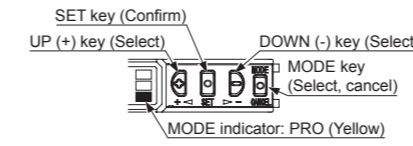


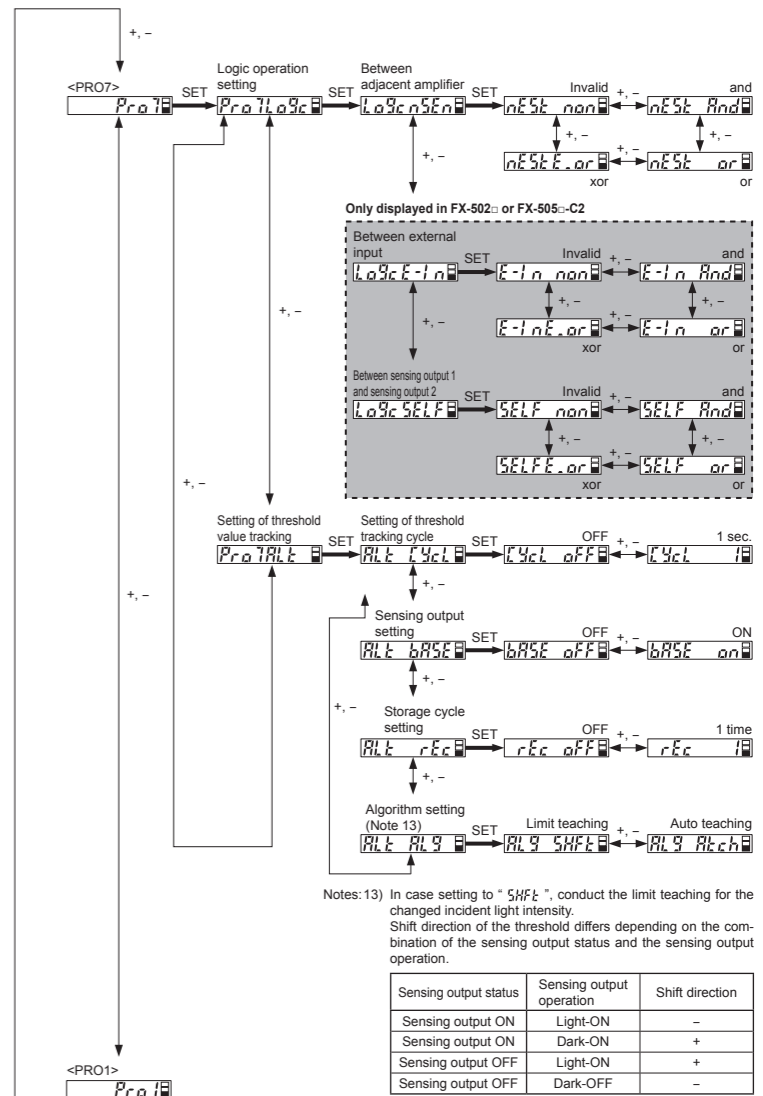
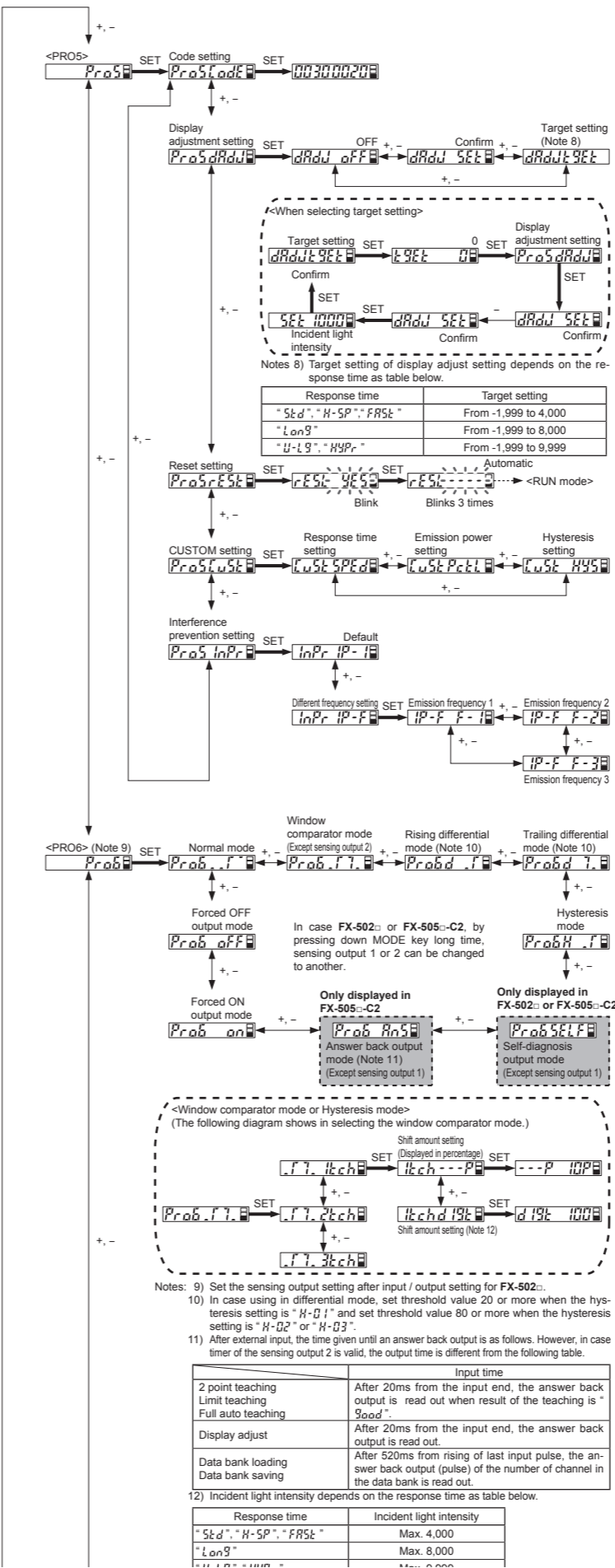
