

Setting item	LCD display	Settings	Initial value
	Operation mode	Selects operation mode (13 types) F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13	F1
	Input A sensor type	- Selects the sensor type of input A - Consists of NPN-L, NPN-H, PNP-L, PNP-H (select and use NPN-L or PNP-L for contact input) NPN-L NPN-H PNP-L PNP-H	NPN-L
	Input B sensor type	- Selects the sensor type of input B - used only in F2, F5, F7, F8, F9, F10, F11, F12, F13 modes - Consists of NPN-L, NPN-H, PNP-L, PNP-H (select and use NPN-L or PNP-L for contact input) NPN-L NPN-H PNP-L PNP-H	NPN-L
	Output mode	- Output mode selection - used in all operation modes except F9 mode (only used in comparative output models) - Consists of standard output mode (S), HIGH output mode (H), LOW output mode (L), ONE-SHOT output mode (F), deviation output mode (D) - F9 mode is fixed to HIGH output mode (H) oUt-S oUt-H oUt-L oUt-b oUt-F oUt-D	OUT-S
	Input A prescale mantissa	- Sets input A prescale mantissa (AX) - used only in F1, F2, F4, F7, F8, F9, F10, F11, F12, F13 modes - Setting range : 0.0000 ~ 9.9999 0.0000 ~ 9.9999	6.0000
	Input A prescale index	- Sets input A prescale index (AY) - used only in F1, F2, F4, F7, F8, F9, F10, F11, F12, F13 modes - Setting range : $10^{-9} \sim 10^9$ $10^{-9} \sim 10^9$	10^1
	Input B prescale mantissa	- Sets input B prescale mantissa (BX) - used only in F10, F11, F12, F13 modes - Setting range : 0.0000 ~ 9.9999 0.0000 ~ 9.9999	6.0000
	Input B prescale index	- Sets input B prescale index (BY) - used only in F10, F11, F12, F13 modes - Setting range : $10^{-9} \sim 10^9$ $10^{-9} \sim 10^9$	10^1
	Decimal point position	- Selects decimal point position of display value - used only in F1, F2, F7, F8, F9, F10, F11, F12, F13 modes - Comparative value setting range differs according to the decimal point setting position 00000 0.0000 0.0000 000.00 0000.0	00000
	Numeral system	- Selects the numeral system of measured time - used only in F3, F4, F5, F6 modes - Consists of decimal and sexagesimal 10 60	10
	Time range	- Selects measured time range - used only in F3, F4, F5, F6 modes - Decimal time range : 0.01 (0-999.99s), 0.1 (0-9999.9s), SEC (0-99999s), MIN (0-99999m) - Sexagesimal time range : 0.01 (0-9m59.99s), 0.1 (0-59m59.9s), SEC (0-9h59m59s), MIN (0-99h59.9m) 0.01 0.1 SEC MIN	0.01
	Display cycle	- Selects display cycle - only in F1, F10, F11, F12, F13 - Consists of 0.05, 0.5, 1, 2, 4, and 8 sec. - The measured value is updated according to display cycle 0.05 0.5 1 2 4 8	0.05

Setting item	LCD display	Settings	Initial value
	Signal number	Select a signal number 001 ~ 127 001 127	001
	Signal speed	Select a signal speed 384 ~ 192 ~ 96 ~ 48 ~ 24 38400 19200 9600 4800 2400 bps	96
	Parity bit	Select the signal parity bit none ~ odd ~ Even NONE ODD EVEN	NONE
	Response latency	Sets the signal response latency 05 ~ 99 05 99	20
	Communication write prohibition	- Select Communication write prohibition. - If Communication write prohibition is 'ON', settings cannot be changed by signal on ~ off ON OFF	ON

