

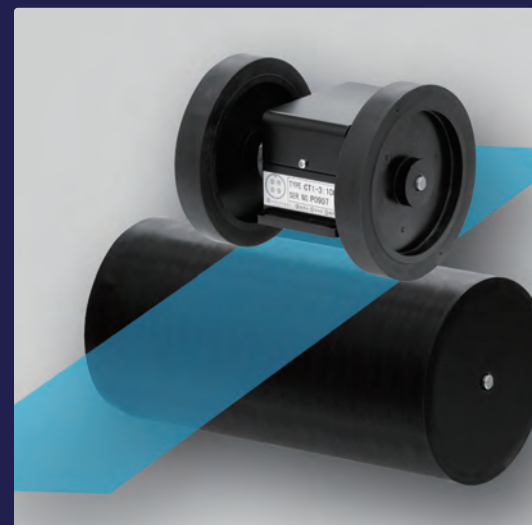


LINE SEIKI

Product Catalog 2020



- Electronic Counter
- Electromagnetic Counter
- Mechanical Counter
- Length Measuring Counter
- Length Sensor
- Tachometer
- Thermometer



■ Company Overview

"As long as humans live counting will be a necessity." ~ Line Seiki

Human progress and development over the years has been measured by numbers. Statistics are as vital to ordinary students and hobbyists as they are to experienced professionals. For 60 years now, Line Seiki has served this everyday need to count, measure, track, and monitor various activities with its wide variety of industrial counters, measuring instruments, and sensors.



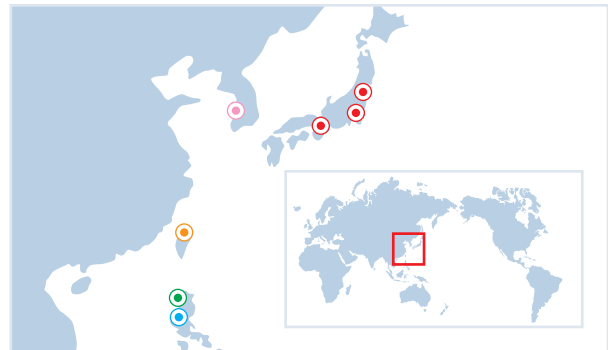
From its humble beginnings as a counter maker in post-World War II Japan, Line Seiki has grown to become a global leader in industrial, professional, and even personal counter-serving the needs of markets across the Asia Pacific, Europe, and the Americas. As a pioneer in counting technology, it has perfected the science and art of measurements while keeping up with the latest counting technology. Wherever you may see humans and their needs to count and measure, you will see Line Seiki.

Now with five locations throughout Asia Pacific and a vast global network of distributors, Line Seiki manufactures and supplies product models for just about every field or industry. Our products include the most advanced electronic, electro-mechanical and mechanical counters, tachometers, digital thermometers, tally counters, sensors, and encoders as well as other customized products. Applications range from factory automation to speed and time measurements for hobbyists, to everyday household uses. Moreover, many of our products are commonly used by original equipment manufacturers (OEM), including those found in vending machines, gaming machines, textile machines, plastic injection machines, metal stamping machines, and so on.

Our core business, above all, is product development. We fuse decades of experience to the latest advances in technology to engage in technological cooperation and joint product development with other world leaders in the field of counting. Thus, as long as humans live, so will Line Seiki.

■ Line Seiki Group

- Line Seiki Co., Ltd. (Japan)
- Line Seiki Philippines, Inc. (Philippines)
- Line Seiki Asia Pacific, Inc. (Philippines)
- LS Instrumentation Sales & Services (Philippines)
- Taiwan Line Seiki Co., Ltd. (Taiwan)
- Korea Line Seiki Co., Ltd. (Korea)



■ History

History	
Feb. 1949	A trading company handling measuring tools was inaugurated in Tokyo, Japan.
Apr. 1954	Line Seiki Co., Ltd. was incorporated in Tokyo, Japan.
Jun. 1985	Shirakawa factory was established in Fukushima Prefecture, Japan.
Jun. 1988	Korea Line Seiki was established in Seoul, Korea.
Jun. 1988	Taiwan Line Seiki was established in Taipei, Taiwan.
Aug. 1995	Line Seiki Philippines, Inc. was established in Cavite, the Philippines.
Jun. 1999	Line Seiki Asia Pacific, Inc. was established in the Philippines.
Jul. 2008	LS Instrumentation Sales & Services was established in Quezon City, the Philippines.

Models

GR2 - □□□0

Type _____

C : Totalizer

H : Hourmeter

Input 0 : Dry Contact / Open Collector / Voltage (NPN Transistor) Input
1 : Wide Range Voltage Input

Reset 0 : Remote
1 : Remote & Front



Specifications

Type	GR2-C:Totalizer	GR2-H:Hourmeter
Display	7-segment LCD 7 digits	
Count Range	0 to 9999999	0.0 to 999999.9
Spec. of Input	Max. Count Speed GR2-C□00 30 Hz GR2-C□10 20 Hz	Resolution 1 count per 1/10 hour

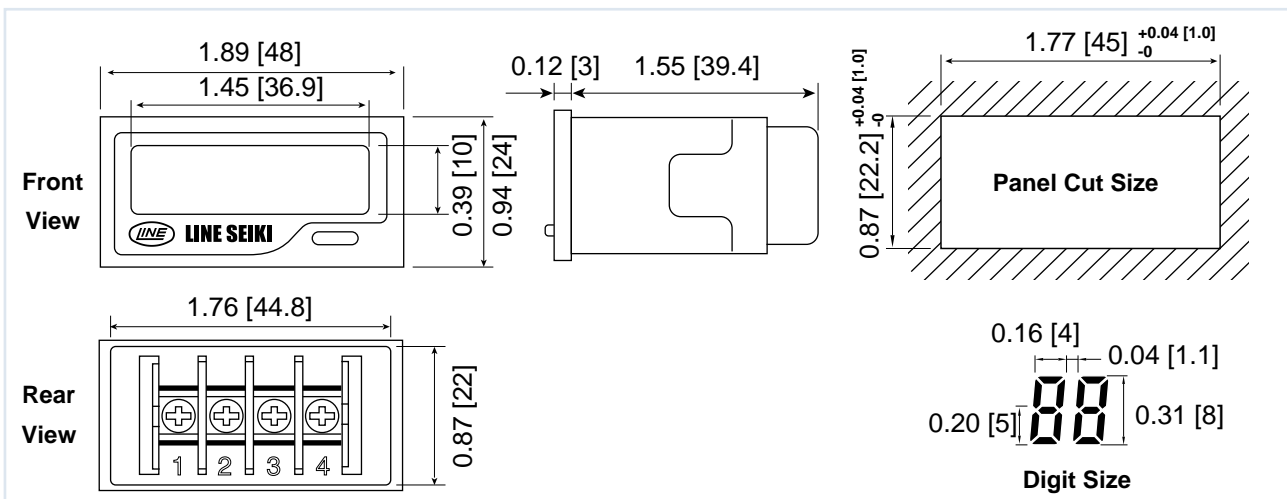
Mechanical / Environmental Specifications

Ambient Temp. : Operating	14 to 131 °F [-10 to +55 °C] (Should not be frozen)
Ambient Temp. : Storage	-4 to +149 °F [-20 to +65 °C] (Should not be frozen)
Ambient Humid. : Operating	25 to 85 %RH (Non-condensing)
Vibration / Shock Resistance	Malfunction : Single Amplitude 0.01 " [0.35 mm] Frequency 10 to 55 Hz X.Y.Z. Axis 3.94 in/s ² [100 m/s ²] Destruction : Single Amplitude 0.03 " [0.75 mm] Frequency 10 to 55 Hz X.Y.Z. Axis 11.8 in/s ² [300 m/s ²]
Front Panel Protection	IP54
Weight (incl. Battery)	Approx. 1.8 oz [50 g]
Wiring	M3 Terminal Screw

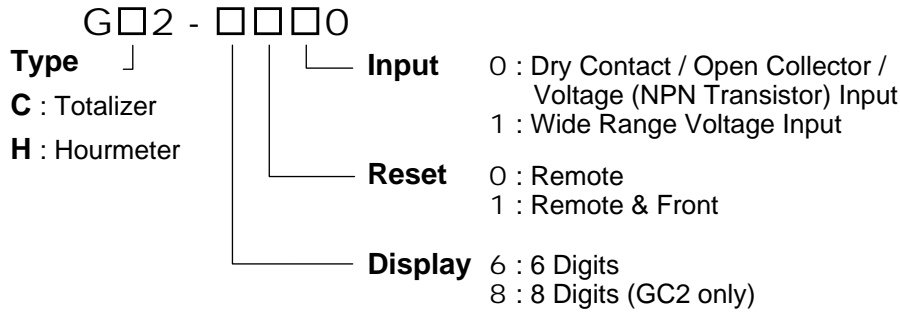
Electrical Specifications

Input	Dry Contact / Open Collector / Voltage (NPN Transistor) Wide Range Voltage	L : <0.8 VDC H : 2 to 30 VDC L : 0 to 5 VDC / AC H : 20 to 250 VDC / AC	Sink Current : 8 μA Input Impedance : 300 kΩ * 50 / 60 Hz Convertible
Reset	Front Reset Remote Reset • Dry Contact / Open Collector / Voltage (NPN Transistor) • Wide Range Voltage	L : <0.8 VDC H : 2 to 30 VDC L : 0 to 5 VDC / AC H : 20 to 250 VDC / AC	Sink Current : 8 μA Input Impedance : 300 kΩ * 50 / 60 Hz Convertible
Reset Pulse Width	6 ms min.		
Power Source	3.6 V 1/2AA Lithium Battery (replaceable), 7 years min. with continuous input at 77 °F [25 °C] *The battery life is not a guaranteed value.		
Compliance	CE, RoHS, UL		

Dimensions in inch [mm]



Models



Specifications

Type	GC2 : Totalizer	GH2 : Hourmeter
Display	7-segment LCD 6 / 8 digits	7-segment LCD 6 digits
Count Range	0 to 999999 / 0 to 99999999	0.0 to 99999.9
Spec. of Input	Max. Count Speed GC2-□□00 30 Hz GC2-□□10 20 Hz	Resolution 1 count per 1/10 hour

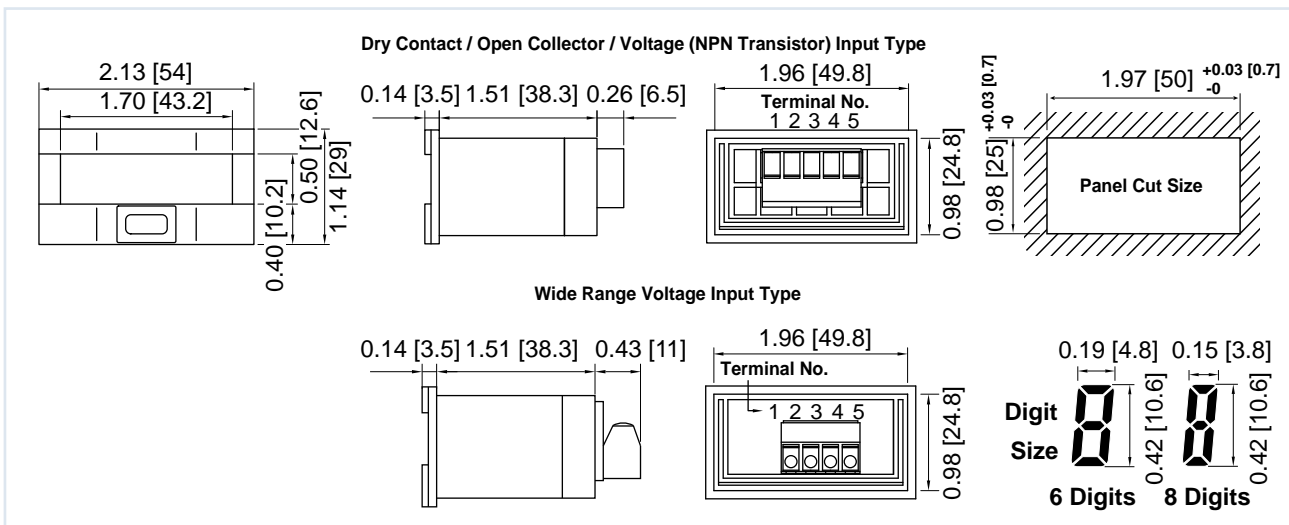
Mechanical / Environmental Specifications

