Selection Guide

LA8N SERIES(COMPACT LCD COUNTER)

▣Ordering information

L A 8 N − B F

F	Universal voltage input
N	No−voltage(Small signal) input
B	Internal lithium battery
N	DIN W48×H24mm
8	99999999(Digit)
A	Counter
L	LCD Display

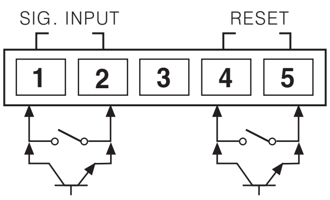
▣Specifications

Model		LA8N-BN	LA8N-BF
Digit		8	
Appearances & Dimensions		 [W48×H24×L54mm]	
Display		LCD Zero Blanking type(Height : 8.7mm)	
Operation method		Count up mode	
Power supply		Internal lithium battery	
Input type		No−voltage input	Universal voltage input
Counting speed		Selectable 1cps / 30cps / 1kcps	20cps
Count input		Residual voltage at short−circuit : Max. 0.5V	Start : 24−240VAC / 6−24VDC Hold : 0−2VAC / 0−2.4VDC
Reset input		No−voltage input	
Min.signal width of Reset		Min. 20ms	
Battery life cycle		Over 7 years(at 20℃)	
External switch		SW1(★1), SW2(★2)	SW1(★1)
Insulation resistance		Min. 100MΩ(at 500VDC)	
Dielectric strength		(★3) 2000VAC 60Hz for 1 minute	
Vibra−tion	Mechanical	0.75mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 1 hour	
	Malfunction	0.3mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 10 minutes	
Shock	Mechanical	300m/s² (Approx. 30G) in X, Y, Z directions for 3 times	
	Malfunction	100m/s² (Approx. 10G) in X, Y, Z directions for 3 times	
Ambient Temperature		−10 ~ +55℃(at non−freezing status)	
Storage Temperature		−25 ~ +65℃(at non−freezing status)	
Ambient humidity		35 ~ 85%RH	

(★1) SW1 is a switch ENABLE/DISABLE the front RESET.
(★2) SW2 is a switch setting counting speed.
(★3) No−voltage input: Between all terminals and case, Universal voltage input: Between input terminal and reset input terminal, all terminals and case

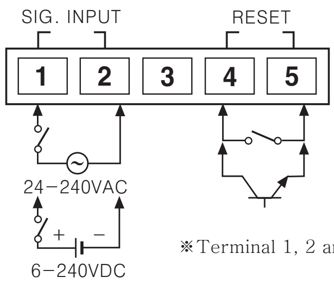
▣Connections

●**No−voltage input**



※Use reliable contacts enough to flow 10㎂ of current.
※Terminal 2 and 5 are connected inside.(Non−isolation)

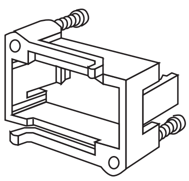
●**Universal voltage input**

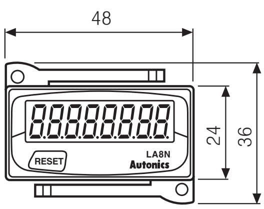


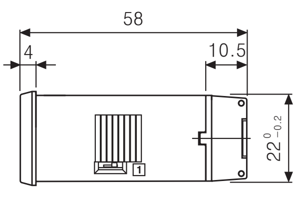
※Terminal 1, 2 and 4, 5 are isolated.

▣Dimensions

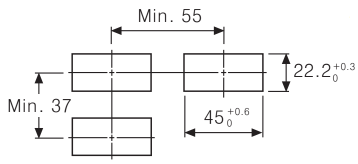
●Bracket







●Panel cut−out



Unit:mm

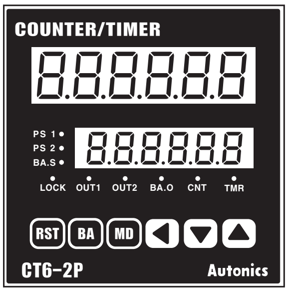
COUNTER/TIMER(CTY/CT/CTS SERIES)

