LA8N Series

## DIN W48×H24mm, Indication Only, LCD Counter

▣ Features
● No additional power due to internal battery
● Signal input method: No-voltage input, voltage input,
  free voltage input
● Screw terminal type (attaching terminal cover)
● LCD display, backlight model
● IP66 protection structure

⚠	Please read "Safety Considerations" in operation manual before using.

CE c(UL)us

▣ Ordering Information
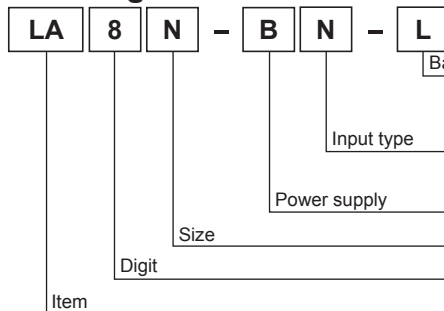
LA 8 N – B N – L

Backlight	No mark	None
	L	Backlight function
Input type	N	No-voltage (small signal) input
	V	Voltage input
	F	Free voltage input
Power supply	B	Internal lithium battery
Size	N	DIN W48×H24mm
Digit	8	99999999 (8-digit)
Item	LA	LCD Counter

▣ Specifications

Model		LA8N-BN	LA8N-BN-L	LA8N-BV	LA8N-BV-L	LA8N-BF
Digit		8-digit (count up, count down, count up/down: -9999999 to 99999999 / count up: 0 to 99999999)				
Digit size		W3.4×H8.7mm				
Display method		LCD Zero Blanking type (character height size: 8.7mm)				
Operation method		Count up, Count down, Count up/down	Count up	Count up, Count down, Count up/down	Count up	Count up
Power supply		Built-in battery				
Battery life cycle		Approx. over 7 years at 20℃				
Backlight power supply		—	24VDC⎓ ±10%	—	24VDC⎓ ±10%	—
Input method		No-voltage input		Voltage input		Free voltage input
Count input		Residual voltage: Max. 0.5VDC⎓ Short-circuit impedance: Max. 10kΩ Open-circuit impedance: Min. 750kΩ		[H]: 4.5-30VDC⎓ [L]: 0-2VDC		[H]: 24-240VAC∼/6-240VDC⎓ [L]: 0-2VAC/0-2.4VDC
RESET input		No-voltage input		Voltage input		No-voltage input
Min. input signal width		UP/DOWN, RESET: approx. 20ms	RESET: approx. 20ms	UP/DOWN, RESET: approx. 20ms	RESET: approx. 20ms	RESET: approx. 20ms
Max. counting speed		1cps / 30cps / 1kcps				20cps
External setting switch		SW1[※1], SW2[※2], SW3[※3]				SW1[※1], SW3[※3]
Insulation resistance		Over 100MΩ (at 500VDC megger)				
Dielectric strength[※4]		2,000VAC 60Hz for 1minute				
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 1 hour				
	Malfunction	0.3mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 min				
Shock	Mechanical	300m/s² (approx. 30G) in each X, Y, Z direction for 3 times				
	Malfunction	100m/s² (approx. 10G) in each X, Y, Z direction for 3 times				
Environ-ment	Ambient temp.	-10 to 55℃, storage: -25 to 65℃				
	Ambient humi.	35 to 85%RH, storage: 35 to 85%RH				
Protection structure		IP66 (when using waterproof rubber for front panel, IEC standard)				
Accessory		Mounting bracket, Rubber waterproof ring				
Approval		CE c(UL)us				
Weight[※5]		Approx. 96g (approx. 50g)				

※1: SW1 is the front panel RESET key enable/disable setting switch.　　　※2: SW2 is the max. counting speed setting switch.
※3: SW3 is the decimal point setting switch.
※4: No-voltage input, voltage input: between terminals and the case / Free voltage input: between the free voltage input terminal and the
　　RESET input terminal, between terminals and the case.
※5: The weight includes packaging. The weight in parenthesis is for unit only.
※Environment resistance is rated at no freezing or condensation.
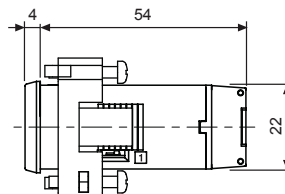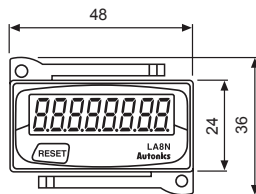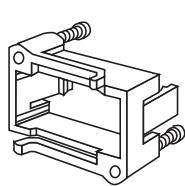
Compact LCD Display Counter