Ambient Temp. : Operating	14 to 131 °F [-10 to +55 °C] (Should not be frozen)
Ambient Temp. : Storage	-4 to +149 °F [-20 to +65 °C] (Should not be frozen)
Ambient Humid. : Operating	25 to 85 %RH (Non-condensing)
Vibration / Shock Resistance	Malfunction : Single Amplitude 0.01 " [0.35 mm] Frequency 10 to 55 Hz X.Y.Z. Axis 3.94 in/s ² [100 m/s ²] Destruction : Single Amplitude 0.03 " [0.75 mm] Frequency 10 to 55 Hz X.Y.Z. Axis 11.8 in/s ² [300 m/s ²]
Front Panel Protection	IP54
Weight (incl. Battery)	Approx. 2.1 oz [60 g]
Wiring	Terminal type : 14-22 AWG lead wires to be connected by screws

Electrical Specifications

Input	<ul style="list-style-type: none"> Dry Contact / Open Collector / Voltage (NPN Transistor) Wide Range Voltage 	L : <0.8 VDC H : 2 to 30 VDC L : 0 to 5 VDC / AC H : 20 to 250 VDC / AC	Sink Current : 8 μA Input Impedance : 300 kΩ * 50 / 60 Hz Convertible
Reset	Front Reset Remote Reset <ul style="list-style-type: none"> Dry Contact / Open Collector / Voltage (NPN Transistor) Wide Range Voltage 	L : <0.8 VDC H : 2 to 30 VDC L : 0 to 5 VDC / AC H : 20 to 250 VDC / AC	Sink Current : 8 μA Input Impedance : 300 kΩ * 50 / 60 Hz Convertible
Reset Pulse Width	6 ms min.		
Power Source	3.6 V 1/2AA Lithium Battery (replaceable), 7 years min. with continuous input at 77 °F [25 °C] *The battery life is not a guaranteed value.		
Compliance	CE, RoHS, UL		

Dimensions in inch [mm]



Models

E48 - □□□

Preset

- 1 : 1 Level Preset
- 2 : 2 Level Preset
- 3 : 1 Level Preset + Prewarn

Power Source

- 1 : 100 to 240 VAC
- 2 : 12 to 24 VDC (E48-102 only)

Output

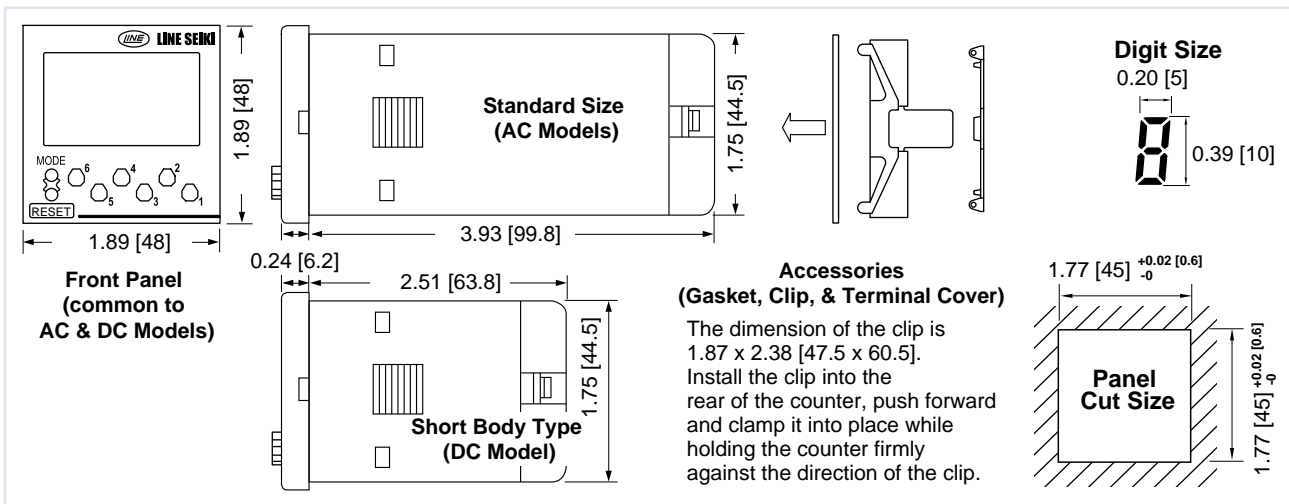
- 0 : Relay Output
- 1 : Open Collector Output



Specifications

Model	E48-101 / E48-111	E48-102 / E48-112	E48-201 / E48-211	E48-301 / E48-311
Display	Blue STN LCD with white backlight ; Digit Size : 0.39 x 0.2 " [10 x 5 mm]			
No. of Digits	6			
No. of Digit Setting Keys	6			
Preset Level	1 Level	1 Level	2 Levels	1 Level Preset + Prewarn
Setting Range	-99999 to 999999			
Prewarn Range	-	-	-	0 to 999999
Input Mode	Contact / Open Collector / Voltage (Selectable)			
Input Signal	Open Collector (Sink Current Approx. 11 mA) L : 0 to 4 V / Voltage (Input Impedance 7 kΩ) L : 0 to 4 V H : 6 to 30 V (Available to 2-wire DC sensor.)			
Count Speed	30 Hz, 1 kHz, 5 kHz, 10 kHz (Selectable)			
Count Mode	Add / Subtract (Add / Subtract individual input, 90° quadrature input)			
Count Range	-99999 to 999999			
Prescale	0.001 to 99.999 (excl. 0)			
Decimal Point Position	0.0, 0.00, 0.000, No Decimal Point			
Write	-99999 to 999999			
Reset	Front Reset, Remote Reset, Auto-reset			
Remote Reset Time	2 ms or 20 ms (Selectable)			
Operation Mode	Selectable from A to G ; fixed to Mode A if output mode is not "Standard"			
Memory	E ² PROM (10 years, rewritable 100,000 times)			
Output	E48 - □0□ Relay Output (Main : 1c, Sub : 1a) : max. resistance load of 250 VAC, 5 A / 30 VDC, 5 A E48 - □1□ NPN Open Collector Output : 45 VDC, 100 mA MAX.			
Output Delay	Relay Output at 30 Hz : 17 ms max. / 1 kHz, 5 kHz, 10 kHz : 12 ms max. Open Collector Output at 30 Hz : 7 ms MAX. / 1 kHz, 5 kHz, 10 kHz : 2 ms MAX.			
Output Mode	1-Level Preset : Standard, Equal, Lower Limit, Upper Limit 2-Level Preset : Standard, Equal, Upper-Lower Limit, Upper-Upper Limit 1-Level Preset + Prewarn : Standard, Equal			
Output Time	One Shot (10 to 9990 ms)* or HOLD * Standard Output only			
Error Display	In 90° quadrature mode, error message will be displayed on LCD if count value exceeds upper / lower limit of count range. (overflow error : $\square-E_r$ underflow error : $\square-U_r$)			
Power Supply	100 to 240 VAC -15%, +10% 50 / 60 Hz Convertible	12 to 24 VDC -15%, +10%	100 to 240 VAC -15%, +10% 50 / 60 Hz Convertible	
Sensor Power Source	12 VDC 100 mA	-	12 VDC 100 mA	
Power Consumption	Approx. 7 VA for 240 VAC	Approx. 2.5 W for 24 VDC	Approx. 7 VA for 240 VAC	
Ambient Temp./Humid. : Operating	14 to 122 °F [-10 to +50 °C] (Should not be frozen) 45 to 85 %RH (Non-condensing)			
Altitude	2,000 m max.			
Installation Environment	Over-voltage Category II, Pollution Degree 2 (IEC61010-1)			
Front Panel Protection	IP54 (Panel Surface)			
Compliance	CE, RoHS, UL			
Weight	Approx. 5.6 oz [160 g]	Approx. 4.2 oz [120 g]	Approx. 5.6 oz [160 g]	

Dimensions in inch [mm]



Models

G48 - 3□□

Preset

- 0 : 1 Level Preset
- 1 : 2 Level Preset
- 2 : 1 Level Preset + Prewarn

Power Source

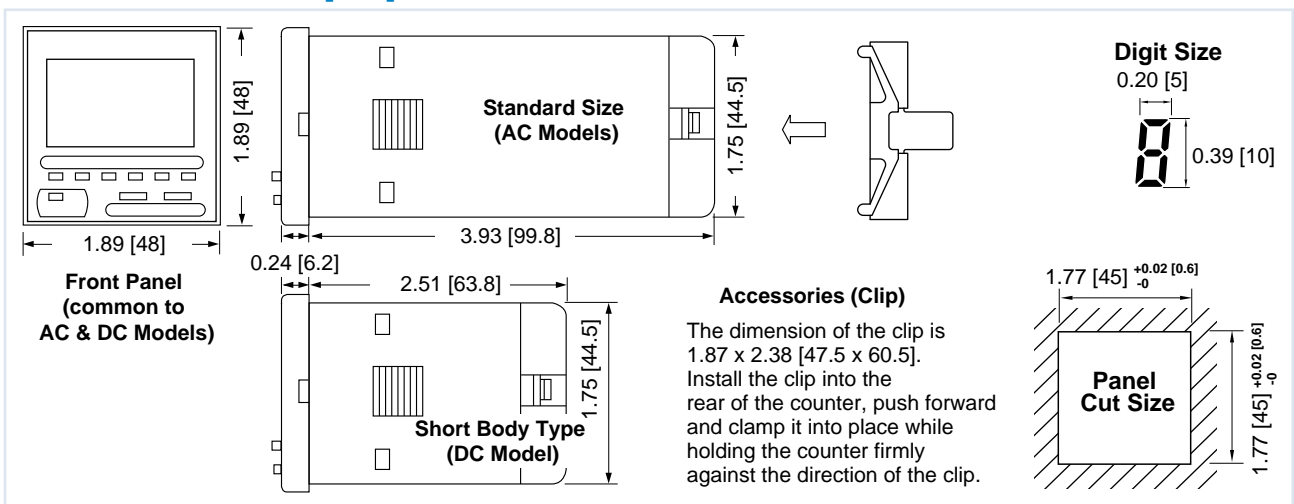
- 5 : 100 to 240 VAC
- 6 : 12 to 24 VDC (G48-306 only)



