

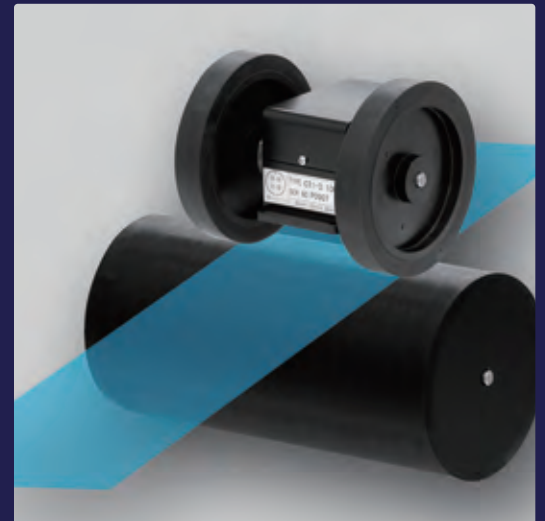


LINE SEIKI

Product Catalog



Safety Products
Electronic Counters
Electromagnetic Counters
Mechanical Counters
Length Measuring Counters
Length Sensors
Tachometers
Thermometers



■ Company Overview

GREETINGS

“Create a product for society. Create a product for people.”

This is our basic philosophy that has been passed on through the generations since the founding of Line Seiki in 1949.

It is a person who makes a product, and it is also a person who uses a product.

No matter how the times change, it is always people who create new values, and we believe that we would not be able to create the products required by society without the connections with people.

Our strength lies in the technical capabilities and human networks that have been cultivated over our long history.

By valuing our connections with people and combining the diverse knowledge and experience, we will contribute to building a future with new ideas outside the existing framework.

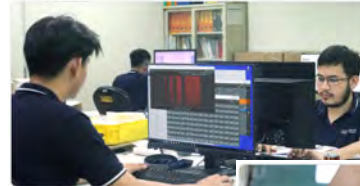


CONCEPT

New Business Challenges

In addition to manufacturing counters over the decades, we also pursue to provide solutions on “visualization” of factories through numerical information.

Without being bound by past practices, we will always endeavor to take on the challenge to enter new markets.



Integrated Production

We offer integrated production from design to development and manufacturing.

We are proud of our reliable production system unique to a specialized counting manufacturer.



Strict Inspection for Quality

Mass production of a product begins when a prototype is received from the development department.

Line Seiki’s products are subjected to repeated testing, and only those which passed the tests are released.

The strict testing procedures of Line Seiki allowed our products to earn the trust of users around the world.



■ 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.
Aug. 2012	Line Seiki established Philippine branch "Line Seiki RHQ" in Manila, Philippines.

SS2 Series For both stand-alone use & combined use with relay.
Safety Switch (Stainless Steel Type available)

Features

- PLd per ISO 13849-1 in stand-alone applications
- Cross monitoring between two channels
- Multiple units can be connected to one safety relay unit
- Robust stainless steel housing available

Dimensions

Model	SS2-P	
Transmitter Unit	3.62 x 0.98 x 0.67 "	[92 x 25 x 17 mm]
Receiver Unit	3.62 x 0.98 x 0.96 "	[92 x 25 x 24.5 mm]
Model	SS2-OX	
Transmitter Unit	3.62 x 1.14 x 0.71 "	[92 x 29 x 18 mm]
Receiver Unit	3.62 x 1.14 x 0.94 "	[92 x 29 x 24 mm]



Plastic Type (SS2-P)

Stainless Steel Type (SS2-OX)

SS3 Series Stand-alone
Small Safety Switch (Stainless Steel Type available)

Features

- PLc per ISO 13849-1 in stand-alone applications
- Two channels
- Small type, slim designed, easy to install
- Robust stainless steel housing available

Dimensions

Model	SS3-P / OX	
Transmitter Unit	2.76 x 0.47 x 0.63 "	[70 x 12 x 16 mm]
Receiver Unit	2.76 x 0.63 x 0.63 "	[70 x 16 x 16 mm]



Plastic Type (SS3-P)

Stainless Steel Type (SS3-OX)

SS4 Series Exclusive use in combination with relay
Small Safety Switch (Stainless Steel Type available)

Features

- Small type, slim designed, easy to install
- Up to PLe per ISO 13849-1 in combination with a safety relay unit
- Multiple units can be connected to one safety relay unit
- Robust stainless steel housing available

Dimensions

Model	SS4-P / OX	
Transmitter Unit	2.76 x 0.47 x 0.63 "	[70 x 12 x 16 mm]
Receiver Unit	2.76 x 0.63 x 0.63 "	[70 x 16 x 16 mm]



Plastic Type (SS4-P)

Stainless Steel Type (SS4-OX)