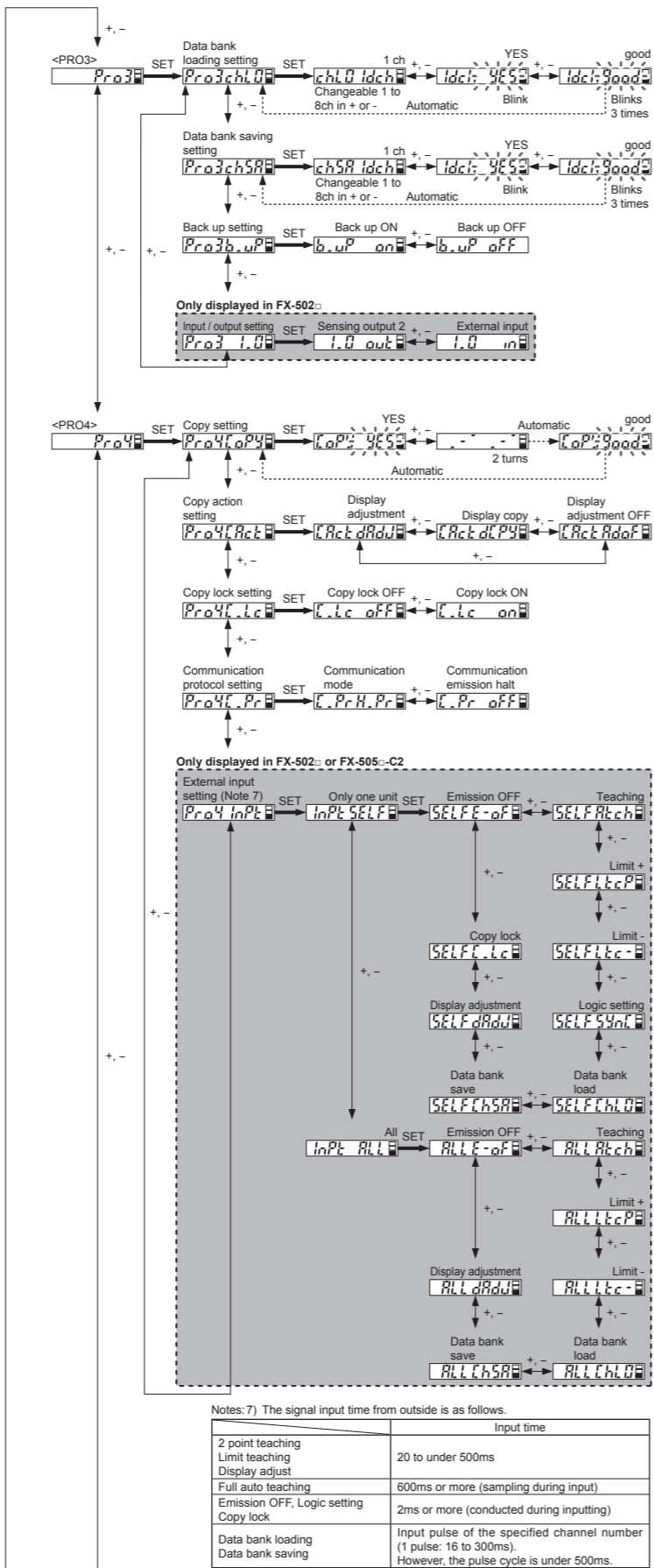
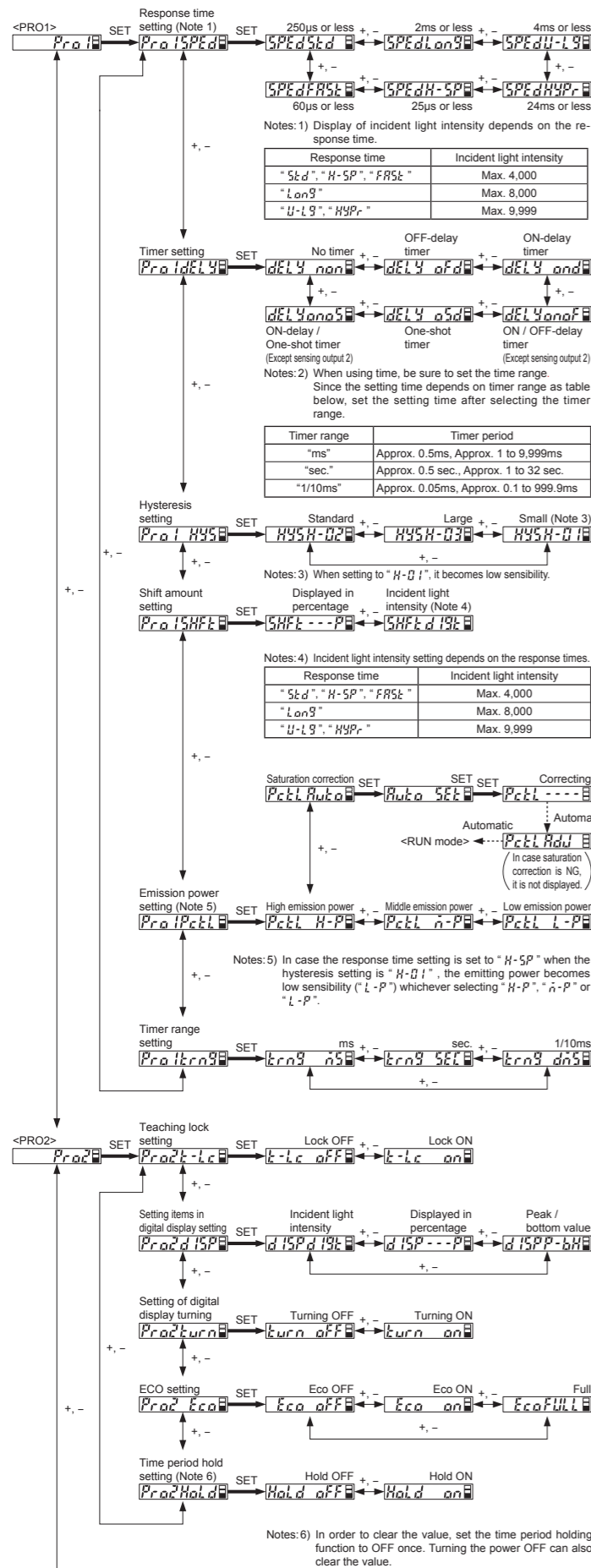
If you are using the <PRO3> data bank saving setting: After exiting all PRO mode settings, always execute the <PRO3> data bank saving setting to save the data.  