Specifications

Model	G48-305	G48-306	G48-315	G48-325
Display	LCD with backlight ; Digit Size : 0.39 x 0.2 " [10 x 5 mm]			
No. of Digits	6			
No. of Digit Setting Keys	6			
Preset Level	1 Level	1 Level	2 Level	1 Level Preset + Prewarn
Setting Range	-99999 to 999999			
Prewarn Range	-	-	-	0 to 999999
Input Mode	Contact / Open Collector / Voltage (Selectable)			
Input Signal	Open Collector (Sink current 10 mA, DC power model : power supply volt / 1.2KΩ) L : 0 to 4 V / Voltage (Input impedance 7 KΩ) L : 0 to 4 V H : 6 to 30 V (Available to 2-wire DC sensor.)			
Count Speed	30 Hz, 1 kHz, 5 kHz (Selectable)			
Count Mode	Add / Subtract (Add / Subtract individual input, 90° quadrature input)			
Count Range	-99999 to 999999			
Prescale	0.001 to 99.999 (excl. 0)			
Decimal Point Position	0.0, 0.00, 0.000, No Decimal Point			
Write	-99999 to 999999			
Reset	Front Reset, Remote Reset , Auto-reset			
Remote Reset Time	2 ms or 20 ms (Selectable)			
Operation Mode	Selectable from A to G ; fixed to Mode A if output mode is not "Standard"			
Memory	E ² PROM (10 years, rewritable 100,000 times)			
Output	Relay Output (1a) : max. resistance load of 250 VAC, 5 A / 30 VDC, 5 A			
Output Delay	Relay Output at 30 Hz : 20 ms max. / 1 kHz, 5 kHz : 7 ms max.			
Output Mode	1-Level Preset: Standard, Equal, Lower Limit, Upper Limit 2-Level Preset: Standard, Equal, Upper-Lower Limit, Upper-Upper Limit 1-Level Preset + Prewarn: Standard, Equal			
Output Time	One Shot (10 to 9990 ms)* or HOLD			* Standard Output only
Error Display	In Add / Subtract mode, error message will be displayed on LCD if count value exceeds upper / lower limit of count range.(overflow error : $\alpha-E_r$ underflow error : $\alpha-E_r$)			
Key Protection	Key operation can be disabled at 4 protection levels (L1, L2, L3, L4) by selecting in Program Mode and shorting key protection terminals.			
Power Supply	100 to 240 VAC -15 %, +10 % 50 / 60 Hz Convertible	12 to 24 VDC -15 %, +10 %	100 to 240 VAC -15 %, +10 % 50 / 60 Hz Convertible	
Sensor Power Source	12 VDC 100 mA	-	12 VDC 100 mA	
Power Consumption	Approx. 7 VA for 240 VAC	Approx. 1.2 W for 24 VDC	Approx. 7 VA for 240 VAC	
Ambient Temp./Humid. : Operating	14 to 122 °F [-10 to +50 °C] (Should not be frozen) 45 to 85 %RH (Non-condensing)			
Altitude	2,000 m max.			
Installation Environment	Over-voltage Category II, Pollution Degree 2 (IEC61010-1)			
Front Panel Protection	IP54 (Panel Surface)			
Compliance	CE, RoHS, UL			
Weight	Approx. 6.0 oz [170 g]	Approx. 3.9 oz [110 g]	Approx. 6.0 oz [170 g]	

Dimensions in inch [mm]



Models

MZ - □□□- □

Digit

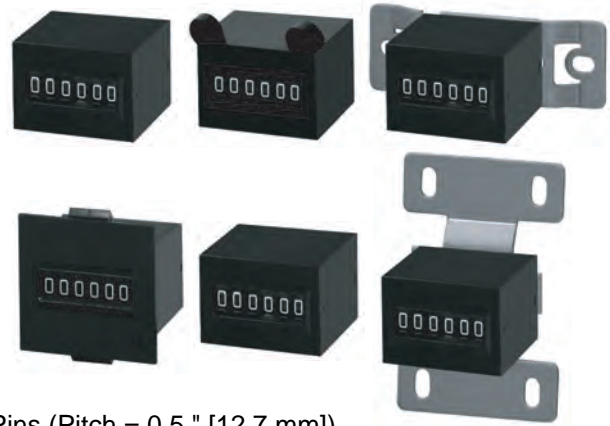
6 : 6 digits
7 : 7 digits

Voltage :

DC12V : 12 VDC
DC24V : 24 VDC

Mounting & Connection

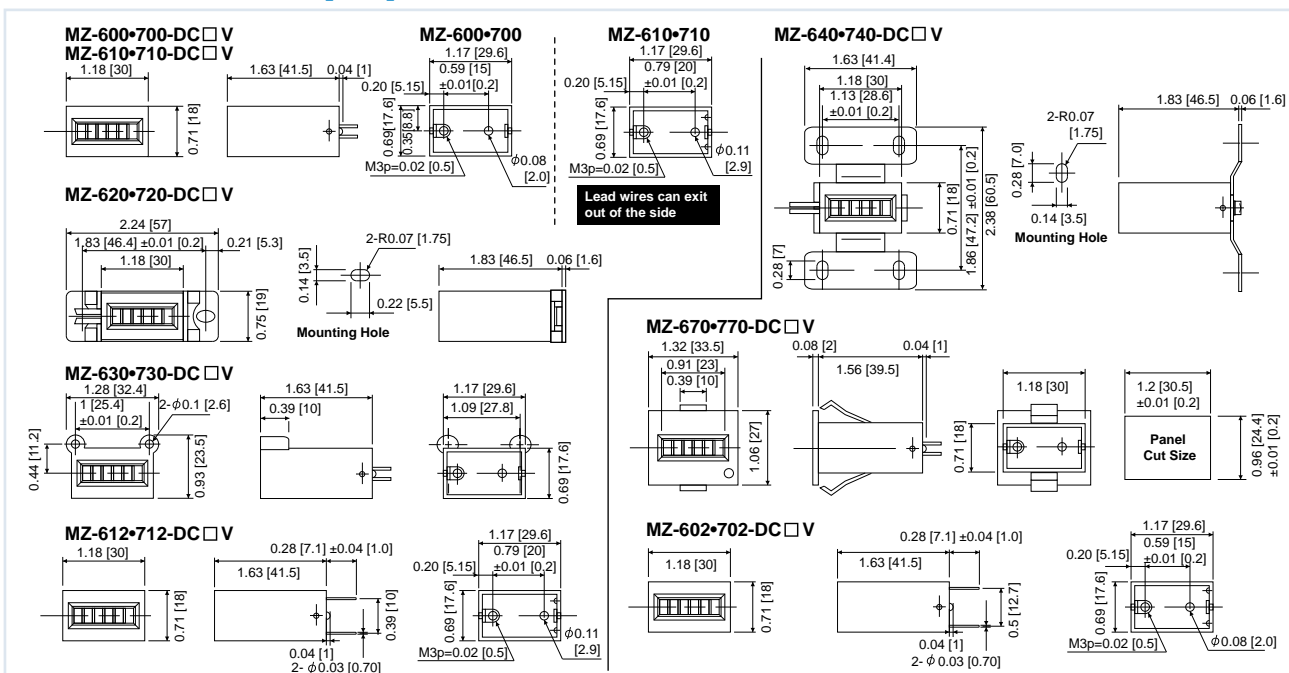
- 00 : Rear (Mounting Pitch : 0.59 " [15 mm]) / Lead wire
- 10 : Rear (Mounting Pitch : 0.79 " [20 mm]) / Lead wire
- 20 : Base (Horizontal) / Lead wire
- 30 : Behind Panel (Screw) / Lead wire
- 40 : Base (Vertical) / Lead wire
- 70 : Panel (Snap-In) / Lead wire
- 02 : Rear (Mounting Pitch : 0.59 " [15 mm]) / Terminal Pins (Pitch = 0.5 " [12.7 mm])
- 12 : Rear (Mounting Pitch : 0.79 " [20 mm]) / Terminal Pins (Pitch = 0.39 " [10 mm])



Specifications

Digit Size	6 digits : 0.12 x 0.08 " [3.0 x 2.0 mm] / 7 digits : 0.12 x 0.06 " [3.0 x 1.6 mm] (white on black)
Power Source	12 VDC, 24 VDC
Allowable Voltage Fluctuation	-15 % to +10 %
Power Consumption	1.2 W
Continuous Energizing	Permissible
Count Method	One Pulse - One Count (Energizing - 1/2 count, De-energized - 1/2 count)
Count Speed	20 Hz max.
Pulse Width	50 ms min.
Make (Duty)	1 : 1
Count Life	6 digits : 3,000,000 counts minimum / 7 digits : 10,000,000 counts minimum
Reset	None
Connection	Lead wire 10.43 " [265 mm] / Terminal : Pin
Ambient Temp. : Operating	23 to 104 °F [-5 to +40 °C] (Should not be frozen)
Ambient Humid. : Operating	85 %RH max. (Non-condensing)
Test Voltage	1,500 VAC for 1 minute
Insulation Resistance	50 MΩ minimum (500 VDC Megger)
Vibration	Destruction : 16.7 Hz : Double Amplitude 0.16 " [4 mm] Malfunction : 10 to 55 Hz : Double Amplitude 0.02 " [0.5 mm]
Shock	Destruction : 30 G Malfunction : 5 G
Structure	Cover : Plastic (Black) / Base : Steel
Weight	Approx. 1.06 oz [30 g]
Compliance	CE, RoHS, UL

Dimensions in inch [mm]



Models

ME - 60□OUL - □ - □

Digit

6 : 6 digits

Voltage

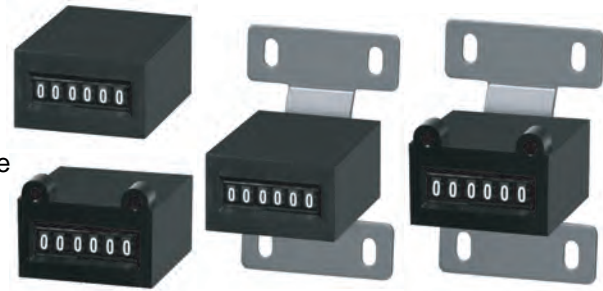
AC115V : 115 VAC
DC24V : 24 VDC

Accessory

Blank : None
B1 : with Base Plate

Mounting

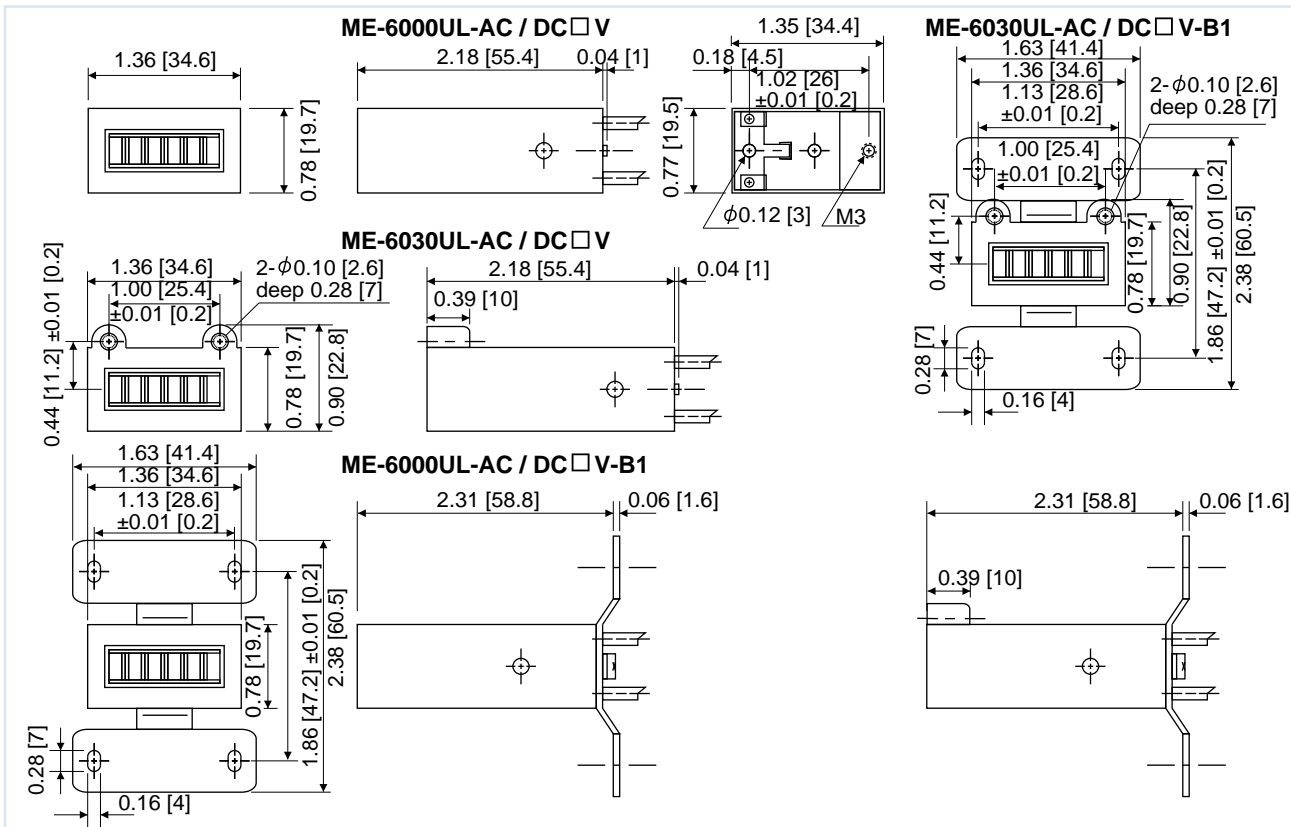
0 : Rear
3 : Behind Panel (Screw)