▣Ordering information

CT 6 S − 2P

I	Indicator(No output)
	Single preset
2P	Dual preset
Y	DIN W72×H36mm
S	DIN W48×H48mm
	DIN W72×H72mm
4	9999(Digit)
6	999999(Digit)
CT	Counter/Timer

▣Features



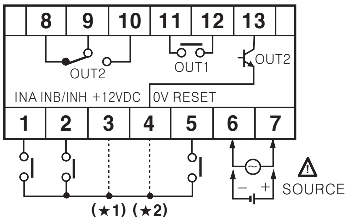
- Selectable Counter or Timer function
- Prescale function
- Programmable counting speed up to 10kcps
- Batch counter function for CT6, CT6−2P only
- Able to set ON/OFF time individually in Flicker(FLK) mode

▣Specifications

Series			CTY SERIES	CTS SERIES		CT SERIES
Digit			6	4	6	6
Model	Single preset		CT6Y	CT4S	CT6S	CT6
	Dual preset		CT6Y−2P	CT4S−2P	CT6S−2P	CT6−2P
	Totalizer(Indicatior)		CT6Y−I	―――	CT6S−I	CT6−I
Appearances & Dimensions			 [W72×H36×L77mm]	 [W48×H48×L90mm]		 [W72×H72×L85mm]
Power supply	AC power		100−240VAC 50/60Hz			
	DC power		24−60VDC			
Allowable voltage range			90 ~ 110% of Power supply			
Power consumption	AC power		Indicator : Approx. 9VA, Single & Dual preset : Approx. 10VA			
	DC power		Indicator & Single preset : Approx. 5W, Dual preset : Approx. 6W			
Counting speed of INA, INB			Selectable 1 / 30 / 1k / 5k / 10kcps			
Prescale range			0.001 ~ 99.999(6 digits), 0.01 ~ 9.99(4 digits)			
Min. input signal width	Counter		Reset input : Selectable 1ms or 2ms			
	Timer		INA, INHIBIT, RESET : Selectable 1ms or 20ms			INA, RESET, INHIBIT, BATCH RESET (Except for CT6−I):Selectable 1ms or 20ms
Input			●Voltage input, No voltage input(PNP, NPN selectable) [Voltage input] Input impedance : 5.4kΩ, "H" level : 5−30VDC, "L" level : 0−2VDC [No voltage input] Impedance at short−circuit : Max. 1kΩ, Residual voltage at short−circuit: Max. 2VDC, Impedance at open−circuit : Min. 100kΩ			
One−shot output			10 / 50 / 100 / 200 / 500 / 1000 / 2000 / 5000ms			
Control output	Contact	Type	Single preset type : SPDT(1c) Dual preset type : SPST(1a) for first output SPDT(1c) for second output	Single preset type : SPDT(1c), Dual preset type : SPST(1a) for first / Second output		
		Capacity	NO : 250VAC 3A at resistive load, NC : 250VAC 2A at resistive load			
	Solid−state	Type	Single preset type : 1 NPN open collector Dual preset type : 1 NPN open collector			Single preset type : 2 NPN open collectors Dual preset type : 3 NPN open collectors
		Capacity	Max. 30VDC, Max. 100mA			
Memory protection			10 years(When using nonvolatile semiconductor memory)			
External sensor power			12VDC ±10%, Max. 100mA			
Time accurancy	Repeat error		Power ON start : Max. ±0.01% ±0.05sec Signal start : Max. ±0.01% ±0.03sec			
	Set error					
	Voltage error					
	Temperature error					

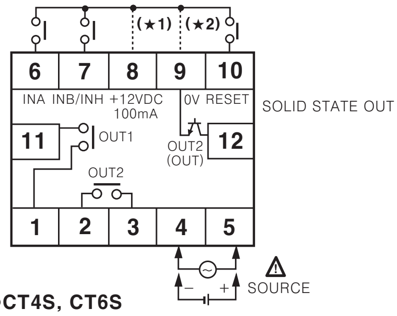
▣Connections

●CT6Y(No out1)
●CT6Y−2P
●CT6Y−I(No output)