Setting item	LCD display	Settings	Initial value
	Transfer Output Upper limit	• Set the upper limit for the transmission output of 20 mA. • The upper limit value should be set larger than the lower limit value. • The setting range of the upper limit value depends on the operation mode (see Comparison value setting range) • If the measured value is above the upper limit, 20mA is output. -99999 ~ +99999 -99999 ~ +99999	99999
	Transfer Output Lower bound	• Set the lower limit for the transmission output of 4 mA. • The lower limit value should be set less than the upper limit value. • The setting range of the lower limit value depends on the operation mode (see Comparison Value Setting Range). • If the measured value is below the lower limit, 4mA is output. -99999 ~ +99999 -99999 ~ +99999	00000

Setting item	LCD display	Settings	Initial value
	Initial mode	- Initializes all parameter set values - Consists of OFF and ON - when ON is selected, all parameter set values are initialized to the default set values OFF → ON OFF ON	OFF
	Hysteresis	- Sets hysteresis value for output - only in F1, F10, F11, F12, F13 (only used with comparative output models) - Hysteresis range depends on decimal point setting position - Setting range: 0.0000 (0~9999), 0.000.0 (0.0~999.9), 0.000.00 (0.00~99.99), 0.0000 (0.000~9.999), 0.0000 (0.0000~0.9999) 0000 ~ 9999 0000 9999	0000
	Input A AUTO-ZERO	- Sets input A AUTO-ZERO time – used only in F1, F4, F10, F11, F12, F13 modes - Setting range: 0.0 ~ 9999.9 sec 00000 ~ 99999 0000.0 9999.9	9999.9
	Input B AUTO-ZERO	- Sets input B AUTO-ZERO time – used only in F10, F11, F12, F13 modes - Setting range: 0.0 ~ 9999.9 sec 00000 ~ 99999 0000.0 9999.9	9999.9
	Output limit	- Selects comparative output limit – used in all operation modes except F9 (only used in comparative output models) - Consists of L, LL output limit and start compensation timer - When L-OUT is selected, L output and LL output are limited. When S-TIM is selected, the comparative output is limited by start compensation timer L-out → S-t. in L-OUT S-TIM	L-OUT
	Start compensation timer	- Sets comparative output limit time of start compensation timer – You can set output limit function when S-TIM is set - Setting range: 0.0 ~ 99.9 sec. 000 ~ 999 00.0 99.9	00.0
	Power outage memory	- Saves final count value when power is off - only in F9 - Consists of CLEAR and SAVE - When SAVE is selected, the final count value is saved CLR → SRCL CLEAR SAVE	CLEAR
	BANK switching	- Selects the activation of BANK function - When the BANK function is activated, the comparative value, prescale, decimal point position, time range, display cycle are measured with the value set in BANK - OFF selection : deactivates BANK function. - KEY selection : switches BANK number by (hold for at least 1sec. ON state) - EX-IN selection : switches BANK number by external BANK input OFF → KEY → EX-IN OFF KEY EX-IN	OFF
	Lock	- Selects the activation of lock function - OFF selection : unlocks keys and parameters. - KEY selection : locks in operation mode (only comparative value checking is possible, not comparative value setting) - PAR selection : locks parameters (parameter change is not possible, comparative value setting is possible) - K-P selection : sets key lock and parameter lock simultaneously (comparative value setting and parameter change are not possible). - BNK selection : locks BANK (BANK setting is not possible) OFF → KEY → PAR → K-P → bNKL OFF KEY PAR K-P BNK	OFF