If you turn off the power without saving, the data will not be saved.

**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	5PEd5td Set response time.
	Timer setting	dELY nan Set operation and period of the timer.
	Hysteresis setting	HYSH-D2 Hysteresis can be set when the normal mode or the window comparator mode is selected. When setting to "H-D1", it becomes low sensibility.
	Shift amount setting	5HFK ---P Set shift amount of threshold value in limit teaching.
	Emission power setting	PcEL H-P Set emission power. "Rud": Saturated incident light intensity can be automatically adjusted "H-P": High emission power (25 to 100%) "n-P": Middle emission power (25 to 100%) "L-P": Low emission power (25 to 100%)
Timer range setting	Erng n5 Change unit time of timer.	
PRO2 mode	Teaching lock setting	t-Lc aFF Be able to prevent from wrong operation of teaching. "aFF": Teaching mode is valid "an": Teaching mode is invalid
	Digital display item setting	d1SPd19t 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	turn aFF Sets the viewing orientation of the digital display.
	ECO setting	Eca aFF Power consumption can be lowered. "aFF": ECO OFF "an": If any key operation is not carried out for 20 sec. in RUN mode, the digital display turns OFF. "FULT": 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	Hold aFF "aFF": Peak / bottom value in the digital display refreshing condition can be displayed. "an": Peak / bottom value in the hold condition can be displayed.
PRO3 mode	Data bank loading setting	chLd lDch Load a setting from specified data bank. (1 to 8 channel)
	Data bank saving setting	chSR lDch Save a setting to specified data bank. (1 to 8 channel)
	Back up setting	b.uP an Select to save or not to save the threshold value by teaching in EEPROM.
PRO4 mode	Input / output setting (FX-502□ only)	i.O out Select either sensing output 2 or external output.
	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.
PRO5 mode	Copy action setting	LRCt dRdJ 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. "dRdJ": Display adjustment of main amplifier and sub amplifiers can be conducted. Set to the target value of display adjustment in each amplifier. "dLpY": 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. "RdaF": Display adjust of main and sub amplifier can be set to OFF. Do not press down the SET key many times when display is "RdaF". When "RdaF" is not displayed in confirmation, also do not press down set key many times.
	Copy lock setting	L.Lc aFF 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.Lc an" does not receive the set contents. However, even if copy lock ON " is set, the copy action setting is communicated.
PRO6 mode	Communication protocol setting	L.Pr H.Pr 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.Pr aFF" and the following sub amplifiers can be halted.
	External input setting (Only FX-502□, FX-505□-C2)	InPt SELF Set external input.
PRO6 mode	Code setting	00300020 Consistent setting can be done by inputting 8-digit code instead of independent setting. In addition, present setting can be confirmed.
	Display adjustment setting	dRdJ aFF Set incident light intensity to target value. If conducting display adjustment setting when incident light intensity does not have enough margin, "DUER" is blinked "aFF": Display adjustment OFF "SEL": Slide to (smaller side) incident light intensity from the set of target setting. "t9EL": Set incident light intensity to value you want (negative side). In case setting to 0-adjustment, set to 0.
