DIN W48×H24mm, Indication Only, LCD Pulse Meter (RPM, RPS, Hz)

▣ Features

- **Upgraded version of LR7N series**
- Easy of 1 pulse input method per 1 revolution
- Display up to 10000RPM
- No need power supply by internal battery
- Protection structure IP66 (front panel only)
- Displays RPM, RPS of rotator
- Displays AC line frequency

Please read "Caution for your safety" in operation manual before using.

▣ Ordering Information

LR 5 N — B

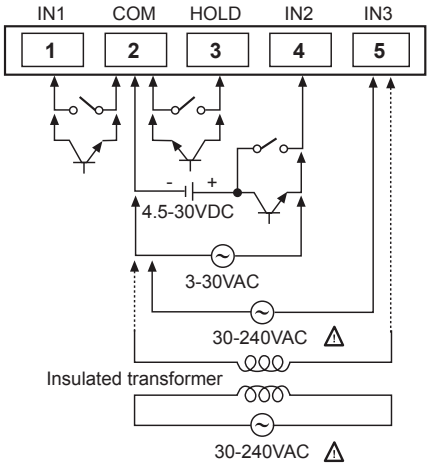
Power supply	B	Internal lithium battery
Size	N	DIN W48×H24mm
Digit	5	10000 (4½-digit)
Item	LR	LCD pulse meter

▣ Specifications

Model		**LR5N-B**			
Input method		No-voltage input	Voltage input 1		Voltage input 2
Input signal level		Short-residual voltage : Max. 0.5V Max. short-circuit impedance : Max. 10kΩ Max. open-circuit impedance : Min. 500kΩ	DC	High input voltage range : 4.5-30VDC Low input voltage range : 0-2VDC	Voltage: 30-240VAC
			AC	Voltage: 3-30VAC	
Power		No-power [includes lithium battery (replaceable)]			
Battery life cycle		Over 3 years at 20℃ (replaceable)			
Dispaly method		LCD Zero blanking method (character height: 8.7mm)			
Display digits		5-digit			
Display range and Display accuracy		Display range		Display accuracy	
		RPM	1 to 10000RPM	1 to 5000RPM: F.S.±0.05%±1-digit	
				5001 to 10000RPM: F.S.±0.1%±1-digit	
		0.1RPM	0.1 to 1000.0RPM	F.S.±0.05%±1-digit	
		Hz	1 to 1000Hz	F.S.±0.1%±1-digit	
		0.1Hz	0.1 to 100.0Hz		
		RPS	1 to 1000RPS		
HOLD function		Includes (external HOLD function)			
Insulation resistance		Over 100MΩ (at 500VDC megger)			
Dielectric strength		2,000VAC 50/60Hz for 1 min (cutoff current=10mA)			
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz (for 1min) in each X, Y, Z direction for 1 hour			
	Malfunction	0.3mm amplitude at frequency of 10 to 55Hz (for 1min) 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			
Envion-ment	Ambient temperature	-10 to 55℃, Storage: -25 to 65℃			
	Ambient humidity	35 to 85%RH, Storage: 35 to 85%RH			
Protection structure		IP66 (when using waterproof rubber for front panel), terminal cover (finger protector)			
Weight※1		Approx. 91.5g (approx. 59g)			

※1: The weight includes packaging. The weight in parenthesis is for unit only.
※Environment resistance is rated at no freezing or condensation.

▣ Connections

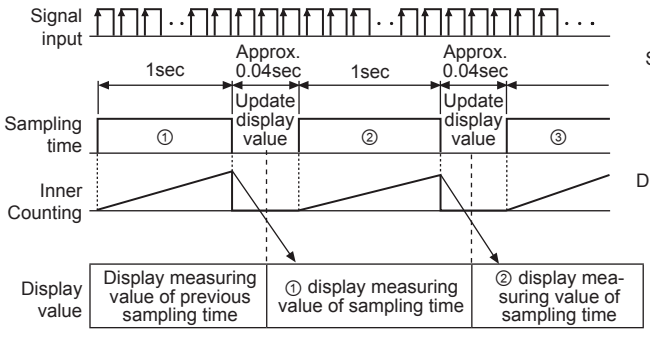


※Please use reliable contacts enough to flow 5μA of current when using input signal or reset signal as a contact.
※IN1 - No-voltage input
IN2 - Voltage input
• DC voltage input
• AC voltage input: Display AC frequency.
IN3 - AC voltage input: Display AC frequency.
※**Choose one among IN1, IN2 and IN3 to use.**

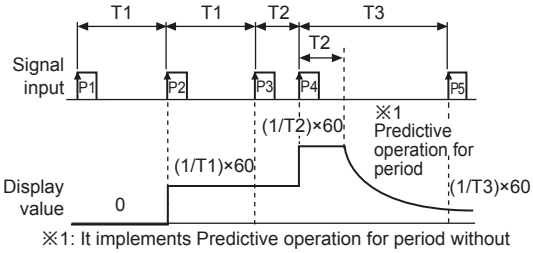
⚠Caution for IN3 input
: If apply high voltage over 50VAC, it may cause an electric shock. Insulated transformer whose turn ratio is 1:1 must be installed, or countermeasures must be provided.

