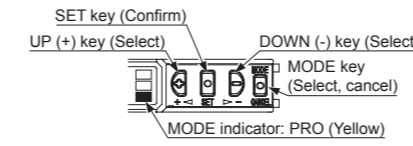


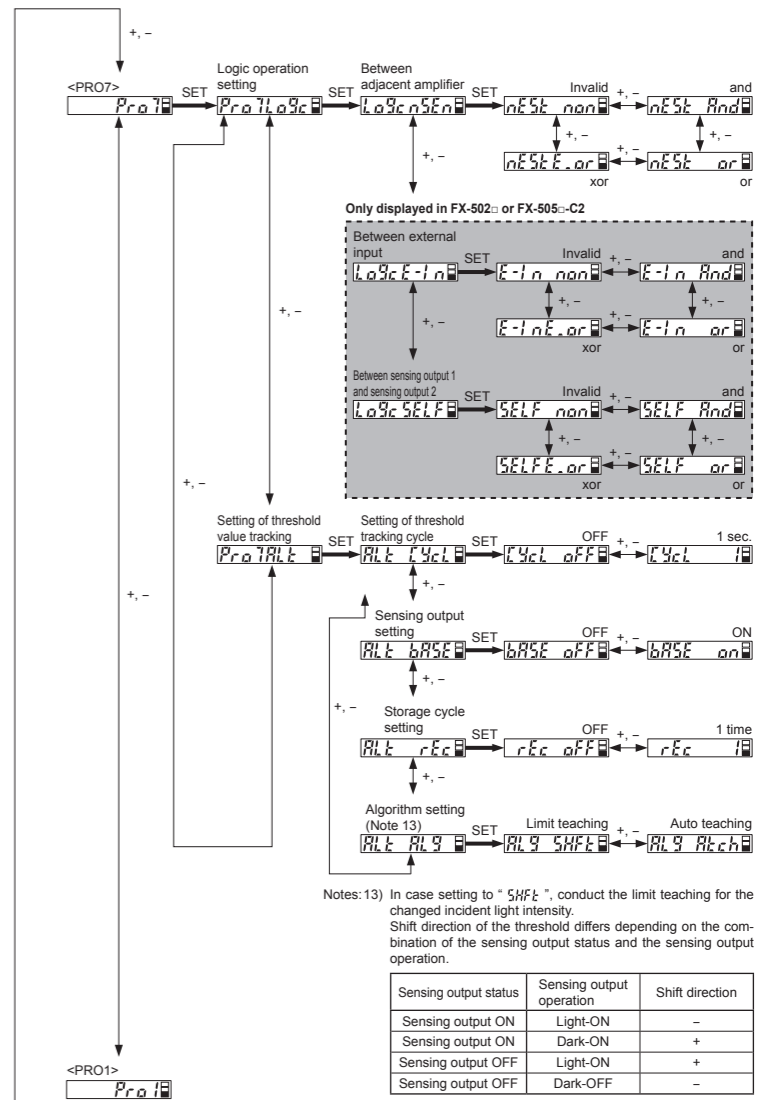
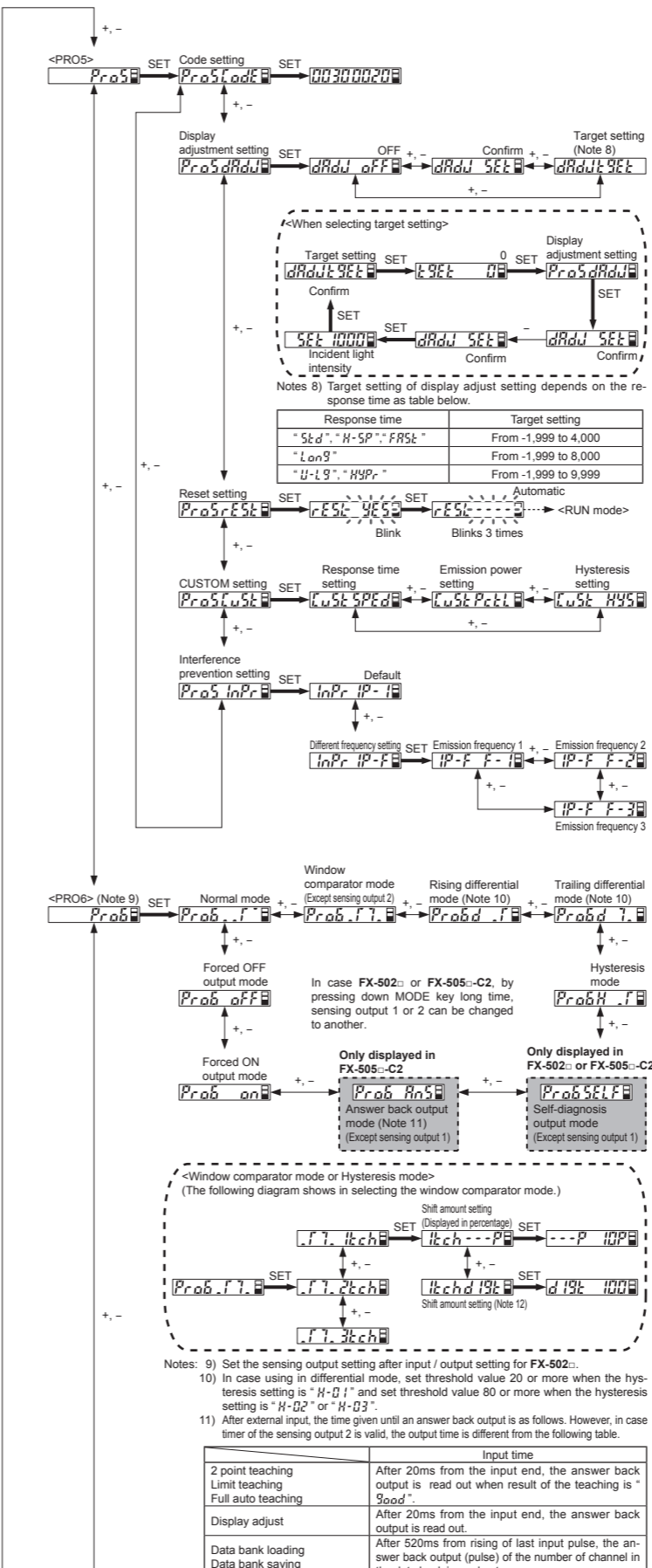
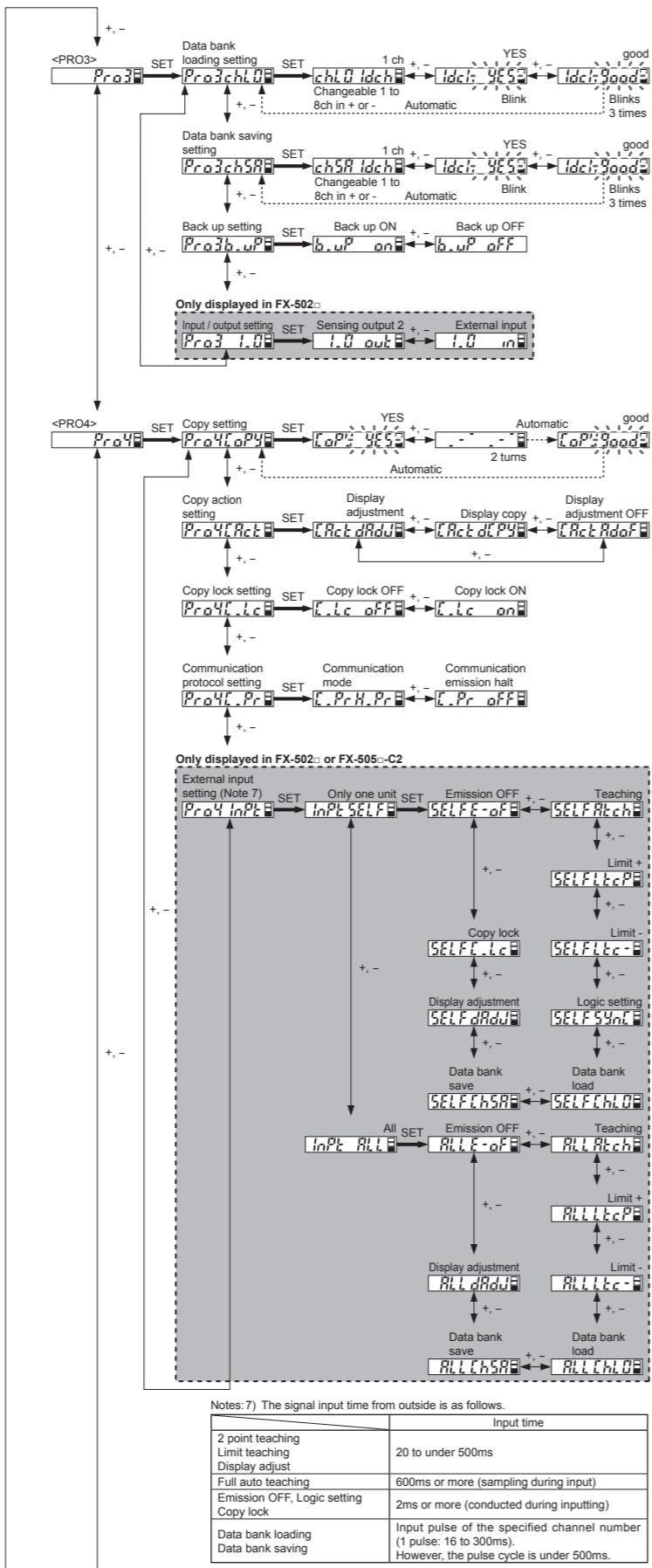
