byte	0x01	0x00 : Invalid 0x01 : Normal sensing mode 0x80 : Window comparator mode (1-point teaching) 0x81 : Window comparator mode (2-point teaching) 0x82 : Window comparator mode (3-point teaching) 0x83 : Rising differential mode 0x84 : Trailing differential mode
	3	Hysteresis Setting of C/Q Output (Note)	R/W	○	UInteger	2byte	-	**HG-C1030L3-P**□: 0.001 to 5.00mm **HG-C1050L3-P**□: 0.01 to 15.00mm **HG-C1100L3-P**□: 0.02 to 35.00mm **HG-C1200L3-P**□: 0.1 to 80.0mm **HG-C1400L3-P**□: 0.2 to 200.0mm
63	1	Output Operation Setting of DO Output	R	○	UInteger	1byte	0	Linkage with Index61_1
	2	Sensing Output Setting of DO Output	R	○	UInteger	1byte	0	Linkage with Index61_2
	3	Hysteresis Setting of DO Output (Note)	R	○	UInteger	2byte	0	Linkage with Index61_3
64	1	Timer Setting	R/W	○	UInteger	1byte	0	0: No timer 2: ON-delay timer 1: OFF-delay timer 3: One-shot timer
	2	Timer Period Setting	R/W	○	UInteger	1byte	0	0: 5ms 5: 250ms 1: 10ms 6: 500ms 2: 25ms 7: 1,000ms 3: 50ms 8: 5,000ms 4: 100ms
66	0	Response Speed Setting of Output	R/W	○	UInteger	1byte	2	0: Fast (1.5ms) 2: H.rso (10ms) 1: Std (5ms)
67	1	Differential Mode - Span Setting	R/W	○	UInteger	1byte	0	0: d-01 4: d-05 1: d-02 5: d-06 2: d-03 6: d-07 3: d-04 7: d-08
	2	Differential Mode - Threshold Value Setting (Note)	R/W	○	UInteger	2byte		Differential Mode - Threshold Value
70	0	Light Emission Halt Setting	R/W		UInteger	1byte	0	0: Emission 1: Emission halt
74	1	Shift Setting	R	○	UInteger	1byte	1	Selection of unit 1: digit (Fixed)
	2	Shift Amount (Note)	R/W	○	UInteger	2byte	-	Setting of range Lower-limit value: Value twice the hysteresis value
80	0	ECO Setting	R/W	○	UInteger	1byte	0	0: OFF 1: ON
83	1	Display Setting	R/W	○	UInteger	1byte	0	0: Normal 2: Offset 1: Invert
84	0	Peak / Bottom Hold Setting	R/W	○	UInteger	1byte	0	0: Invalid hold function 2: Bottom hold 1: Peak hold
85	1	Hold During Alarm Setting	R/W	○	UInteger	1byte	0	0: Hold OFF 1: Hold ON
	2	Alarm Judgment Setting	R/W	○	UInteger	1byte	0	0: No notification when measurement error occurs 1: Notifies when measurement error occurs
160	0	Detection Margin	R/W	○	Integer	2byte	0	0: 200% 3: 500% 1: 300% 4: 150% 2: 400%
162	0	Instability Detection Judgment Delay Time	R/W	○	UInteger	2byte	10000	10 to 30,000ms
163	0	Operating Time	R		UInteger	4byte	0	Operating time per 1-hour unit [h]
164	0	Number of Data Save Operations	R		UInteger	4byte	0	Increments each time setting data is stored in the nonvolatile memory.
168	0	Notification Flag Setting	R/W	○	UInteger	4byte		0: Notify 1: Do not notify
169	0	Notification Event Code	R		UInteger	1byte		Newest event code readout

Note: IO-Link communication data is sent and received as integer values. Integer values multiplied by scale values are used as sensor setting values.

Model No.	Scale value
HG-C1030L3-P□	0.001
HG-C1050L3-P□, **HG-C1100L3-P**□	0.01
HG-C1200L3-P□, **HG-C1400L3-P**□	0.1

<Example>
If the data to be written to Index60 Sub index 1 (Threshold value setting 1) is set to 20, the sensor setting value will be 0.020.
20 (integer value) × 0.001 (**HG-C1030L3-P**□ scale value) = 0.020 (sensor setting value)

4 EVENT FUNCTION

Error indication	Event code	Error level	State	
Er 11	0x7710	Fault	DO output short-circuit	
Er90 Er91 Er92 Er93	0x1815	Fault	System error	
Er01	0x1802	Fault	Nonvolatile memory write error	
Er01	0x1803	Fault	Nonvolatile memory CRC error	
Er21	0x1810	Fault	Light emission circuit damage	
Er31	0x8CB0	Normal	Zero set not possible	Information notification
Er41	0x8CB2	Normal	Teaching not possible	
----	0x8CA0	Normal	Measurement error (center of gravity computation failure) * Measured value: Transmission of 32764	
----	0x8CA1	Normal	Measurement error (out of specification range, near point side) * Measured value: Transmission of 32000	

Error indication	Event code	Error level	State	
----	0x8CA2	Normal	Measurement error (out of specification range, far point side) * Measured value: Transmission of -32000	Information notification
Display of measured value	0x8CA3	Normal	Low incident light intensity	
Display of measured value	0x8D00	Caution	Operating time exceeded	
Display of measured value	0x8D01	Caution	Max. number of nonvolatile memory save operations exceeded	

Panasonic Industrial Devices SUNX Co., Ltd.
http://panasonic.net/id/pidsx/global
Overseas Sales Division (Head Office)
2431-1 Ushiyama-cho, Kasugai-shi, Aichi, 486-0901, Japan
Phone: +81-568-33-7861 FAX: +81-568-33-8591

For sales network, please visit our website.

© Panasonic Industrial Devices SUNX Co., Ltd. 2018
PRINTED IN CHINA