▣ Connections

(A) Photoelectric Sensors
(B) Fiber Optic Sensors
(C) Door/Area Sensors
(D) Proximity Sensors
(E) Pressure Sensors
(F) Rotary Encoders
(G) Connectors/ Connector Cables/ Sensor Distribution Boxes/Sockets
(H) Temperature Controllers
(I) SSRs / Power Controllers
(J) Counters
(K) Timers
(L) Panel Meters
(M) Tacho / Speed / Pulse Meters
(N) Display Units
(O) Sensor Controllers
(P) Switching Mode Power Supplies
(Q) Stepper Motors & Drivers & Controllers
(R) Graphic/ Logic Panels
(S) Field Network Devices
(T) Software

Input type	No-backlight	Backlight
No-voltage input type	●LA8N-BN[※1] 1 2 3 4 5 SIGNAL INPUT UP/DOWN RESET	●LA8N-BN-L 1 2 3 4 5 SIGNAL INPUT RESET 24VDC BACKLIGHT ※Terminal (1, 2, 3) and (4, 5) are insulated inside.
Voltage input type	●LA8N-BV[※1] SIGNAL INPUT UP/DOWN RESET 1 2 3 4 5 + − 4.5-30VDC	●LA8N-BV-L SIGNAL INPUT RESET 4.5-30VDC + − 1 2 3 4 5 24VDC BACKLIGHT ※Terminal (1, 2, 3) and (4, 5) are insulated inside. ※Backlight power is available as signal input and reset.
Free voltage input type	●LA8N-BF 1 2 3 4 5 ⚠ 24-240VAC 50/60Hz ⚠ + − 6-240VDC SIGNAL INPUT RESET ※Terminal (1, 2) and (4, 5) are insulated inside.	—

※1: Terminal 2 and 5 are connected inside. (non-isolated)   ※Use reliable contacts enough to flow 5μA current.
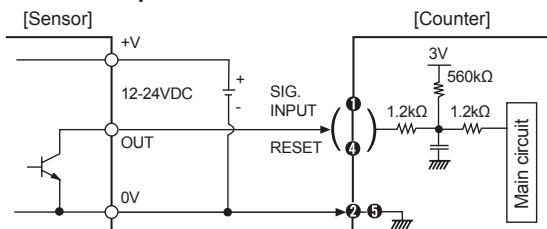
▣ Dimensions

(unit: mm)

● **Bracket**
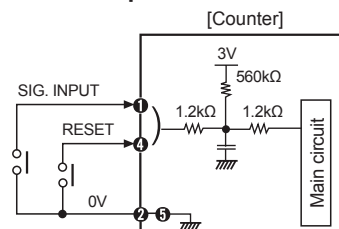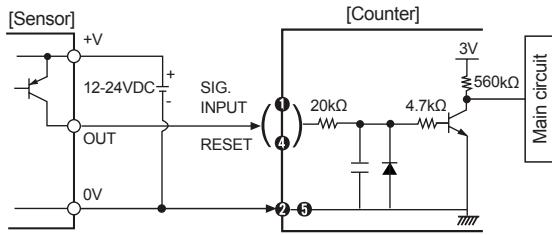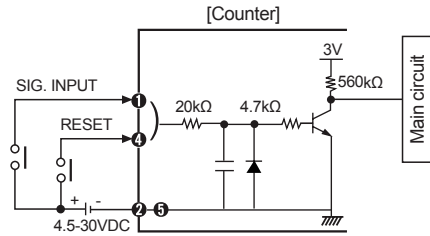
48   4   54

24   36   22

● **Panel cut-out**

Min. 55

Min. 37   22.2 $^{+0.3}_{0}$

45 $^{+0.6}_{0}$
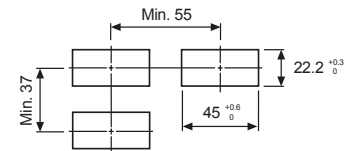
▣ Input Connections

◎ **No-voltage input (standard sensor: NPN open collector output type sensor)**

● **Solid-state input**

[Sensor]   [Counter]

+V
12-24VDC   + −
OUT
0V
SIG. INPUT ❶
RESET ❹
3V
560kΩ
1.2kΩ   1.2kΩ
Main circuit
❷ ❺

● **Contact input**

[Counter]

SIG. INPUT ❶
RESET ❹
0V
3V
560kΩ
1.2kΩ   1.2kΩ
Main circuit
❷ ❺

※When power is applied to terminal No ❶ and ❹, input terminal circuit can be broken and a malfunction can occur.
(NPN output, PNP output, PNP open collector output type sensor cannot be used.)
※❷ and ❺ are connected inside.
※For backlight function model, the input terminals are no. ❶, ❸ and the GND terminal is no. ❷ .