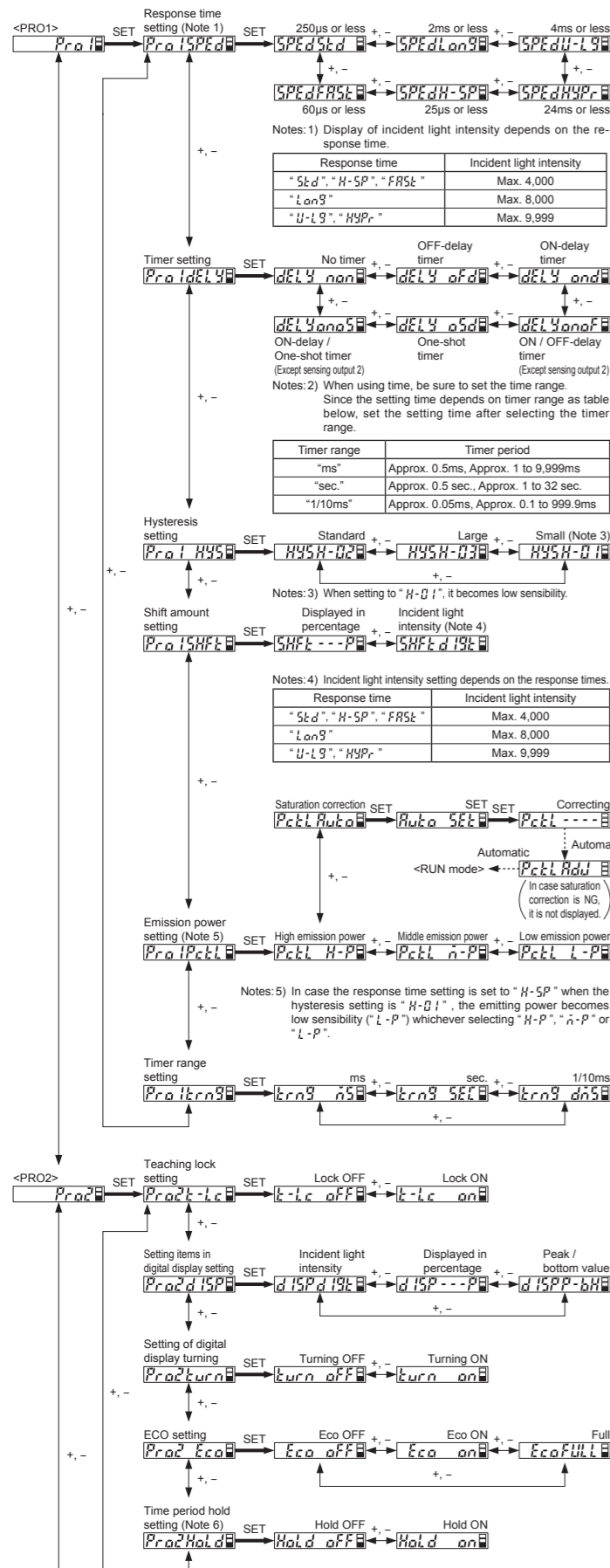
If you are using the <PRO3> data bank saving setting: After exiting all PRO mode settings, always execute the <PRO3> data bank saving setting to save the data.
If you turn off the power without saving, the data will not be saved.