	Reset setting	— If setting to "4E5", returns to default settings (factory settings).
	CUSTOM setting	L.u5t 5PEd Select an item in CUSTOM mode to display.

Item	Default setting	Description
PRO5 mode	Interference prevention setting	InPr iP- i Number of adherence mounting of sensor head depends on response time of interference prevention function. "iP- i": Set when using the interference prevention function by optical communication. Maximum adherence mounting of sensor head is 12 units "iP-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	Prab .iF Set sensing output 1 mode and sensing output 2 mode. ".iF": (Normal mode) • Sets a threshold value for ON / OFF operation. ".iF1": 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.iF" (Rising differential mode) • Only drastic rises in incident light intensity are detected. "d.i" (Trailing differential mode) • Only drastic drops in incident light intensity are detected. "H.iF" (Hysteresis mode) • Changes hysteresis to ignore small change of incident light intensity. • This can be selected in 1 / 2 / 3-point teaching. "SELF" (Self diagnosis output mode) (Only displayed in FX-502□, FX-505□-C2 but except sensing output 1. • Conduct self diagnosis output "Rr5" (Answer back output mode) (Only displayed in FX-502□ but except sensing output 1) • Conduct Answer back output toward external input. "an": Forced ON output mode • Sets forcibly the output to ON. "aFF": Forced OFF output mode • Sets forcibly the output to OFF.
PRO6 mode	Logical operation setting	Lagc n5En Select for logical operation and set logical operation methods (and, or, xor). "n5En": 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-In": 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) "SELF": 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	L4cl aFF 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	bR5E aFF Selects whether tracking threshold when the output is OFF or when the output is ON.
	Storage cycle setting	rEc aFF Selects a threshold storage cycle in EEPROM from 1 to 250 times.
Algorithm setting	Rl9 5HFK 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		
1	Copy lock ON	H-02	1	Incident light intensity	Back up OFF	1	FAST	1	WC mode		
2	Copy lock OFF	H-03	2	Displayed in percentage	Back up ON	2	STD	2	Rising differential mode		
3	Copy lock ON	H-03	3	Displayed in percentage	Back up OFF	3	LONG	3	Trailing differential mode		
4	Copy lock OFF	H-01	4	Peak / bottom value	Back up ON	4	U-LG	4	HYS mode		
5	Copy lock ON	H-01	5	Peak / bottom value	Back up OFF	5	HYPR	5	—		

(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		
1	Copy lock ON	H-02	1	Incident light intensity	Back up OFF	1	FAST	1	WC mode		
2	Copy lock OFF	H-03	2	Displayed in percentage	Back up ON	2	STD	2	Rising differential mode		
3	Copy lock ON	H-03	3	Displayed in percentage	Back up OFF	3	LONG	3	Trailing differential mode		
4	Copy lock OFF	H-01	4	Peak / bottom value	Back up ON	4	U-LG	4	HYS mode		
5	Copy lock ON	H-01	5	Peak / bottom value	Back up OFF	5	HYPR	5	—		

(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		
1	Copy lock ON	H-02	1	Incident light intensity	Back up OFF	1	FAST	1	Normal mode		
2	Copy lock OFF	H-03	2	Displayed in percentage	Back up ON	2	STD	2	Normal mode		
3	Copy lock ON	H-03	3	Displayed in percentage	Back up OFF	3	LONG	3	Normal mode		
4	Copy lock OFF	H-01	4	Peak / bottom value	Back up ON	4	U-LG	4	Normal mode		
5	Copy lock ON	H-01	5	Peak / bottom value	Back up OFF	5	HYPR	5	Normal mode		
6	—	—	6	—	—	6	—	6	WC mode		
7	—	—	7	—	—	7	—	7	WC mode		
8	—	—	8	—	—	8	—	8	Rising differential mode		
9	—	—	9	—	—	9	—	9	HYS mode		

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

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