▣ Operation Charts

● Setting RPS, Hz



● Setting RPM 0.1, RPM 0.1Hz

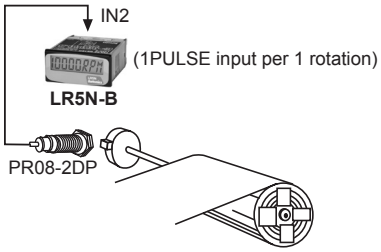


※1: It implements Predictive operation for period without Auto zero time setting function (If there is no pulse input within setting time, it displays the value as zero forcibly). If there is any input signal within certain time (T2), CPU considers input to be supplied, display value is decreased continuously.

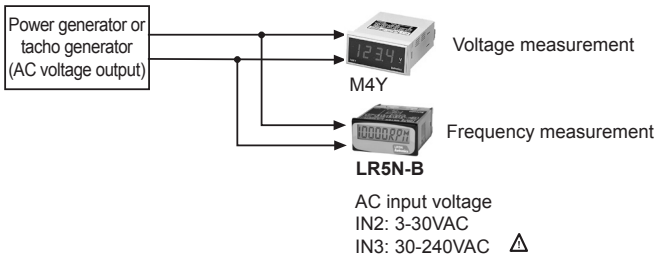
▣ Operation Mode (Frequency/Revolution)

◎ **Frequency (Hz, 0.1Hz) = f, Revolution (RPM, 0.1RPM)= f × 60, Revolution (RPS)= f**

● Revolution



● AC frequency

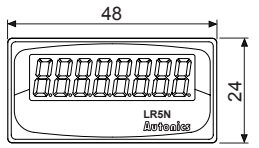


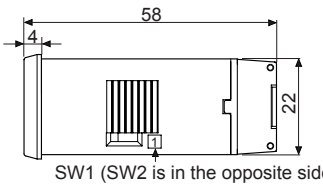
● Display value and unit

Display	Frequency		Revolution		
Unit	Hz	0.1Hz	RPM	0.1RPM	RPS (factory default)

▣ Dimensions

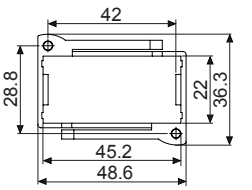
(unit: mm)

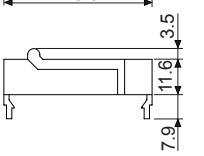


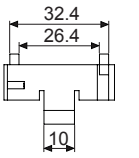


SW1 (SW2 is in the opposite side)

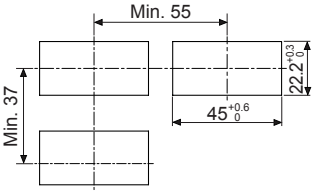
● **Bracket**







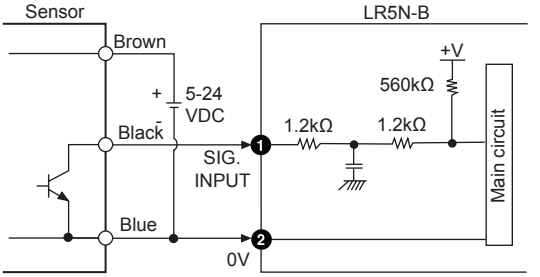
● **Panel cut-out**



▣ Input Connections

● **Standard input sensor**

: NPN open collector output type



▣ Function Description

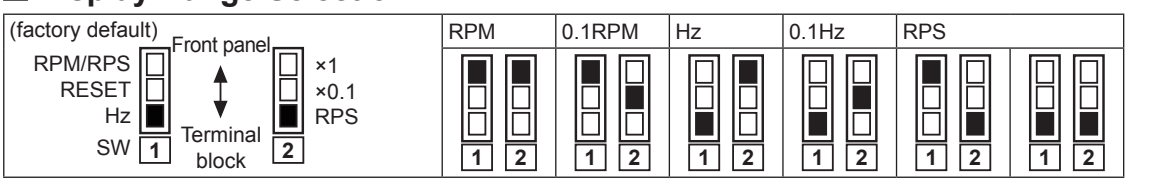
● **RESET**

It initializes an unit and front LCD display. There are not indicated when set switch1 as RESET.

● **HOLD**

It stops display value by short circuit HOLD terminal when it is hard to read the value because of frequent input changes.

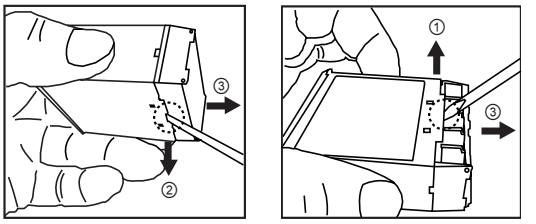
▣ Display Range Selection



① Select one among ×1, ×0.1 and RPS by SW2.
② Shift SW1 to RESET.
③ Select one again between RPM/RPS and Hz by SW1.
※If set display range and front display LCD unit are not same, shift SW1 to RESET and select RPM/RPS or Hz.

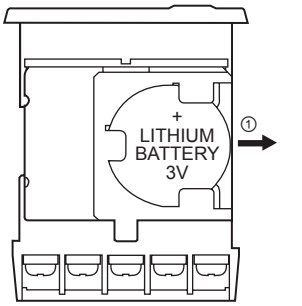
▣ Case Detachment And Battery Replacement

● **Case detachment**



※Hold up Lock part toward ①, ② of the product with the tool and pull toward ③, the case is detached.
⚠ Please be careful of the injury caused by tools.

● **Battery replacement**



1) Detach the case.
2) Push the battery and detach toward ①.
3) Insert new battery with correct alignment of polarity pushing toward opposite of ①.
※Battery is sold separately.
※Do not burn up or disassemble the lithium battery.