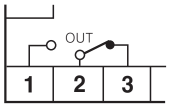


※(★1) : PNP INPUT
※(★2) : NPN INPUT

●CT4S−2P, CT6S−2P
●CT6S−I (No output)

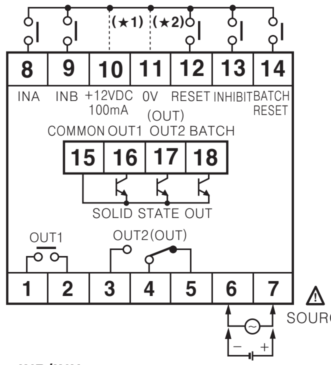


●CT4S, CT6S



※**INA** terminal
- Operation of Counter : Operating as INA signal or INH signal
- Operation of Timer : Operating as "START"

●CT6 (No out1)
●CT6−2P
●CT6−I (No output)



※**INB/INH** terminal
- Operation of Counter : Operating as INB signal
- Operation of Timer : Operating as INH signal
  If the INH signal applied when it is used as Timer, the process time stops. (Hold)

Selection Guide

COUNTER/TIMER(FX SERIES)

▣Ordering information

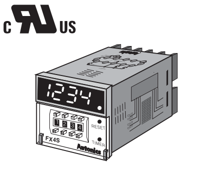
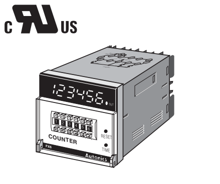
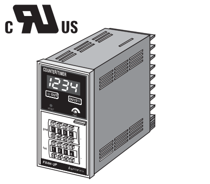
FX 4 □ – □

I	Indicator(No output)
	Single preset
2P	Dual preset
	DIN W72×H72mm
H	DIN W48×H96mm
L	DIN W144×H72mm
4	9999(Digit)
6	999999(Digit)
FX	Counter/Timer type

FX 4 S – □

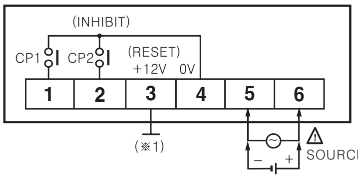
I	Indicator(No output)
	Single preset
Y	DIN W72×H36mm
S	DIN W48×H48mm
4	9999(Digit)
5	99999(Digit)
6	999999(Digit)
FX	Counter/Timer type

▣Specifications

Series		FX SERIES								
Digit		4	6	4	5	4	6	4	4	6
Model	Single preset	———	———	FX4S	———	FX4	FX6	FX4H	———	———
Model	Dual preset	———	———	———	———	FX4-2P	FX6-2P	FX4H-2P	FX4L-2P	FX6L-2P
Model	Totalizer(Indicator)	FX4Y-I	FX6Y-I	———	FX5S-I	FX4-I	FX6-I	FX4H-I	FX4L-I	FX6L-I
Appearances & Dimensions		 [W72×H36×L93mm]		 [W48×H48×L91mm]		 [W72×H72×L112mm]		 [W48×H96×L100mm]	 [W144×H72×L112mm]	
Input operation mode		Count up/down input(Command input, Individual input, Phase difference input), Count up input, Count down input								
Power supply		100–240VAC 50/60Hz, 12–24VAC/DC(Option) [90 ~ 110% of Power supply]								
Max. counting speed		Selectable 30cps, 5kcps				Selectable 1cps , 30cps, 2kcps, 5kcps				
Input	CP1, CP2 input / Reset input	No voltage input ☞ Impedance at short–circuit : Max. 470Ω Residual voltage at short–circuit : Max. 1VDC Impedance at open–circuit : Min. 100kΩ		●Voltage input, No voltage input (PNP, NPN selectable) [Voltage input] Input impedance : 5.4kΩ, "H" level : 5–30VDC, "L" level : 0–2VDC [No voltage input] Impedance at short–circuit impedance : Max. 1kΩ, Residual voltage at short–circuit: Max. 2VDC, Impedance at open–circuit : Min. 100kΩ						
Control output	Contact – Type	———		SPDT(1c)	———	Single preset type : SPDT(1c), Dual preset type : 1st output SPDT(1c), 2nd output : SPDT(1c)				
Control output	Contact – Capacity	———		250VAC 3A resistive load	———	250VAC 3A at resistive load				
Control output	Solid–state – Type	———		NPN open collector	———	Single preset type : NPN open collector, Dual preset Type : 1st output NPN open collector, 2nd output NPN open collector				
Control output	Solid–state – Capacity	———		30VDC max. 100mA max.	———	30VDC Max. 100mA Max.				