※Please use reliable contacts enough to flow 3VDC 5μA of current.

LA8N Series

◎ **Voltage input (standard sensor: PNP open collector output type sensor)**

● **Solid-state input**

※For backlight function model, the input terminals are no. ❶, ❸ and the GND terminal is no. ❷ .

● **Contact input**

※Please use reliable contacts enough to flow 3VDC 5μA of current.

◎ **Free voltage input**
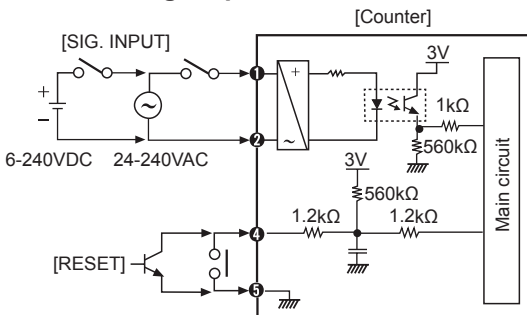
※AC type proximity sensor cannot be used as the source of count input signals.
※Input terminal (❶, ❷)and reset terminal (❹, ❺)are insulated inside.
※It is not possible to reset with AC power or DC power.
※When relay contact is used as the source of RESET signal, please use reliable contacts enough to flow 3VDC 5μA of current.
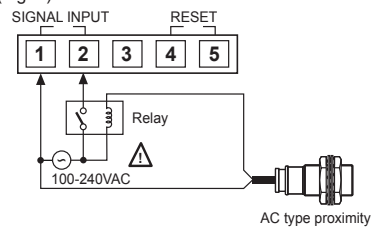
◎ **Input from AC type proximity sensor**

In case of free voltage input type, do not connect AC proximity sensors instead of a switch as shown in the figure 1.
It may cause malfunction due to sensor's leakage current. Connect a relay as shown in the figure 2.
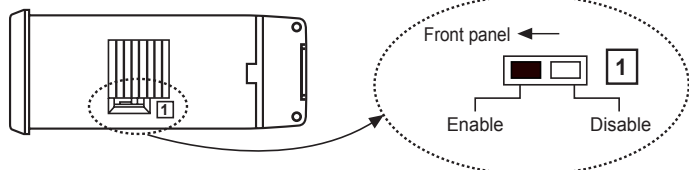

(Fig. 1)

<Example of wrong connection>
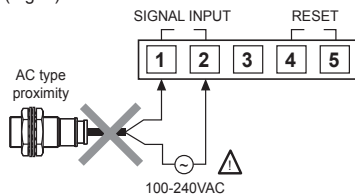
(Fig. 2)

<Example of correct connection>

▣ Setting Switch

◎ **SW1** (1 switch)
SW1 is a switch to Enable/Disable the front panel RESET key.
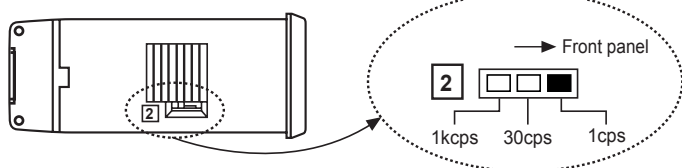※Factory default: Enable

◎ **SW2** (2 switch)
SW2 is a switch for setting max. counting speed.
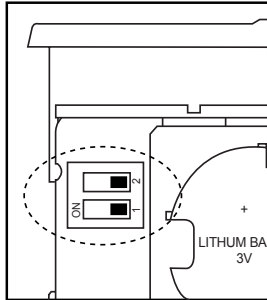※Factory default: 1cps
(Free voltage input type: 20cps is fixed)

Compact LCD Display Counter

(A) Photoelectric Sensors

(B) Fiber Optic Sensors

(C) Door/Area Sensors

(D) Proximity Sensors

(E) Pressure Sensors

(F) Rotary Encoders

(G) Connectors/ Connector Cables/ Sensor Distribution Boxes/Sockets

(H) Temperature Controllers

(I) SSRs / Power Controllers

(J) Counters

(K) Timers

(L) Panel Meters

(M) Tacho / Speed / Pulse Meters

(N) Display Units

(O) Sensor Controllers

(P) Switching Mode Power Supplies

(Q) Stepper Motors & Drivers & Controllers

(R) Graphic/ Logic Panels

(S) Field Network Devices

(T) Software

◎ SW3

SW3 is a switch for decimal point position. (※factory default: no decimal point)

SW3	Decimal point
ON 2 1	Not use decimal point
ON 2 1	0.0
ON 2 1	0.00
ON 2 1	0.000

※Change SW3 setting after removing the case.
※Supply RESET signal (front panel or terminal RESET) after setting SW2, SW3 during operation.