Part description



Symbol explanation

- SET → Press the SET key.
- +/- → Press the UP (+) key or DOWN (-) key.
- Automatic → Automatically move to next.



Item	Default setting	Description
PRO1 mode	Response time setting	5PE d 5 t d Set response time.
	Timer setting	d E L Y n a n Set operation and period of the timer.
	Hysteresis setting	H Y S H - O 2 Hysteresis can be set when the normal mode or the window comparator mode is selected. When setting to "H-O 1", it becomes low sensibility.
	Shift amount setting	5 H F t - - - P Set shift amount of threshold value in limit teaching.
	Emission power setting	P c e t L H - P Set emission power. "R u t a": Saturated incident light intensity can be automatically adjusted "H-P": High emission power (25 to 100%) "M-P": Middle emission power (25 to 100%) "L-P": Low emission power (25 to 100%)
PRO2 mode	Timer range setting	t r n g n 5 Change unit time of timer.
	Teaching lock setting	t - L c a F F Be able to prevent from wrong operation of teaching. "a F F": Teaching mode is valid "a n": Teaching mode is invalid
	Digital display item setting	d 1 5 P d 1 9 t Incident light intensity can be displayed in percentage or the peak / bottom value can be displayed on the digital display (red).
	Digital display turning on setting	t u r n a F F Sets the viewing orientation of the digital display.
	ECO setting	E c o a F F Power consumption can be lowered. "a F F": ECO OFF "a n": If any key operation is not carried out for 20 sec. in RUN mode, the digital display turns OFF. "F u l l t": If key operation is not done in 20 sec. or setting the key lock function in Run mode, all indicators turns OFF.
	Period hold setting	H o l d a F F "a F F": Peak / bottom value in the digital display refreshing condition can be displayed. "a n": Peak / bottom value in the hold condition can be displayed.
	Data bank loading setting	c h L O l d c h Load a setting from specified data bank. (1 to 8 channel)
Data bank saving setting	c h S R l d c h Save a setting to specified data bank. (1 to 8 channel)	
PRO3 mode	Back up setting	b . u P a n Select to save or not to save the threshold value by teaching in EEPROM.
	Input / output setting (FX-502□ only)	i . O a u t Select either sensing output 2 or external output.
PRO4 mode	Copy setting	— Using optical communications, be able to copy setting contents in main amplifier to all of the sub amplifiers connected from the main amplifier. FX-502□ cannot send or receive threshold value when conducting copy.
	Copy action setting	L R c t d R d d Copy of items in display adjustment setting and incident light intensity are conducted or canceled by using optical communication. In case incident light intensity does not have enough margin, automatically set optimum value. "d R d d": Display adjustment of main amplifier and sub amplifiers can be conducted. Set to the target value of display adjustment in each amplifier. "d L P Y": Incident light intensity of main amplifier can be copied to sub amplifier. However, when the difference between main amplifier and sub amplifier is big, it will not be copied. "R d a F": Display adjust of main and sub amplifier can be set to OFF. Do not press down the SET key many times when display is "R d a F". When "R d a F" is not displayed in confirmation, also do not press down set key many times.
PRO5 mode	Copy lock setting	L . L c a F F When conducting the setting of copy setting or data bank loading / saving from the main amplifier via optical communications, it is possible that only the sub amplifier which is set to copy lock ON "L . L c a n" does not receive the set contents. However, even if copy lock ON " is set, the copy action setting is communicated.
	Communication protocol setting	L . P r H . P r When conducting the copy setting or setting of data bank loading / saving from the main amplifier via optical communications, the optical communications through a sub amplifier which is set to communication emission halt "L . P r a F F" and the following sub amplifiers can be halted.
	External input setting (Only FX-502□, FX-505□-C2)	i n P t 5 E L F Set external input.
PRO6 mode	Code setting	0 0 3 0 0 0 2 0 Consistent setting can be done by inputting 8-digit code instead of independent setting. In addition, present setting can be confirmed.
	Display adjustment setting	d R d d a F F Set incident light intensity to target value. If conducting display adjustment setting when incident light intensity does not have enough margin, "D U E r" is blinked "a F F": Display adjustment OFF "5 E t": Slide to (smaller side) incident light intensity from the set of target setting. "t 9 E t": Set incident light intensity to value you want (negative side). In case setting to 0-adjustment, set to 0.
	Reset setting	— If setting to "4 E 5", returns to default settings (factory settings).
	CUSTOM setting	L u 5 t 5 P e d Select an item in CUSTOM mode to display.