Specifications

Digit Size	0.14 x 0.07 " [3.5 x 1.8 mm] (white on black)
Power Source	115 VAC 50 / 60 Hz Convertible 24VDC
Allowable Voltage Fluctuation	-15 % to +10 %
Power Consumption	AC : 1.4 VA / DC : 1.2 W
Continuous Energizing	Permissible
Count Method	One Pulse - One Count (Energizing - ½ count, De-energized - ½ count)
Count Speed	10 Hz max.
Pulse Width	50 ms min.
Make (Duty)	1 : 1
Count Life	3,000,000 counts minimum
Reset	None
Connection	Lead wire 9.84 " [250 mm]
Ambient Temp. : Operating	23 to 104 °F [-5 to +40 °C] (Should not be frozen)
Ambient Humid. : Operating	85 %RH max. (Non-condensing)
Test Voltage	1,500 VAC for 1 minute
Insulation Resistance	50 MΩ minimum (500 VDC Megger)
Vibration	Destruction : 16.7 Hz : Double Amplitude 0.16 " [4 mm] Malfunction : 10 to 55 Hz : Double Amplitude 0.02 " [0.5 mm]
Shock	Destruction : 30 G / Malfunction : 5 G
Structure	Cover : Plastic (Black) / Base : Steel
Weight	ME-6000UL- AC / DC□V : Approx. 1.76 oz [50 g], ME-6000UL- AC / DC□V-B1 : Approx. 2.12 oz [60 g] ME-6030UL- AC / DC□V : Approx. 1.83 oz [52 g], ME-6030UL- AC / DC□V-B1 : Approx. 2.19 oz [62 g]
Compliance	CE, RoHS, UL

Dimensions in inch [mm]



Models

MCU - 6 □ UL - □ - □

Digit

6 : 6 digits

Voltage

AC115V : 115 VAC

DC24V : 24 VDC

Mounting

S : Rear

P : Panel (Screw)

Accessory

Blank : None

B2 : with Base Plate

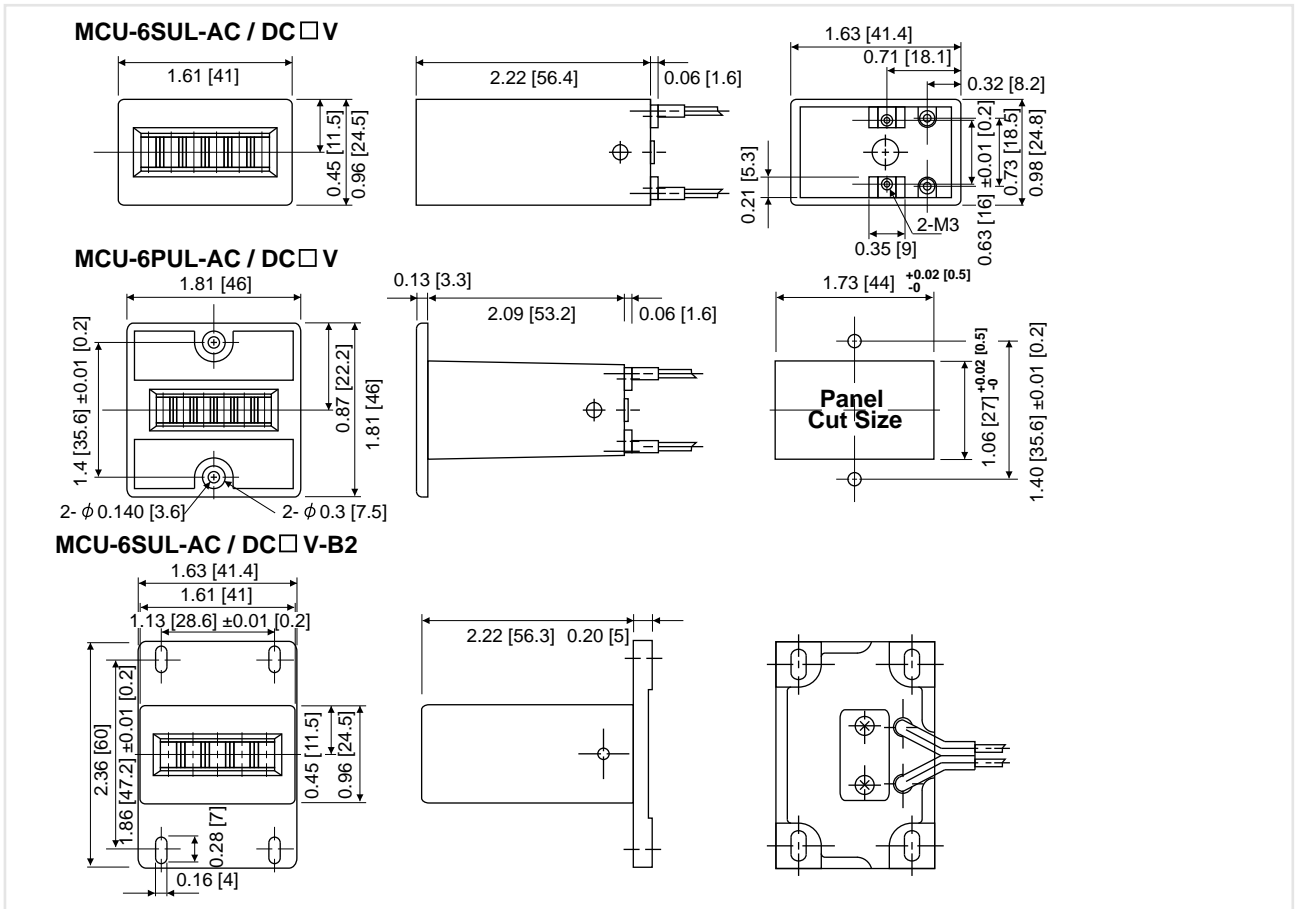
(S Type only)



Specifications

Digit Size	0.17 x 0.10 " [4.3 x 2.6 mm] (white on black)
Power Source	115 VAC 50 / 60 Hz Convertible 24 VDC
Allowable Voltage Fluctuation	±10%
Power Consumption	AC : 3.2 VA / DC : 1.7 W
Continuous Energizing	AC : less than 5 minutes / DC : Permissible
Count Method	One Pulse - One Count (Energizing - ½ count, De-energized - ½ count)
Count Speed	10 Hz max.
Pulse Width	50 ms min.
Make (Duty)	1 : 1
Count Life	10,000,000 counts minimum
Reset	None
Connection	Lead wire 9.84 " [250 mm]
Ambient Temp. : Operating	23 to 104 °F [-5 to +40 °C] (Should not be frozen)
Ambient Humid. : Operating	85 %RH max. (Non-condensing)
Test Voltage	1,500 VAC for 1 minute
Insulation Resistance	50 MΩ minimum (500 VDC Megger)
Vibration	Destruction : 16.7 Hz : Double Amplitude 0.16 " [4 mm] Malfunction : 10 to 55 Hz : Double Amplitude 0.02 " [0.5 mm]
Shock	Destruction : 30 G / Malfunction : 5 G
Structure	Cover : Plastic (Black) / Base : Plastic
Weight	MCU-6SUL- AC / DC □ V : Approx. 3.00 oz [85 g], MCU-6PUL- AC / DC □ V : Approx. 3.53 oz [100 g], MCU-6SUL-AC / DC □ V-B2 : Approx. 3.70 oz [105 g]
Compliance	CE, RoHS, UL

Dimensions in inch [mm]



Models

MCF - □□UL - □

Digit
4 : 4 digits
6 : 6 digits

Voltage AC115 V : 115 VAC
DC24V : 24 VDC

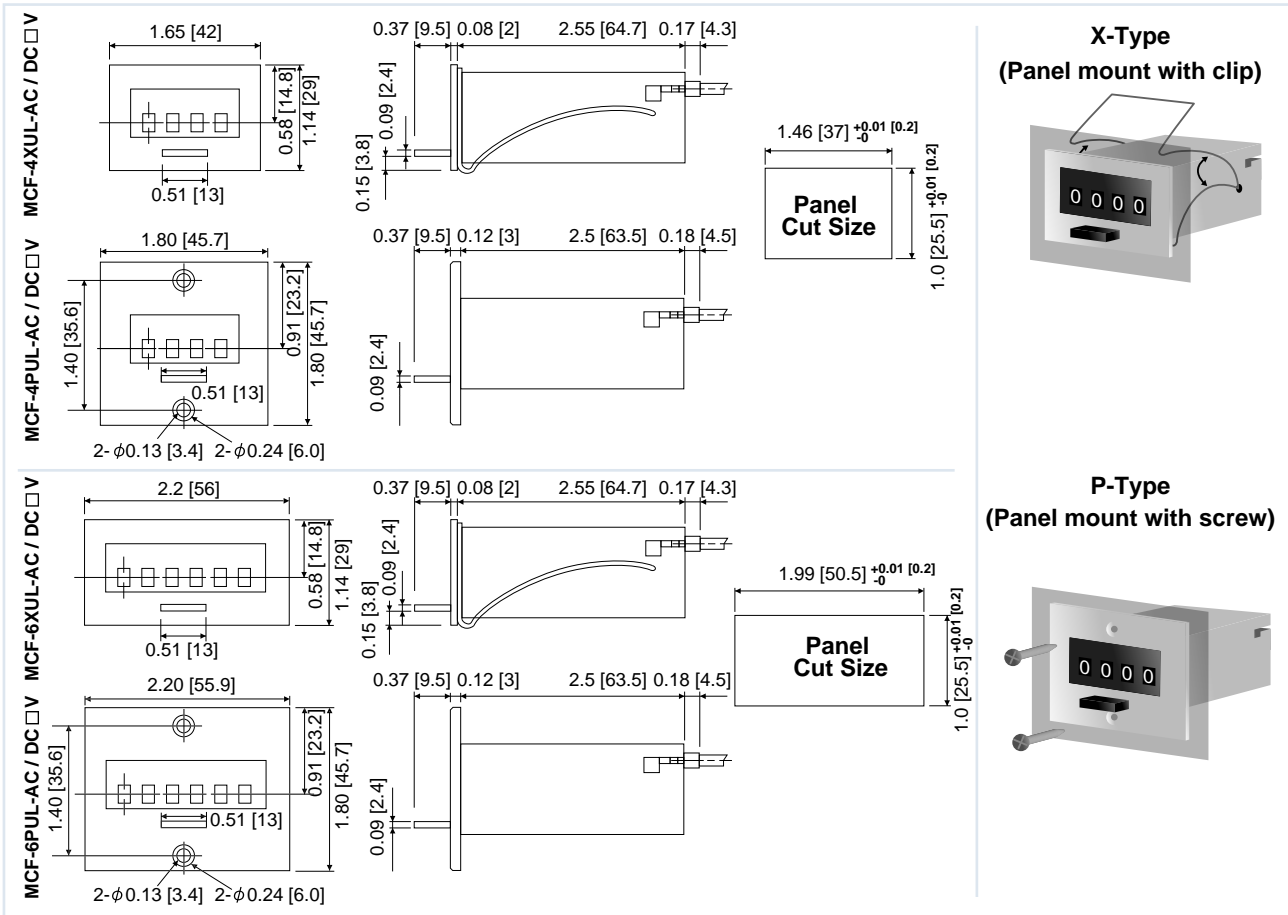
Mounting X : Panel (Clip)
P : Panel (Screw)