## ▣ Counter Operation Mode

● LA8N-BN/LA8N-BV model
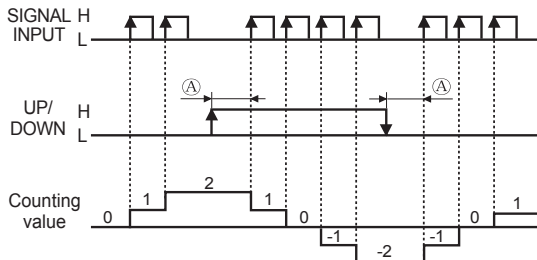
※SIGNAL INPUT: Counting input,
  UP/DOWN: Counting instruction input
※UP/DOWN as "L" is count up (UP)
  UP/DOWN as "H" is count down (DOWN)
※The meaning of "H" and "L"

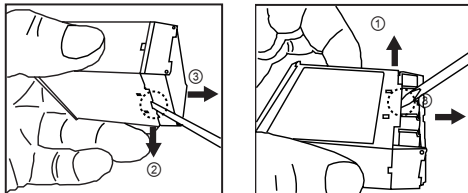|	Voltage input	No-voltage input	Free voltage input
H	4.5-30VDC	Short	6-240VAC, 24-240VDC
L	0-2VDC	Open	0-2VAC, 0-2.4VDC

※Ⓐ should be over 20ms of min. signal width. If it is below 20ms, it may cause counting error.

● LA8N-BN-L/LA8N-BV-L/LA8N-BF model
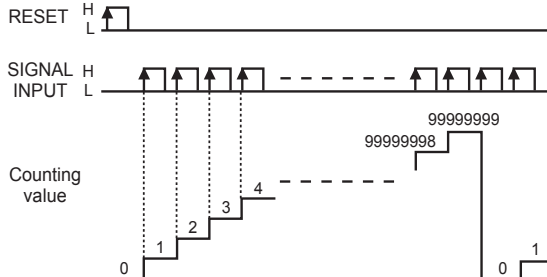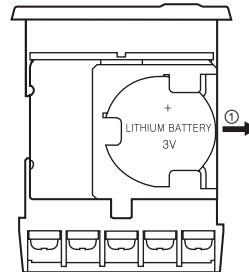
▣ Case Detachment and Battery Replacement

● Case detachment

※Hold up Lock part toward ①, ② of the product with the tool and pull toward ③ to detach the case.
⚠When using the tools, be careful not to be wounded.

● Battery replacement

1. Detach the case.
2. Push the battery and detach it toward ①.
3. Insert a new battery with correct alignment of polarity pushing it toward opposite of ①.
※The battery is sold separately.
  Please replace a battery by yourself. (sold separately)
※Do not burn up or disassemble the lithium battery.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Counters & Tachometers *category:*

Click to view products by Autonics *manufacturer:*

Other Similar products are found below :

LC2H-FE-2K-N H7CN-XLN DC12-48 LC24-F-N H7CXAWD1NDC1224AC24 H7ER-NV1-H H7CX-A114S-N AC100-240 H7CX-AWSD-N-DC12-24 H7CX-AU-N AC100-240 GPMZC-SET CX6S-1P2F CX6S-1P4F CX6S-2P2F CX6S-2P4F H127.010A01H H5KLR-11 100-240V AC/DC H7CX-AUD1-N H7CX-AW-N 3.550.401.075 3.550.401.351 LC2H-C-2K-N LC2H-C-30-N LC2H-F-DL-2KK LC4H-R4-AC240VS LC4H-R6-AC240V 1.150.510.012.550 1.150.510.054.550 1.150.510.056.550 6.520.012.300 6.560.010.300 SLE-73-1400-1-4-01 SLIK-94-1521-1-3-001 SLN-94-1421-1-3 SPI-73-1411-1-3-011 CT6S-1P4 Y-50 LC4H-R4-AC24V LC4H-R4-DC24V CT6S-2P4 LC2H-F-DL-2KK-B LC2H-FE-DL-2KK-B LC2H-FE-FV-30 H127.010A01G H5KLR-8B 12-48 AC/DC H7CX-A11-N H7CX-AD-N H7CX-AU-N H7ER-NV1 H8DA 12-48V AC/DC 87622062 99776901