Item	Default setting	Description
PRO5 mode	Interference prevention setting	i n P r i P - i Number of adherence mounting of sensor head depends on response time of interference prevention function. "i P - i": Set when using the interference prevention function by optical communication. Maximum adherence mounting of sensor head is 12 units "i P - F": Set when using interference prevention function by changing emitting frequency. The maximum adherence mounting by setting 3 types of emission frequency is 3 units.
	Sensing output mode	P r a b . . i - Set sensing output 1 mode and sensing output 2 mode. "- . f -" (Normal mode) • Sets a threshold value for ON / OFF operation. ". f 1 .": Window comparator mode (Except sensing output 2 of FX-502□, FX-505□-C2) • Sets two threshold values and judges they are within the required range or not. This can be selected in 1 / 2 / 3-point teaching. "d . f" (Rising differential mode) • Only drastic rises in incident light intensity are detected. "d 1 .": (Trailing differential mode) • Only drastic drops in incident light intensity are detected. "H . f" (Hysteresis mode) • Changes hysteresis to ignore small change of incident light intensity. • This can be selected in 1 / 2 / 3-point teaching. "5 E L F" (Self diagnosis output mode) (Only displayed in FX-502□, FX-505□-C2 but except sensing output 1.) • Conduct self diagnosis output "R n 5" (Answer back output mode) (Only displayed in FX-502□ but except sensing output 1) • Conduct Answer back output toward external input. "a n": Forced ON output mode • Sets forcibly the output to ON. "a F F": Forced OFF output mode • Sets forcibly the output to OFF.
PRO6 mode	Logical operation setting	L a g c n 5 E n Select for logical operation and set logical operation methods (and, or, xor). "n 5 E n": Logical operation is sensing output 1 of this device and conduct logical operation between the sensing output 1 and sensing output 1 of this device. The calculation result of upper amplifiers and this product is output from the sensing output 1 of this product. "E - i n": Logical operation is sensing output 1 of an upper adjacent amplifier and conduct logical operation between the sensing output and sensing output 1 of this device. (Only displayed in FX-502□, FX-505□-C2) "5 E L F": Logical operation is outer input and conduct logical operation between the output and sensing output 1 of this device. (Only displayed in FX-502□, FX-505□-C2)
	Setting of threshold value tracking	L y c l a F F This mode can change the threshold value depending on the cycle (1 to 9,999 sec.) that is set with the variations of the incident light intensity. The tracking shift amount is the one which is set at the shift setting.
	Sensing output setting	b R 5 E a F F Selects whether tracking threshold when the output is OFF or when the output is ON.
	Storage cycle setting	r E c a F F Selects a threshold storage cycle in EEPROM from 1 to 250 times.
	Algorithm setting	R L g 5 H F t When setting to limit teaching, threshold value is followed up on the bases of shift amount. Furthermore, when setting to auto teaching, threshold value be followed up on the bases of each cycle.