Setting item	LCD display	Settings	Initial value
	BANK number	• Selects BANK number • Consists of BANK_1 and BANK_2 – individually sets comparative value, prescale, decimal point position, time range, display cycle for each BANK.	1
	Input A prescale mantissa	• Sets BANK_1,2 input A prescale mantissa (AX) – used only in F1, F2, F4, F7, F8, F9, F10, F11, F12, F13 modes • Setting range : 0.0000 ~ 9.9999	6.0000
	Input A prescale index	• Sets BANK_1,2 input A prescale index (AXI) – used only in F1, F2, F4, F7, F8, F9, F10, F11, F12, F13 modes • Setting range : $10^{-9} \sim 10^9$	10^1
	Input B prescale mantissa	• Sets BANK_1,2 input B prescale mantissa (BX) – used only in F10, F11, F12, F13 modes • Setting range : 0.0000 ~ 9.9999	6.0000
	Input B prescale index	• BANK_1,2 input B prescale index (BY) – used only in F10, F11, F12, F13 modes • Setting range : $10^{-9} \sim 10^9$	10^1
	Decimal point position	• Selects display value decimal point position of BANK_1,2 – used only in F1, F2, F7, F8, F9, F10, F11, F12, F13 modes • The comparative value setting range depends on the decimal point setting position	00000
	Numeral system	• Selects BANK_1,2 measured time numeral system– used only in F3, F4, F5, F6 modes • Consists of decimal and sexagesimal	10
	Time range	• Selects BANK_1,2 measured time range – used only in F3, F4, F5, F6 modes • Decimal time range : 0.01 (0~999.99S), 0.1 (0~9999.9S), SEC (0~99999S), MIN (0~999999M) • Sexagesimal time range : 0.01 (0~9M59.99S), 0.1 (0~59M59.9S), SEC (0~9H59M59S), MIN (0~99H59M59M)	0.01
	Display cycle	• Selects BANK_1,2 display cycle – used only in F1, F10, F11, F12, F13 modes • Consists of 0.05 sec., 0.5 sec., 1 sec., 2 sec., 4 sec., 8 sec. The measured value is updated according to display cycle	0.05
	HH comparative value	• Sets BANK_1,2 HH comparative value – not used in D output mode • HH comparative value setting range depends on decimal point setting position (refer to comparative value setting range).	+99999
	H comparative value	• Sets BANK_1,2 H comparative value – used as H deviation value in D output mode. • H comparative value setting range depends on decimal point setting position (refer to comparative value setting range).	+99999
	L comparative value	• Sets BANK_1,2 L comparative value – used as L deviation value in D output mode. • L comparative value setting range depends on decimal point setting position (refer to comparative value setting range).	-99999
	LL comparative value	• Sets BANK_1,2 LL comparative value – not used in D output mode. • LL comparative value setting range depends on decimal point setting position (refer to comparative value setting range).	-99999

Operation mode	Comparative value and deviation value setting range
F1, F2, F7, F8, F9, F10, F12	0 ~ 99999
F3, F4, F5, F6	0 ~ setting time range
F11, F13	-99999 ~ 99999

● Output H (ON condition) : display value $\geq$ deviation value H
 ● Output L (ON condition) : display value $\leq$ deviation value L

- Function that can set parameter, BANK, KEY operation lock

Lock setting	Descriptions
oFF	Unlocks parameters and keys
EEY	Locks  ,  ,  . Cannot set comparative values, can change parameters
PRr	Locks parameters. Can set comparative values, cannot change parameters
Y-P	Locks parameters and keys. Cannot set comparative values, cannot change parameters
bNk	Locks BANK. Can set comparative values and change parameters. Can switch BANK 1, 2, cannot set BANK parameters

Function that enables the comparative value and the prescale value to be saved in advance in two BANKs, and to be easily switched and used on demand.

The BANK function is used when the prescale value needs to be changed, such as changing the transmission ratio.

Consists of two banks, such as BANK_1 and BANK_2.

You can set prescale, decimal point position, display refresh cycle, comparative value, etc. to the BANK.

When the BANK function is activated, the display shows "BA" and BANK number.

When the BANK function is activated, it uses and measures the comparative value and prescale value that are saved in the relevant BANK.

The BANK switching is performed by and external BANK terminal.

If the BANK parameter "b-CHG" is set to "KEY", the BANK switching is performed by (the BANK is switched every time you press and hold for at least 1 second).

If the BANK parameter "b-CHG" is set to "EX-IN", the BANK switching is performed by external BANK terminal input (BANK_1 is used when the BANK terminal is opened, and BANK_2 is used when the BANK terminal is short.)

※ For further information, please visit our homepage(www.hanyoungnux.com) and refer to the user's manual.