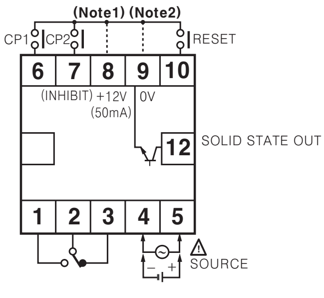
▣Connections

●FX4Y-I(No output)
●FX6Y-I(No output)

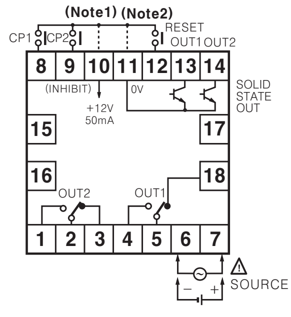


(※1)It can be selected reset or sensor power(+12VDC 50mA) by controlling internal jump pin.

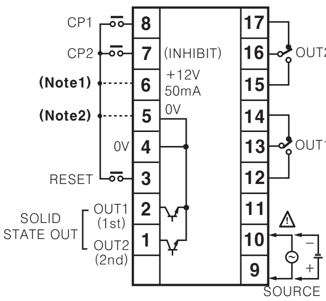
●FX4S
●FX5S-I(No output)



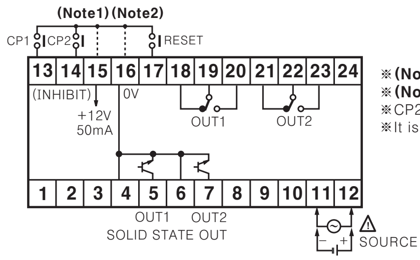
●FX4(No out1) / FX6(No out1)
●FX4-2P / FX6-2P
●FX4-I(No output) / FX6-I(No output)



●FX4H(No out1)
●FX4H-2P
●FX4H-I(No output)



●FX4L-2P / FX6L-2P
●FX4L-I(No output) / FX6L-I(No output)



※(Note1) : PNP input
※(Note2) : NPN input
※CP2(INHIBIT) : Time hold terminal when using for timer.
※It is operated by power ON start type when using for timer.

COUNTER(FS, F/L, FM/LM SERIES)

▣Ordering information

FS 4 A

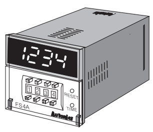
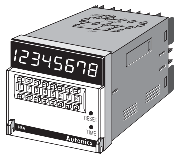
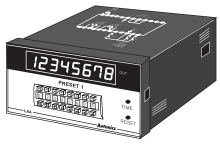
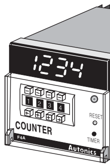
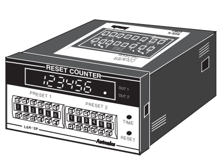
A	Single preset
B	Indicator(No output)
4	9999(Digit)
5	99999(Digit)
FS	DIN W48×H48mm

F 4 A M — 2P

	Single preset
2P	Dual preset
M	Measuring function
A	Preset
B	Indicator(No output)
4	9999(Digit)
6	999999(Digit)
F	DIN W72×H72mm
L	DIN W144×H72mm

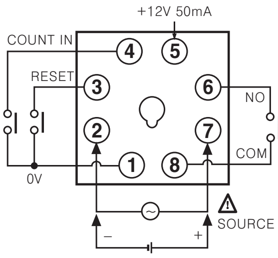
※Up & Down, Multi & Divide function.