Specifications

Digit Size	0.16 x 0.09 " [4.0 x 2.4 mm] (white on black)
Power Source	115 VAC 50 / 60 Hz Convertible 24 VDC
Allowable Voltage Fluctuation	-15 % to +10 %
Power Consumption	AC : 3.56 VA / DC : 2.1 W
Continuous Energizing	Permissible
Count Method	One Pulse - One Count (Energizing - ½ count, De-energized - ½ count)
Count Speed	10 Hz max.
Pulse Width	50 ms min.
Make (Duty)	1 : 1
Count Life	10,000,000 counts minimum
Reset	Manual Reset (Push Button)
Connection	Lead wire 9.84 " [250 mm]
Ambient Temp. : Operating	23 to 104 °F [-5 to +40 °C] (Should not be frozen)
Ambient Humid. : Operating	85 %RH max. (Non-condensing)
Test Voltage	1,500 VAC for 1 minute
Insulation Resistance	50 MΩ minimum (500 VDC Megger)
Vibration	Destruction : 16.7 Hz : Double Amplitude 0.16 " [4 mm] Malfunction : 10 to 55 Hz : Double Amplitude 0.02 " [0.5 mm]
Shock	Destruction : 30 G / Malfunction : 5 G
Structure	Cover : Plastic (Gray)
Weight	MCF-4X / P UL-AC / DC □ V : Approx. 3.53 oz [100 g], MCF-6X / P UL-AC / DC □ V : Approx. 4.23 oz [120 g]
Compliance	CE, RoHS, UL

Dimensions in inch [mm]



Models

MCR - 6 UL -

Digit
6 : 6 digits

Voltage AC115V : 115 VAC
DC24V : 24 VDC

Mounting PNW : Panel (Screw)
CN : Base (Screw)

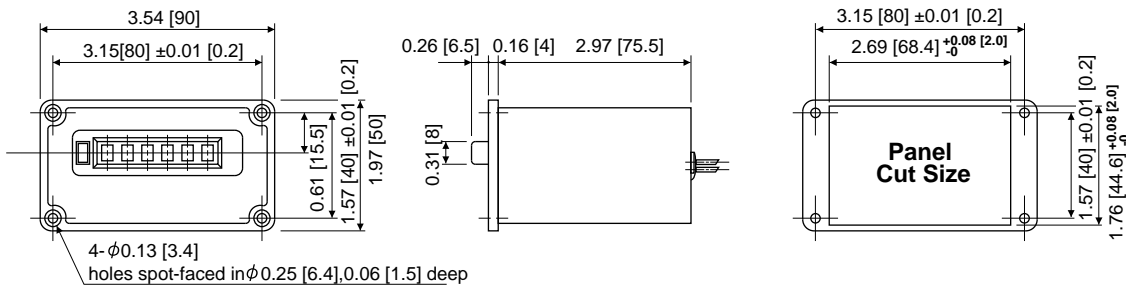


Specifications

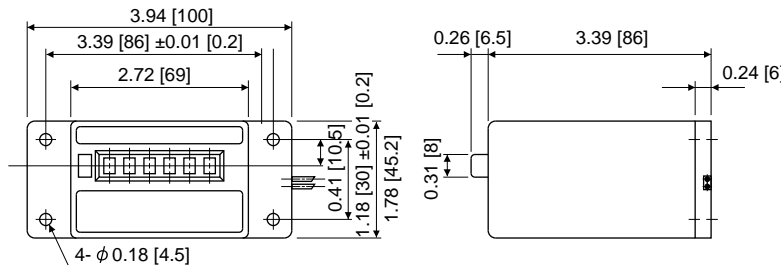
Digit Size	6 digits : 0.21 x 0.11 " [5.4 x 2.8 mm] (white on black)
Power Source	115 VAC 50 / 60 Hz Convertible 24 VDC
Allowable Voltage Fluctuation	±10 %
Power Consumption	AC : 3.5 VA / DC : 3.3 W
Continuous Energizing	Permissible
Count Method	One Pulse - One Count (Energizing - ½ count, De-energized - ½ count)
Count Speed	15 Hz max.
Pulse Width	33 ms min.
Make (Duty)	1 : 1
Count Life	10,000,000 counts minimum
Reset	Manual Reset (Push Button)
Connection	PN Type: Soldering Terminal (Lead wires with terminal (10.2" [260mm]) are included) CN Type: Lead wire (AWG22)
Ambient Temp. : Operating	23 to 104 °F [-5 to +40 °C] (Should not be frozen)
Ambient Humid. : Operating	85 %RH max. (Non-condensing)
Test Voltage	1,500 VAC for 1 minute
Insulation Resistance	50 MΩ minimum (500 VDC Megger)
Vibration	Destruction : 16.7 Hz : Double Amplitude 0.16 " [4 mm] Malfunction : 10 to 55 Hz : Double Amplitude 0.02 " [0.5 mm]
Shock	Destruction : 30 G / Malfunction : 5 G
Structure	Cover : Plastic (Black)
Weight	MCR- 6PNWUL-AC / DC <input type="checkbox"/> V : Approx. 9.35 oz [265 g], MCR-6CNUL-AC / DC <input type="checkbox"/> V : Approx. 9.88 oz [280 g]
Compliance	CE, RoHS, UL

Dimensions in inch [mm]

MCR- 6PNWUL-AC / DC V



MCR- 6CNUL-AC / DC V



Models

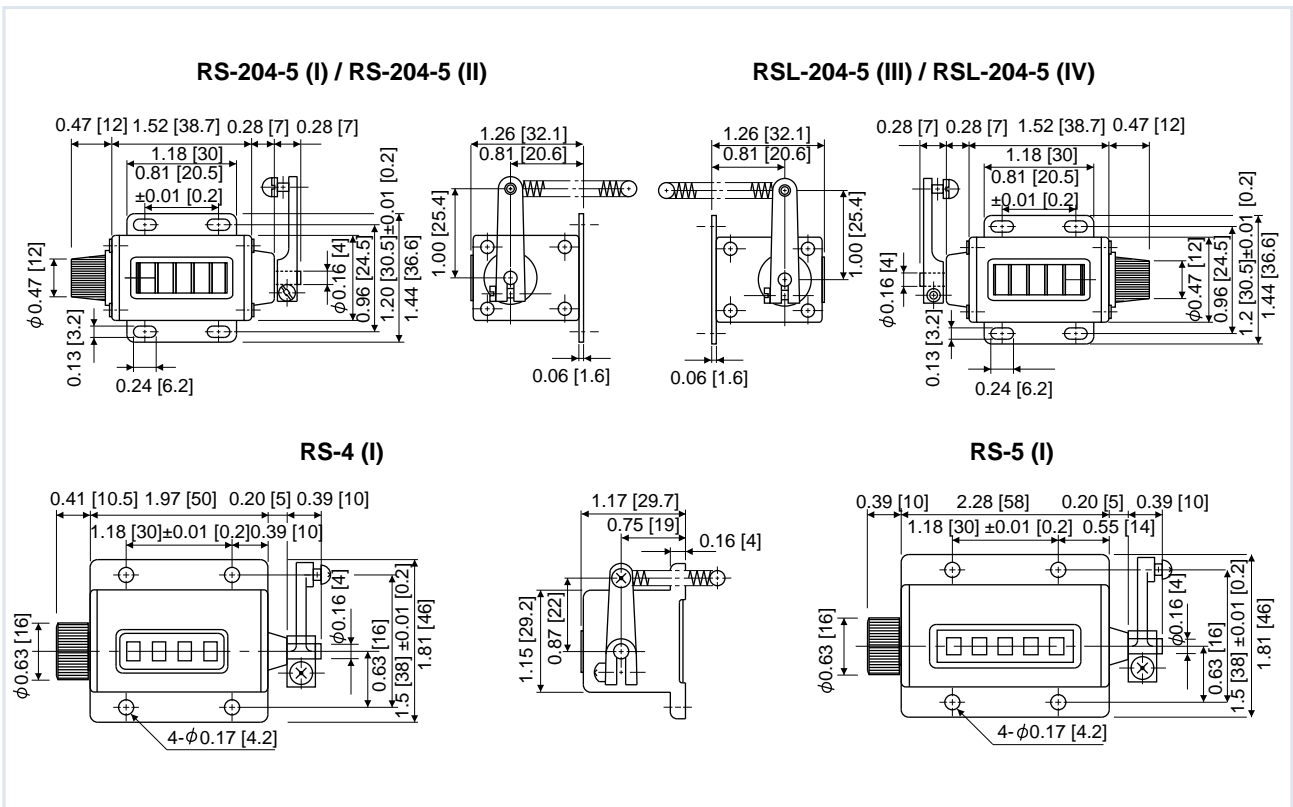
	Type (I)	Type (II)	Type (III)	Type (IV)
Model	RS-204-5 (I)	RS-204-5 (II)	RSL-204-5 (III)	RSL-204-5 (IV)
	RS-4 (I)			
	RS-5 (I)	RS-5 (II)		
Rotating Shaft				
	Right	Right	Left	Left
	Top-Coming	Top-Coming	Top-Going	Top-Coming



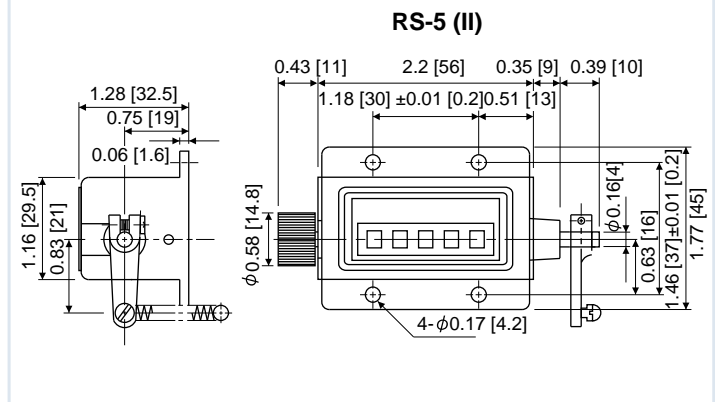
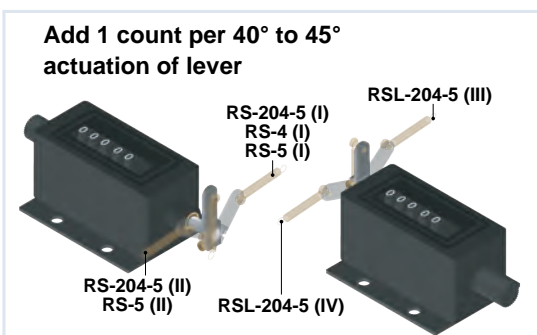
Specifications

Count Method	Ratchet : Add 1 count per 40° to 45° actuation of lever
No. of Digits	5 digits / RS-4 : 4 digits
Digit Size	RS-204 : 0.19 x 0.09 " [4.8 x 2.4 mm] / RS-4, RS-5 : 0.17 x 0.11 " [4.4 x 2.8 mm]
Maximum Count Speed	RS-204, RSL-204 Series : 1,000 counts/minute / RS-4 (I), RS-5 (I) : 300 counts/minute / RS-5 (II) : 600 counts/minute
Count Range	0 to 99999 / RS-4 : 0 to 9999
Reset	Knob
Weight	Approx. 1.76 to 3.70 oz [50 to 105 g]
Ambient Temp. : Operating	23 to 104 °F [-5 to +40 °C] (Should not be frozen)
Ambient Humid. : Operating	85 %RH max. (Non-condensing)
Compliance	RoHS (RS(L)-204)

Dimensions in inch [mm]



Mechanical Counter Operation



■ Models (RS / LB / RL / SR Series)