FX-501□ / Code setting table

• Green digital display (right side is the first digit)

Code	Forth digit		Code	Third digit		Code	Second digit		Code	First digit	
	Sensing output operation mode	Sensing output 1 Sensing output 2		Timer operation	Timer period		Response time setting	CUSTOM setting			
0	Light-ON	Light-ON	0	No timer	0	0.5ms	0	Response time setting			
1	Dark-ON	Dark-ON	1	OFD	1	1ms	1	Emission power setting			
2	—	—	2	OND	2	3ms	2	Hysteresis setting			
3	—	—	3	ONOF	3	5ms	3	—			
4	—	—	4	OSD	4	10ms	4	—			
5	—	—	5	ONOS	5	30ms	5	—			
6	—	—	6	—	6	50ms	6	—			
7	—	—	7	—	7	100ms	7	—			
8	—	—	8	—	8	300ms	8	—			
9	—	—	9	—	9	500ms	9	—			
R	—	—	R	—	R	1 sec.	R	—			
b	—	—	b	—	b	2 sec.	b	—			
L	—	—	L	—	L	3 sec.	L	—			
d	—	—	d	—	d	4 sec.	d	—			
E	—	—	E	—	E	5 sec.	E	—			

(OFD: OFF-delay timer, OND: ON-delay timer, ONOF: ON / OFF-delay timer, OSD: One-shot timer)
(ONOS: ON-delay / One-shot timer)

• Red digital display (right side is the first digit)

Code	Forth digit		Code	Third digit		Code	Second digit		Code	First digit	
	Copy lock setting	Hysteresis setting		Setting items in digital display setting	Back up setting		Response time setting	Sensing output setting			
0	Copy lock OFF	H-02	0	Incident light intensity	Back up ON	0	H-SP	0	Normal mode	0	Normal mode
1	Copy lock ON	H-02	1	Incident light intensity	Back up OFF	1	FAST	1	WC mode	1	Rising differential mode
2	Copy lock OFF	H-03	2	Displayed in percentage	Back up ON	2	STD	2	Rising differential mode	2	Trailing differential mode
3	Copy lock ON	H-03	3	Displayed in percentage	Back up OFF	3	LONG	3	Trailing differential mode	3	HYS mode
4	Copy lock OFF	H-01	4	Peak / bottom value	Back up ON	4	U-LG	4	HYS mode	4	Self-diagnosis output mode
5	Copy lock ON	H-01	5	Peak / bottom value	Back up OFF	5	HYPR	5	—	5	Answer back mode

(WC mode: Window comparator mode, HYS mode: Hysteresis mode)

FX-502□ / Code setting table

• Green digital display (right side is the first digit)

Code	Forth digit		Code	Third digit		Code	Second digit		Code	First digit	
	Sensing output operation mode	Sensing output 1 Sensing output 2		Timer operation	Timer period		Response time setting	CUSTOM setting			
0	Light-ON	Light-ON	0	No timer	0	0.5ms	0	Response time setting			
1	Light-ON	Dark-ON	1	OFD	1	1ms	1	Emission power setting			
2	Dark-ON	Light-ON	2	OND	2	3ms	2	Hysteresis setting			
3	Dark-ON	Dark-ON	3	ONOF	3	5ms	3	—			
4	—	—	4	OSD	4	10ms	4	—			
5	—	—	5	ONOS	5	30ms	5	—			
6	—	—	6	No timer	6	50ms	6	—			
7	—	—	7	No timer	7	100ms	7	—			
8	—	—	8	No timer	8	300ms	8	—			
9	—	—	9	—	9	500ms	9	—			
R	—	—	R	—	R	1 sec.	R	—			
b	—	—	b	—	b	2 sec.	b	—			
L	—	—	L	—	L	3 sec.	L	—			
d	—	—	d	—	d	4 sec.	d	—			
E	—	—	E	—	E	5 sec.	E	—			

(OFD: OFF-delay timer, OND: ON-delay timer, ONOF: ON / OFF-delay timer, OSD: One-shot timer)
(ONOS: ON-delay / One-shot timer)

• Red digital display (right side is the first digit)