▣Specifications

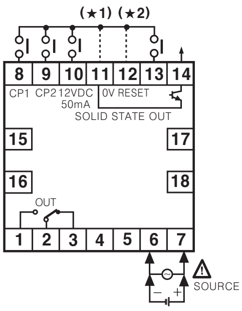
Series			Standard Type				Measure counter			
			FS SERIES		F SERIES	L SERIES	FM SERIES		LM SERIES	
Digit			4	5	8	8	4	6	4	6
Model	Single preset		FS4A	———	F8A	L8A	F4AM	F6AM	———	———
Model	Dual preset		———	———	———	———	F4AM-2P	F6AM-2P	L4AM-2P	L6AM-2P
Model	Totalizer (Indicator)		———	FS5B	F8B	L8B	F4BM	F6BM	L4BM	L6BM
Appearances & Dimensions			 [W48×H48×L85mm]		 [W72×H72×L113mm]	 [W144×H72×L112mm]	 [W72×H72×L112mm]		 [W144×H72×L112mm]	
Input operation mode			Count up, Count down input		Count up input, Count down input, Count up/down input					
Power supply			100-240VAC 50/60Hz, 12-24VAC/DC(Option) [90 ~ 110% of Power supply]							
Max. counting speed			Selectable 1cps, 30cps, 2kcps, 5kcps(by DIP SW)							
Input	Count input (CP1, CP2 input) / Reset input		[No voltage input] • Residual voltage at short-circuit : Max. 1VDC • Impedance at short-circuit : Max. 470kΩ • Impedance at open-circuit : Min. 100kΩ		• Voltage input, No voltage input(PNP, NPN selectable) [Voltage input] Input impedance : 5.4kΩ, "H" level : 5-30VDC, "L" level : 0-2VDC [No voltage input] Impedance at short-circuit : Max. 1kΩ, Residual voltage at short-circuit : Max. 2VDC, Impedance at open-circuit : Min. 100kΩ					
Control output	Contact	Type	SPST(1a)	———	SPDT(1c)		Single preset type:SPDT(1c) Dual preset type: 1st output:SPST(1a), 2nd output:SPST(1a)		Single preset type:SPDT(1c) Dual preset type: 1st output:SPDT(1c), 2nd output:SPDT(1c)	
Control output	Contact	Capacity	250VAC 3A resistive load	———	250VAC 3A resistive load					
Control output	Solid-state	Type	NPN open collector	———	NPN open collector		Single preset type : NPN open collector Dual preset type : 1st output NPN open collector, 2nd output NPN open collector			
Control output	Solid-state	Capacity	30VDC. 100mA Max.	———	30VDC 100mA Max.					
One shot output time			0.05 ~ 5sec				Single preset type : 0.5sec fixed, Dual preset type : 0.05~5sec			
Memory protection			10 years(When using nonvolatile semiconductor memory)							

▣Connections

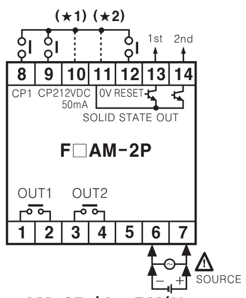
●FS4A / FS5B(No output)

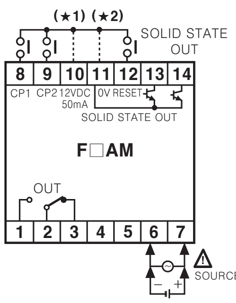


●F8A / F8B(No output)

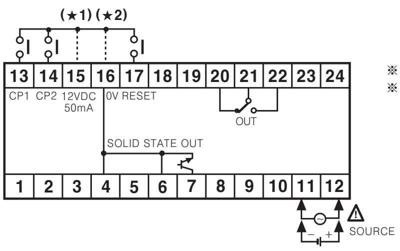


●F□AM / F□AM-2P / F□BM(No output)



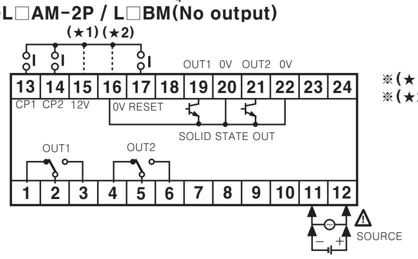


●L8A / L8B(No output)



※(★1) : PNP INPUT
※(★2) : NPN INPUT

●L□AM-2P / L□BM(No output)



※(★1) : PNP INPUT
※(★2) : NPN INPUT