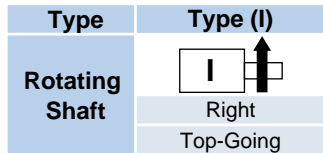
Count Type	Model	Digits	Digit Size	Weight (Approx.)	Maximum Count Speed
Ratchet	RS-6 (I)	6	0.20 x 0.15 " [5.0 x 3.8mm]	4.06 oz [115 g]	600 counts/minute
	RS-303-5 (I)	5	0.24 x 0.18 " [6.0 x 4.5mm]	4.23 oz [120 g]	300 counts/minute
Revolution	LB-4 (I)	4	0.20 x 0.15 " [5.0 x 3.8mm]	3.17 oz [90 g]	4,000 rotations/minute
	LB-5 (I)	5	0.20 x 0.15 " [5.0 x 3.8mm]	3.53 oz [100 g]	4,000 rotations/minute
Direct Drive	RL-4 (I)	4	0.20 x 0.15 " [5.0 x 3.8mm]	3.17 oz [90 g]	400 rotations/minute
	RL-5 (I)	5	0.20 x 0.15 " [5.0 x 3.8mm]	3.53 oz [100 g]	400 rotations/minute
	SR-4 (I)	4	0.17 x 0.11 " [4.3 x 2.8mm]	2.12 oz [60 g]	200 rotations/minute



RS-303-5 (I)



LB-4 (I)



- **Ratchet**
Add 1 count per 40° to 45° actuation of lever
- **Revolution**
Add 1 count per complete revolution of the shaft
- **Direct Drive**
Add 10 counts per complete revolution (1 count per 1/10 revolutions) of the shaft

■ Specifications

Count Range	5-digit models : 0 to 99999 / 4-digit models : 0 to 9999 / 6-digit model : 0 to 999999
Reset	Knob / SR-4 : Push Button
Ambient Temp. : Operating	23 to 104 °F [-5 to +40 °C] (Should not be frozen)
Ambient Humid. : Operating	85 %RH max. (Non-condensing)

■ Models (SP1-101 / SP1-102 Series)

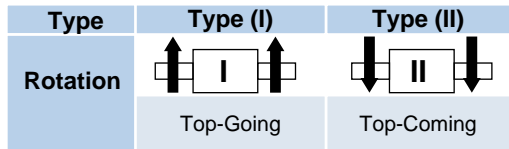
Count Type	Type (I)	Type (II)	Digits
Revolution	SP1-101-4 (I)	SP1-101-4 (II)	4
	SP1-101-5 (I)	SP1-101-5 (II)	5
Direct Drive	SP1-102-4 (I)	SP1-102-4 (II)	4
	SP1-102-5 (I)	SP1-102-5 (II)	5



SP1-101-4 (I)



SP1-101-5 (I)

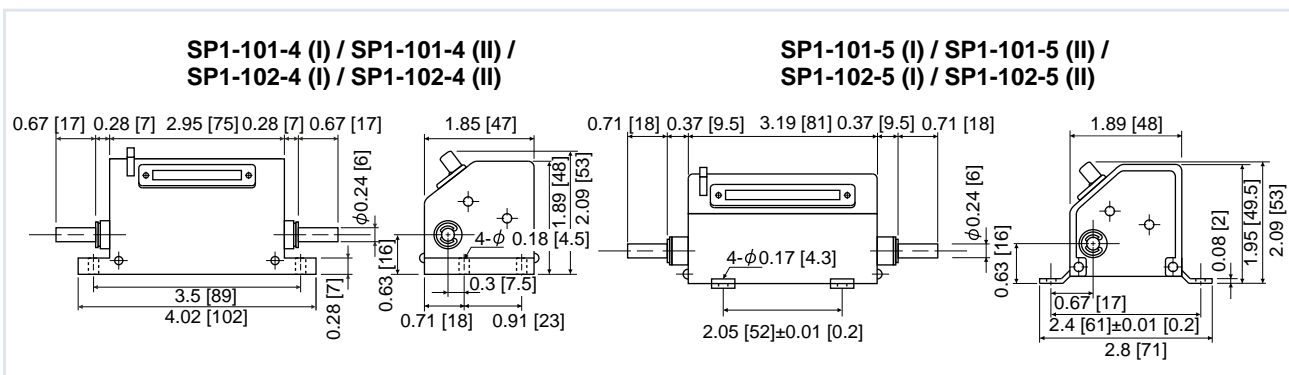


- **Revolution**
Add 1 count per complete revolution of the shaft
- **Direct Drive**
Add 10 counts per complete revolution (1 count per 1/10 revolutions) of the shaft

■ Specifications

Maximum Count Speed	SP1-101 : 3000 rotations/minute SP1-102 : 300 rotations/minute
Count Range	SP1-101-4, SP1-102-4 : 0 to 9999 / SP1-101-5, SP1-102-5 : 0 to 99999
Digit Size	0.24 x 0.16 " [6.0 x 4.0 mm]
Weight	Approx. 7.58 - 9.35 oz [215 - 265 g]
Reset	Push Button
Ambient Temp. : Operating	23 to 104 °F [-5 to +40 °C] (Should not be frozen)
Ambient Humid. : Operating	85 %RH max. (Non-condensing)

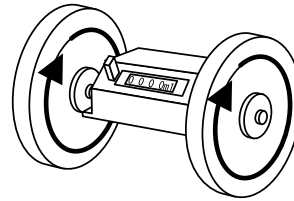
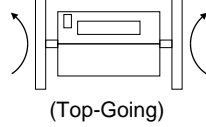
■ Dimensions in inch [mm]



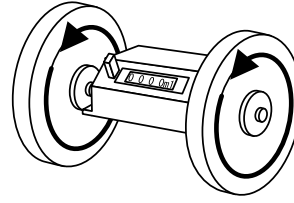
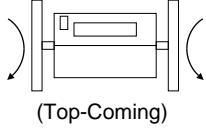
Models

RY1 Series

RY1-3:10-5 (I)
RY1-3:100-5 (I)
SP1-102-5 (I)-12FT

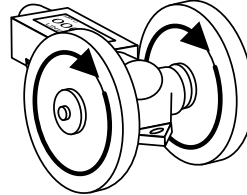
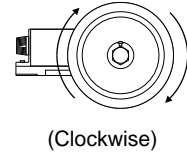


RY1-3:10-5 (II)
RY1-3:100-5 (II)
SP1-102-5 (II)-12FT



MWC Series

MWC-3:1-5 (I)
MWC-3:10-5 (I)



Specifications

Model	No. of Digits	Rotations for Adding	Resolution	Maximum Count Speed	Operation Torque	Weight (Approx.)
RY1-3:10-5 (I)-YDP	5	Top-Going	0.1 yard	300 yard/min	2.08 ozf-in [150 gcm]	20 oz [570 g]
RY1-3:10-5 (II)-YDP	5	Top-Coming	0.1 yard	300 yard/min	2.08 ozf-in [150 gcm]	20 oz [570 g]
RY1-3:100-5 (I)-YDP	5	Top-Going	0.01 yard	30 yard/min	3.47 ozf-in [250 gcm]	20 oz [570 g]
RY1-3:100-5 (II)-YDP	5	Top-Coming	0.01 yard	30 yard/min	3.47 ozf-in [250 gcm]	20 oz [570 g]
SP1-102-5 (I)-12FT-YP	5	Top-Going	1 inch	300 feet/min	2.78 ozf-in [200 gcm]	20 oz [570 g]
SP1-102-5 (II)-12FT-YP	5	Top-Coming	1 inch	300 feet/min	2.78 ozf-in [200 gcm]	20 oz [570 g]
MWC-3:1-5 (I)-YP	5	Clockwise	1 yard	300 yard/min	2.08 ozf-in [150 gcm]	19 oz [545 g]
MWC-3:10-5 (I)-YP	5	Clockwise	0.1 yard	30 yard/min	2.08 ozf-in [150 gcm]	19 oz [545 g]

2 wheels are furnished as standard accessories. Please pay attention to copy products in the market.

Color of Figure

RY1-3:10-5 (I)-YDP



RY1-3:10-5 (II)-YDP

Decimal place : yellow on black

Integer : white on black

SP1-102-5-12FT-YP

Decimal place : black on white

Integer : white on black



RY1-3:100-5 (I)-YDP

RY1-3:100-5 (II)-YDP

Decimal place : yellow on black

Integer : white on black



MWC-3:1-5 (I)-YP



MWC-3:10-5 (I)-YP



All figures are white on black.

Ambient Temp. : Operating 23 to 104 °F [-5 to +40 °C] (Should not be frozen) Ambient Humid. : Operating 85 %RH max. (Non-condensing)

Dimensions in inch [mm]

RY1-3 : 10-5 / RY1-3 : 100-5 / SP1-102-5-12FT

MWC-3 : 1-5 / MWC-3 : 10-5

Wheel

Unit	Yard
Model	MRM097
Type of Surface	Plain
Material of Surface	Thermoplastic Elastomer

Yard Wheel

ATTENTION !!!
Measuring wheels are subject to slip due to wear after prolonged usage. They may cause measurement errors if not replaced on time. Please periodically check the wheels for signs of deterioration.

Digit Size (2nd to 5th wheels)	Digit Size (1st wheel of MWC-3:10-5)	Digit Size (1st wheel of MWC-3:1-5)
0.18 [4.5] 0.24 [6]	0.16 [4.1] 0.16 [4]	0.12 [3] 0.16 [4]

Models

Model	Sensor	Resolution	Maximum Count Speed	Weight (Approx.)	Rotation Torque	Proper Counter
CT1-3:1-YP	Microswitch	1 yard	240 yard/min	25 oz [700 g]	2.12 ozf-in [153 gcm]	Electronic Counter
CT1-3:10-YP		0.1 yard	24 yard/min	25 oz [710 g]		Electromagnetic Counter
CT1-3:1A-YP	Photoelectronic Sensor, 1 Non-contact Output (Voltage Output)	1 yard	700 yard/min	26 oz [730 g]		Electronic Counter
CT1-3:10A-YP		0.1 yard	500 yard/min	26 oz [730 g]		
CT1-3:100A-YP		0.01 yard	250 yard/min	26 oz [740 g]		
CT1-3:1000A-YP		0.001 yard	100 yard/min	28 oz [790 g]		
CT1-3:1R-YP	Photoelectronic Sensor, 2 Non-contact Outputs (Voltage Output / 90° Quadrature)	1 yard	700 yard/min	26 oz [740 g]		Bidirectional Electronic Counter
CT1-3:10R-YP		0.1 yard	500 yard/min	26 oz [740 g]		
CT1-3:100R-YP		0.01 yard	250 yard/min	26 oz [750 g]		
CT1-3:1000R-YP		0.001 yard	100 yard/min	28 oz [780 g]		

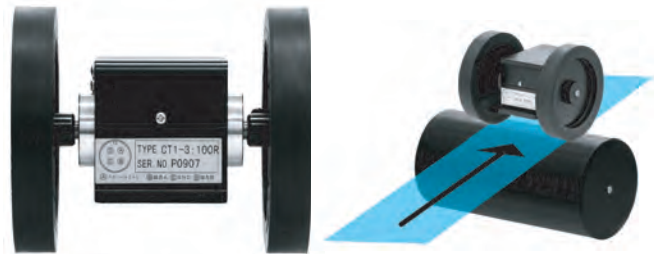
* Factory-Installed Option : Open collector output is available for models with 1 or 2 non-contact outputs. "C" should be added to the model number. (Ex.) CT1-3:10AC-YP

Specifications

Model	Output	Power Source	Current Consumption	Output Impedance	Maximum Load Current
CT1-3:1-YP / CT1-3:10-YP	1 Output	Microswitch Contact Output, Switching Capacity : 250 VAC 5 A , 125 VDC			0.5 A (Resistance Load)
CT1-3:1A-YP / CT1-3:10A-YP / CT1-3:100A-YP	1 Output	5 to 24 VDC ±10 %	35 mA	3.9 kΩ	100 mA
CT1-3:1000A-YP	1 Output	5 to 12 VDC ±10 %	20 mA	2 kΩ	20 mA
CT1-3:1R-YP / CT1-3:10R-YP / CT1-3:100R-YP	2 Outputs (90° Quadrature)	5 to 24 VDC ±10 %	70 mA	3.9 kΩ	100 mA
CT1-3:1000R-YP	2 Outputs (90° Quadrature)	5 to 12 VDC ±10 %	40 mA	2 kΩ	20 mA

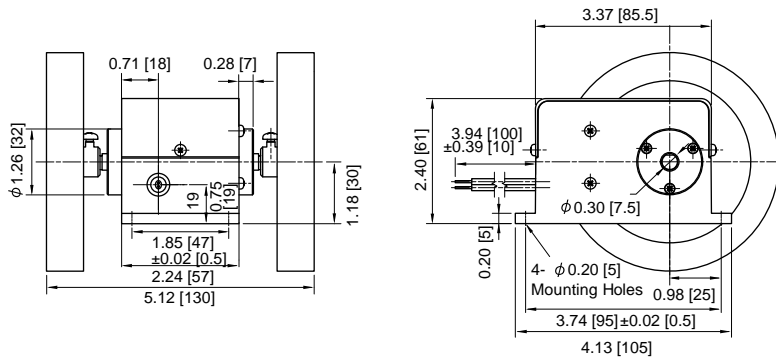
* 2 wheels are furnished as standard accessories.
When you order, please specify type of wheels : meter or yard.
Please pay attention to copy products in the market.