Code	Forth digit		Code	Third digit		Code	Second digit		Code	First digit	
	Copy lock setting	Hysteresis setting		Setting items in digital display setting	Back up setting		Response time setting	Sensing output setting (Note)			
0	Copy lock OFF	H-02	0	Incident light intensity	Back up ON	0	H-SP	0	Normal mode	0	Normal mode
1	Copy lock ON	H-02	1	Incident light intensity	Back up OFF	1	FAST	1	WC mode	1	Rising differential mode
2	Copy lock OFF	H-03	2	Displayed in percentage	Back up ON	2	STD	2	Rising differential mode	2	Trailing differential mode
3	Copy lock ON	H-03	3	Displayed in percentage	Back up OFF	3	LONG	3	Trailing differential mode	3	HYS mode
4	Copy lock OFF	H-01	4	Peak / bottom value	Back up ON	4	U-LG	4	HYS mode	4	Self-diagnosis output mode
5	Copy lock ON	H-01	5	Peak / bottom value	Back up OFF	5	HYPR	5	—	5	Answer back mode

(WC mode: Window comparator mode, HYS mode: Hysteresis mode)

Note: It is a setting only for sensing output 1. Sensing output 2 cannot be set.

FX-505□-C2 / Code setting table

• Green digital display (right side is the first digit)

Code	Forth digit		Code	Third digit		Code	Second digit		Code	First digit	
	Sensing output operation mode	Sensing output 1 Sensing output 2		Timer operation	Timer period		Response time setting	CUSTOM setting			
0	Light-ON	Light-ON	0	No timer	0	0.5ms	0	Response time setting			
1	Light-ON	Dark-ON	1	OFD	1	1ms	1	Emission power setting			
2	Dark-ON	Light-ON	2	OND	2	3ms	2	Hysteresis setting			
3	Dark-ON	Dark-ON	3	ONOF	3	5ms	3	—			
4	—	—	4	OSD	4	10ms	4	—			
5	—	—	5	ONOS	5	30ms	5	—			
6	—	—	6	No timer	6	50ms	6	—			
7	—	—	7	No timer	7	100ms	7	—			
8	—	—	8	No timer	8	300ms	8	—			
9	—	—	9	—	9	500ms	9	—			
R	—	—	R	—	R	1 sec.	R	—			
b	—	—	b	—	b	2 sec.	b	—			
L	—	—	L	—	L	3 sec.	L	—			
d	—	—	d	—	d	4 sec.	d	—			
E	—	—	E	—	E	5 sec.	E	—			

(OFD: OFF-delay timer, OND: ON-delay timer, ONOF: ON / OFF-delay timer, OSD: One-shot timer)
(ONOS: ON-delay / One-shot timer)

• Red digital display (right side is the first digit)

Code	Forth digit		Code	Third digit		Code	Second digit		Code	First digit	
	Copy lock setting	Hysteresis setting		Setting items in digital display setting	Back up setting		Response time setting	Sensing output setting			
0	Copy lock OFF	H-02	0	Incident light intensity	Back up ON	0	H-SP	0	Normal mode	0	Normal mode
1	Copy lock ON	H-02	1	Incident light intensity	Back up OFF	1	FAST	1	Normal mode	1	Rising differential mode
2	Copy lock OFF	H-03	2	Displayed in percentage	Back up ON	2	STD	2	Normal mode	2	Trailing differential mode
3	Copy lock ON	H-03	3	Displayed in percentage	Back up OFF	3	LONG	3	Normal mode	3	HYS mode
4	Copy lock OFF	H-01	4	Peak / bottom value	Back up ON	4	U-LG	4	Normal mode	4	Self-diagnosis output mode
5	Copy lock ON	H-01	5	Peak / bottom value	Back up OFF	5	HYPR	5	Normal mode	5	Answer back mode
6	—	—	6	—	—	6	—	6	WC mode	6	Normal mode
7	—	—	7	—	—	7	—	7	WC mode	7	HYS mode
8	—	—	8	—	—	8	—	8	Rising differential mode	8	Trailing differential mode
9	—	—	9	—	—	9	—	9	HYS mode	9	Normal mode

(WC mode: Window comparator mode, HYS mode: Hysteresis mode)

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.

PRINTED IN CHINA

© Panasonic Industrial Devices SUNX Co., Ltd. 2017



Ihr Schweizer Industriepartner

info@digiparts.ch

www.digiparts.ch