Ambient Temp. : Operating	14 to 122 °F [-10 to +50 °C]
Ambient Humid. : Operating	35 to 85 %RH
Remarks	Should not be frozen, Non-condensing
Compliance	CE, RoHS



Dimensions in inch [mm]

CT1-3:1-YP / CT1-3:10-YP



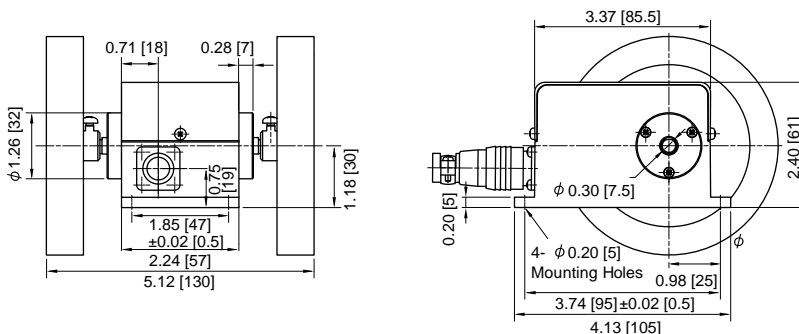
Wheel

Unit	Model	Type of Surface	Material of Surface
Yard	MRM097	Plain	Thermoplastic Elastomer

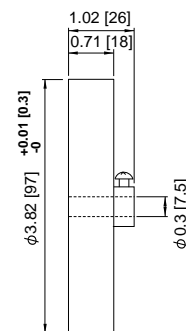
ATTENTION !!!

Measuring wheels are subject to slip due to wear after prolonged usage. They may cause measurement errors if not replaced on time. Please periodically check the wheels for signs of deterioration.

CT1-3:1A-YP / CT1-3:10A-YP / CT1-3:100A-YP / CT1-3:1000A-YP
CT1-3:1R-YP / CT1-3:10R-YP / CT1-3:100R-YP / CT1-3:1000R-YP



Yard Wheel



Models

Model	Sensor	Resolution	Maximum Count Speed	Weight (Approx.)	Rotation Torque	Proper Counter
CR-3:1AC-YP	Photoelectronic Sensor, 1 Non-contact Output (Open Collector Output)	1 yard	700 yard/min	21 oz [605 g]	20 mN.m	Electronic Counter
CR-3:10AC-YP		0.1 yard	700 yard/min			
CR-3:100AC-YP		0.01 yard	250 yard/min			
CR-3:1RC-YP	Photoelectronic Sensor, 2 Non-contact Outputs (Open Collector Output / 90° Quadrature)	1 yard	700 yard/min	22 oz [610 g]		Bidirectional Electronic Counter
CR-3:10RC-YP		0.1 yard	700 yard/min			
CR-3:100RC-YP		0.01 yard	250 yard/min			

Specifications

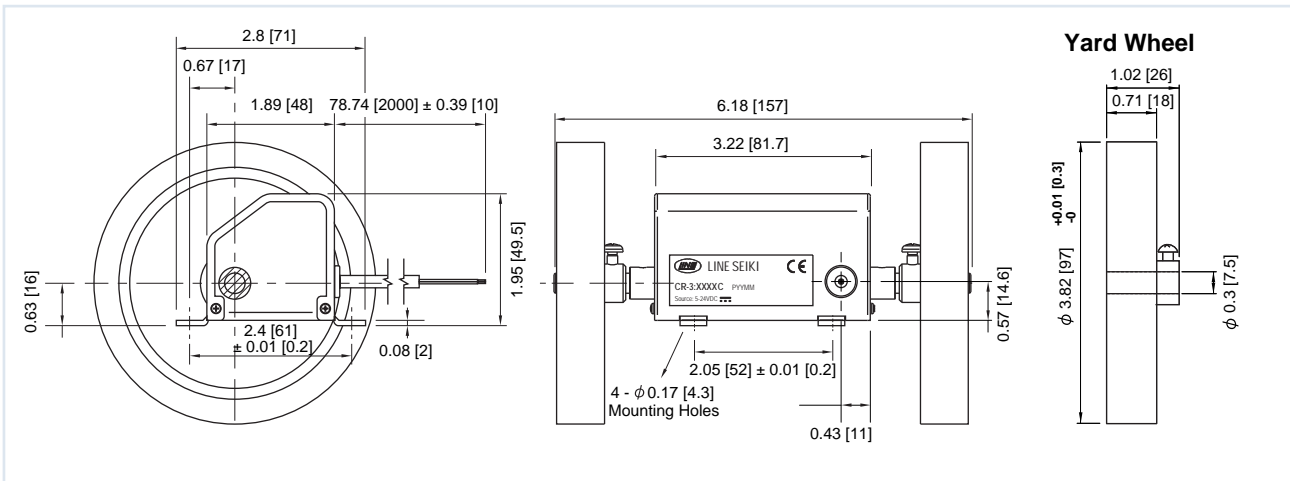
Model	Output	Power Source	Current Consumption	Maximum Load Current	Cable Type
CR-3:1AC-YP CR-3:10AC-YP CR-3:100AC-YP	1 Output	5 to 24 VDC ±10 %	35 mA	100 mA	2-meters, Shielded Cable
CR-3:1RC-YP CR-3:10RC-YP CR-3:100RC-YP	2 Outputs (90° Quadrature)		44 mA		

* 2 wheels are furnished as standard accessories.
When you order, please specify type of wheels : meter or yard.
Please pay attention to copy products in the market.

Ambient Temp. : Operating	23 to 104 °F [-5 to +40 °C]
Ambient Humid. : Operating	35 to 85 %RH
Remarks	Should not be frozen, Non-condensing
Compliance	CE, RoHS

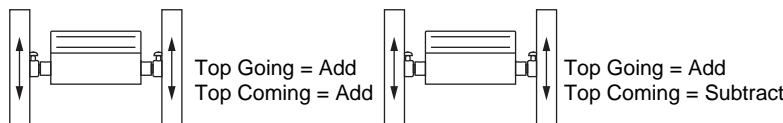


Dimensions in inch [mm]



Count Method

- | | |
|--------------------------------|--------------------------------|
| CT1-3:1-YP / CT1-3:10-YP | CT1-3:1R-YP / CT1-3:10R-YP |
| CT1-3:1A-YP / CT1-3:10A-YP | CT1-3:100R-YP / CT1-3:1000R-YP |
| CT1-3:100A-YP / CT1-3:1000A-YP | |
| CR-3:1AC-YP / CR-3:10AC-YP | CR-3:1RC-YP / CR-3:10RC-YP |
| CR-3:100AC-YP | CR-3:100RC-YP |



Note : If wiring for output A & B was reversed unintentionally, counting method will also be reversed.

Wheel

Unit	Yard
Model	MRM097
Type of Surface	Plain
Material of Surface	Thermoplastic Elastomer

ATTENTION !!!

Measuring wheels are subject to slip due to wear after prolonged usage. They may cause measurement errors if not replaced on time. Please periodically check the wheels for signs of deterioration.

Models

Model	Type	Measuring Method	Scope of Supply	Accessories
TM-5000	Main Unit only	- Non-contact	- TM-5000 (Main Unit) - AAA Alkaline Battery x 4 pcs - Instruction Manual - Accessories	- ZTM051 Reflective Tape x 10 pcs
TM-5010E	Main Unit only	- Non-contact	- TM-5010E (Main Unit) - AAA Alkaline Battery x 4 pcs - Instruction Manual - Accessories	- ZTM051 Reflective Tape x 10 pcs
TM-5000EK	Kit Type	- Non-contact - Contact	- TM-5000 (Main Unit) - Contact Adapter - AAA Alkaline Battery x 4 pcs - Instruction Manual - Accessories	- ZTM051 Reflective Tape x 10 pcs - ZTM004-SET Rubber Tip x 3 pcs - ZM4052 Surface Speed Wheel 0.1 m x 1 pc - ZM4053 Surface Speed Wheel 0.1 y x 1 pc - C-4000 Carrying Case
TM-5010EK	Kit Type	- Non-contact - Contact	- TM-5010E (Main Unit) - Contact Adapter - AAA Alkaline Battery x 4 pcs - Instruction Manual - Accessories	- ZTM051 Reflective Tape x 10 pcs - ZTM004-SET Rubber Tip x 3 pcs - ZM4052 Surface Speed Wheel 0.1 m x 1 pc - C-4000 Carrying Case
TM-5013	-	-	- Contact Adapter - Accessories	- ZTM004-SET Rubber Tip x 3 pcs - ZM4052 Surface Speed Wheel 0.1 m x 1 pc
TM-5014	-	-	- Contact Adapter - Accessories	- ZTM004-SET Rubber Tip x 3 pcs - ZM4053 Surface Speed Wheel 0.1 y x 1 pc



Specifications (Main Unit)

Model	TM-5000	TM-5010E
Measuring Range	6.0 to 99999.9 r/min	6.0 to 99999.9 r/min 0.10 to 1666.66 r/s 0.60 to 9999.99 m/min 1.00 to 16666.6 cm/s 0.65 to 10936.1 y/min 0.39 to 6561.65 inch/s 1.9 to 32808.3 f/min
Resolution	0.1 r/min	0.1 r/min f/min, others 0.01
Accuracy	±(0.01 % + 1 digit)	±(0.01 % + 1 digit) (r/min, m/min) ±(0.05 % + 1 digit) (incl. conversion) (accuracy for other units)
Sampling Time	1.0 to 10.0 seconds	
Display	Measurement Display : 6 digits, 7-segment LCD	
	Low-battery mark : Reflective light mark :	
	Unit : r/min	Unit : r/min, r/s, m/min cm/s, y/min, inch/s, f/min Memory : MEM1-8, MAX, MIN

Model	TM-5000	TM-5010E
Auto Power-off	After 3 minutes from last measurement or key operation	
Data Hold Time	Measurement Data : until the next data is defined - Memory Data : same as battery life	
Measuring Method	Non-contact Measurement : Main Unit / Extended Sensor + Reflective Tape Contact Measurement : Rubber Tip / Surface Speed Wheel + Contact Adapter	
Measuring Distance and Angle	1.97 to 11.81 " [50 to 300 mm], ±30°	
Power Supply	AAA Alkaline Battery, 4 pcs.	
Battery Life under Continuous Measurement	Approx. 20 hours	
Ambient Temp. : Operating	41 to 104 °F [5 to +40 °C] (Should not be frozen)	
Ambient Humid. : Operating	35 to 85 %RH (Non-condensing)	
Ambient Temp. : Storage	14 to 140 °F [-10 to +60 °C] (Should not be frozen)	
Dimensions / Weight (Battery Included)	4.80 " [122 mm] (H) x 2.28 " [58 mm] (W) x 1.10 " [28 mm] (D) Approx. 4.6 oz [130 g]	
Compliance	CE, RoHS	

Functions

The extended sensor can be used by turning the slide switch inside the battery box located at the back of main unit.

<p>① Emitter / Receiver Part</p> <p>② Displays and Indicators</p> <p>②a Photoelectric Detection Indicator</p> <p>②b Unit Display</p> <p>②c Memory Number Display</p>	<p>②d Measurement Data Display</p> <p>③ Measurement Button</p> <p>④ Extended Sensor</p> <p>④a Connector for Extended Sensor</p>	<p>⑤ Keys / Switches</p> <p>⑤a Measurement Mode Key</p> <p>⑤b 8-Point Memory Data Input Key</p> <p>⑤c 8-Point Memory Data Read/Clear Key</p> <p>⑤d Rotational Speed Key (Unit Selecting Key)</p>
		<p>⑤e Linear / Surface Speed Key (Unit Selecting Key)</p> <p>⑥ Contact Adapter</p> <p>⑥a Rubber Tip</p> <p>⑥b Surface Speed Wheel</p>

Option

ZTM051	Reflective Tape, 10 pcs.
ZTM004-SET	Rubber Tip, 3 pcs.
ZM4052	Surface Speed Wheel (1/10 m), 1 pc.
ZM4053	Surface Speed Wheel (1/10 y), 1 pc.
TM-4015	Extended sensor (0.83 " [21 mm] diameter, cable length 39.37 " [1 m] max)

Models

Model	Type	Measuring Method	Scope of Supply	Accessories
TM-7000K2	Kit Type	- Non-contact - Contact	- TM-7000 (Main Unit) - Contact Adapter - AAA Alkaline Battery x 4 pcs - Instruction Manual - Accessories	- ZTM051 Reflective Tape x 10 pcs - ZTM004-SET Rubber Tip x 3 pcs - ZM4052 Surface Speed Wheel 0.1 m x 1 pc - ZM4053 Surface Speed Wheel 0.1 y x 1 pc - C-7000 Carrying Case
TM-7010EK	Kit Type	- Non-contact - Contact	- TM-7010E (Main Unit) - Contact Adapter - AAA Alkaline Battery x 4 pcs - Instruction Manual - Accessories	- ZTM051 Reflective Tape x 10 pcs - ZTM004-SET Rubber Tip x 3 pcs - ZM4052 Surface Speed Wheel 0.1 m x 1 pc - C-7000 Carrying Case
TM-7020K2	Kit Type	- Contact	- TM-7020 (Main Unit) - AAA Alkaline Battery x 4 pcs - Instruction Manual - Accessories	- ZTM004-SET Rubber Tip x 3 pcs - ZM4052 Surface Speed Wheel 0.1 m x 1 pc - ZM4053 Surface Speed Wheel 0.1 y x 1 pc - C-7020 Carrying Case



Specifications (Main Unit)

Model	TM-7000	TM-7010E	TM-7020	Model	TM-7000	TM-7010E	TM-7020
Measuring Range (Non-contact)	6.0 to 99999.9 r/min	6.0 to 99999.9 r/min	Prescale	Auto Power-off	After 3 minutes from last measurement or key operation		
Measuring Range (Contact)	6.0 to 15000.0 r/min	0.10 to 1666.66 r/sec	1.0 to 6000.0 r/min	Data Hold	Measurement Data : until the next data is defined		
Resolution	0.1 r/min	0.1 r/min f/min, others 0.01	0.1 r/min	Time	-	Memory Data : until the battery runs down	-
Accuracy	±(0.01 % + 1 digit)	±(0.01 % + 1 digit) (r/min, m/min) ±(0.05 % + 1 digit) (incl. conversion accuracy for other units)	±(0.01 % + 1 digit)	Measuring Method	Non-contact Measurement : Main Unit with Reflective Tape Contact Measurement : Rubber Tip / Surface Speed Wheel with Contact Adapter		
Sampling Time	1.0 to 10.0 seconds (1.0 to 2.0 seconds, with Contact Adapter)		1.0 to 2.0 seconds	Optical System (Except TM-7020)	Light Source : Laser, Class 2 compliant to IEC 60825-1 Measuring Range : 1.97 to 39.37" [50 to 1000 mm], ±40° Wavelength : 650 nm, CW Power Output : 1 mW max.		
Display	Measurement Display : 6 digits, 7-segment LCD Low-battery mark : On Target mark :	Laser On mark : Contact Measurement mark : (Except TM-7020)	Unit : /min	Power Supply	AAA Alkaline Battery, 4 pcs.		
Prescale Range	-	0.001 to 999.999	-	Battery Life under Continuous Measurement	Approx. 30 hours	Approx. 15 hours	Approx. 30 hours
	Unit : /min, /sec, m/min cm/sec, y/min, in/sec, f/min Memory : MEM1-25, MAX, MIN Prescale Mode Indicator : PS			Backlight	-	Blue (Auto-Backlight Off after 10 seconds of inactivity)	-
				Ambient Temp. / Humid. : Operating	41 to 104 °F [5 to 40 °C] (Should not be frozen) 35 to 85 %RH (Non-condensing)		
				Ambient Temp. : Storage	14 to 140 °F [-10 to +60 °C] (Should not be frozen)		
				Dimension / Weight (Approx. / Battery Included)	TM-7000 / TM-7010E : 4.92" [125 mm] (H) x 2.28" [58 mm] (W) x 1.08" [27.4 mm] (D) / 4.9 oz [140 g] TM-7020 : 5.67" [144 mm] (H) x 2.28" [58 mm] (W) x 1.42" [36 mm] (D) / 6.0 oz [170 g]		
				Compliance	CE, RoHS		

Functions

Option

- ZTM051**
Reflective Tape, 10 pcs.
- ZTM004-SET**
Rubber Tip, 3 pcs.
- ZM4052**
Surface Speed Wheel (1/10 m), 1 pc.
- ZM4053**
Surface Speed Wheel (1/10 y), 1 pc.

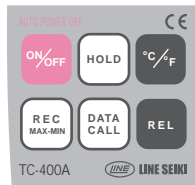
Contact Adapter with Rotating Shaft

① Emitter / Receiver Part	②d Low-battery Indicator	③ Measurement Button
② Displays and Indicators	②c Contact Measurement Indicator	④ Keys / Switches
②a Measurement Data Display	②f Memory Number & MAX-MIN Display	④a Enter Key
②b Prescale Setting Indicator	②g Laser On Indicator	④b Memory Call Key (Unit Selecting Key)
②c Unit Display	②h On Target Indicator	④c Clear Key
		④d Measurement Mode Key
		④e Rotational Speed Key (Unit Selecting Key)
		④f Measurement Mode Key

⑤ Contact Adapter	⑤a Rubber Tip	⑤b Surface Speed Wheel
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Model : TC-400A

1. °C / °F
2. Auto Power-off
3. Data Hold
4. Data Record (MAX / MIN / Memory)
5. Relative Measurement



Specifications

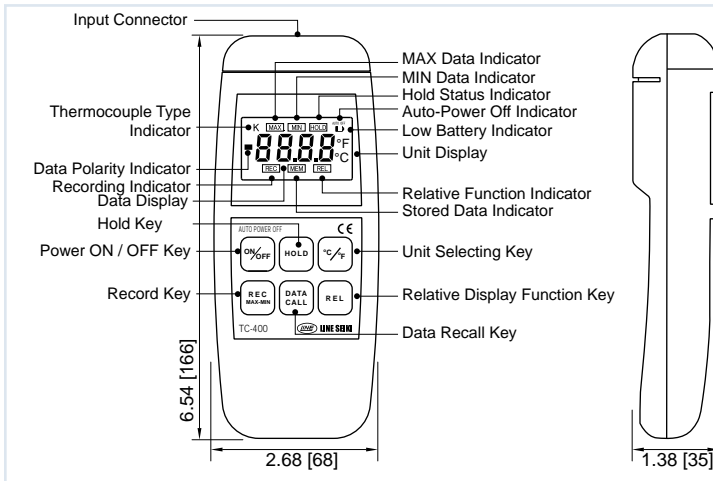
Sensor Type	Type K
Measuring Range	-256 °F [-160 °C] to +2,502 °F [+1,372 °C]
Resolution	≤+391.8 °F [+199.9 °C] : 0.2 °F [0.1 °C], ≥+392 °F [+200 °C] : 2 °F [1 °C]
Accuracy at Ambient Temp.	32 °F [0 °C] to 391.8 °F [199.9 °C] : ±(0.1 % of reading +1.3 °F [0.7 °C])
77 °F [25 °C] ± 9 °F [5 °C]	≤31.8 °F [-0.1 °C], ≥+392 °F [+200 °C] : ±(0.2 % of reading +1.8 °F [1 °C])
Temperature Coefficient	±(0.015 % of reading + 0.108 °F) / °F ±(0.015 % of reading + 0.06 °C) / °C
Sampling Time	Approx. 0.5 second
Operation Function	°C / °F (Selectable), Auto Power-Off, Data Hold, Data Record (MAX / MIN / Memory), Relative Measurement
Ambient Temp. : Operating	32 to 122 °F [0 to 50 °C] (Should not be frozen)
Ambient Humid. : Operating	90 %RH max. at 32 to 95 °F [0 to 35 °C] (Non-condensing)
Power Supply	Battery 006P (9 V)
Battery Life	Approx. 500 hours
Weight (incl. Battery)	Approx. 7.1 oz [200 g]
Sensor Connector	Thermocouple Connector
Accessories	Instruction Manual, Battery 006P, 1 pc.
Compliance	CE, RoHS

Thermocouple Probes

Model	Max. Temp.	Application / Type
KF-01A	932 °F [500 °C]	Surfaces
KF-02A	932 °F [500 °C]	Surfaces / Hard-to-reach Surfaces
KS-21A	1,472 °F [800 °C]	Interior of Semi-solids with High Temperature Sheath Type : SUS316

Cable : L = 39.37 " [1,000 mm]

Dimensions in inch [mm]



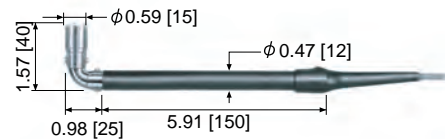
Digit Size



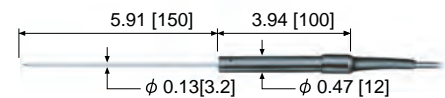
KF-01A



KF-02A



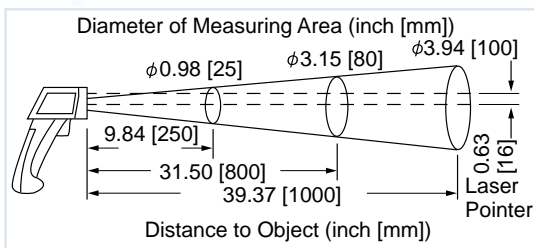
KS-21A



Model : TC-6000



- Simple & Easy Operation Infrared Thermometer
- Handy gun type with laser pointing function
- EL back light function
- In Conformance to CE(EMC)



Specifications

Measuring Range	-22 °F [-30 °C] to +1,022 °F [+550 °C]
Resolution	0.9 °F [0.5 °C] / 1.8 °F [1 °C] Automatic Change
Accuracy	±2 % of reading or ± 5.4 °F [3 °C] whichever is higher
Sampling Time	4 times/second
Emissivity	0.95 fixed
Measuring Area Size	φ 3.94 " [100 mm] at 39.37 " [1000 mm] distance
Ambient Temp. / Humid. : Operating	32 to 122 °F [0 to 50 °C] / 70 %RH max. *
Ambient Temp. / Humid. : Storage	-4 to +140 °F [-20 to 60 °C] / 80 %RH max. *
Display	3.5-Digit LCD
Power Supply	9 V 006P
Dimensions / Weight (incl. Battery)	5.83 " [148 mm] (H) x 4.13 " [105 mm] (W) x 1.65 " [42 mm] (D) / Approx. 5.64 oz [160 g]
Accessories	One Battery 006P, Instruction Manual, Plastic Cover
Compliance	CE, RoHS

* Should not be frozen, Non-condensing



Line Seiki Co., Ltd.

Line Seiki Co., Ltd. - Head Office
37-7 Chuo-cho, 2-Chome
Meguro-ku, Tokyo JAPAN 152-0001
Tel: +81-3-37165151
Fax: +81-3-37104552
E-mail: webtrade@line.co.jp