SM1-301 Safety Relay Unit

Features

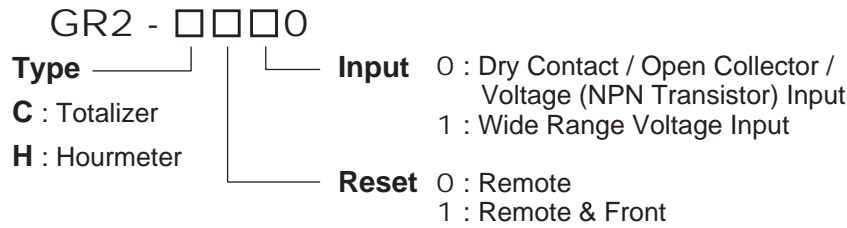
- 23 mm width, compact space-saving type
- Applicable to the conditions of Category 4 per ISO 13849-1
- 25 units of SS4-Series models can be connected in series, still applicable to the conditions of Category 4 per ISO 13849-1
- Monitor contacts of emergency stop devices and/or limit switches
- 3 safety outputs (N.O.) with force guided contacts

Dimensions

Model	SM1-301
	3.94 x 0.91 x 4.49 " [100 x 23 x 114mm]



Models



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

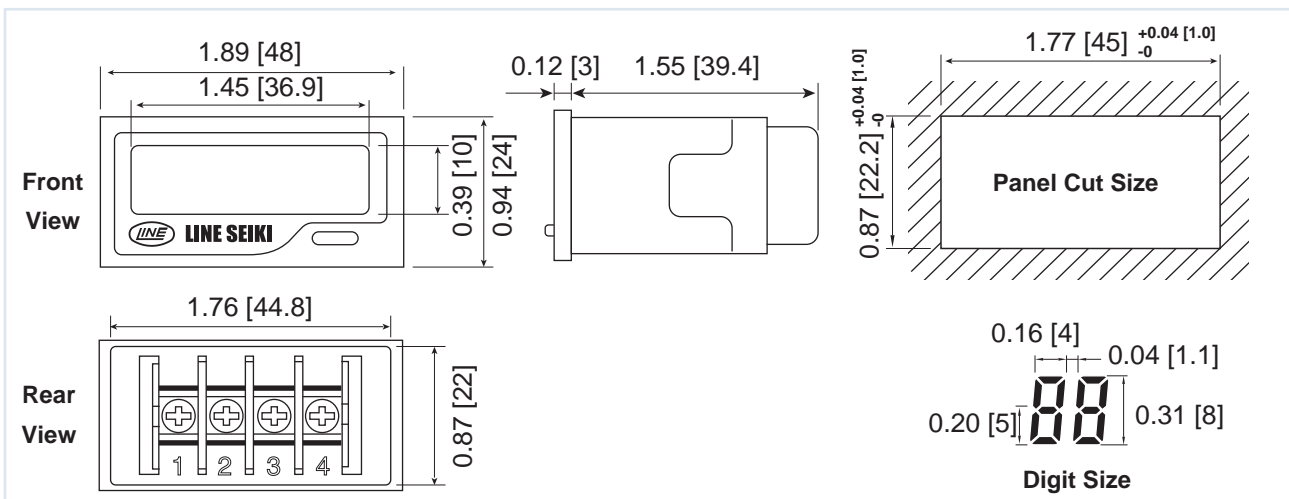
Mechanical / Environmental Specifications

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

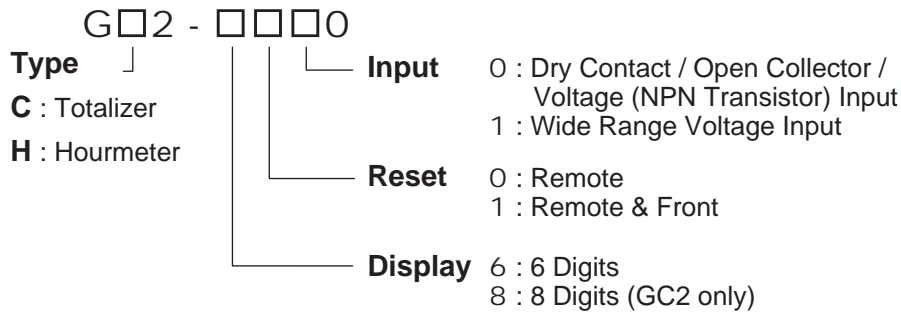
Electrical Specifications

Input	Dry Contact / Open Collector / Voltage (NPN Transistor) L : <0.8 VDC H : 2 to 30 VDC Sink Current : 8 μA Wide Range Voltage L : 0 to 5 VDC / AC Input Impedance : 300 kΩ H : 20 to 250 VDC / AC * 50 / 60 Hz Convertible
Reset	Front Reset Remote Reset • Dry Contact / Open Collector / Voltage (NPN Transistor) L : <0.8 VDC H : 2 to 30 VDC Sink Current : 8 μA • Wide Range Voltage L : 0 to 5 VDC / AC Input Impedance : 300 kΩ H : 20 to 250 VDC / AC * 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

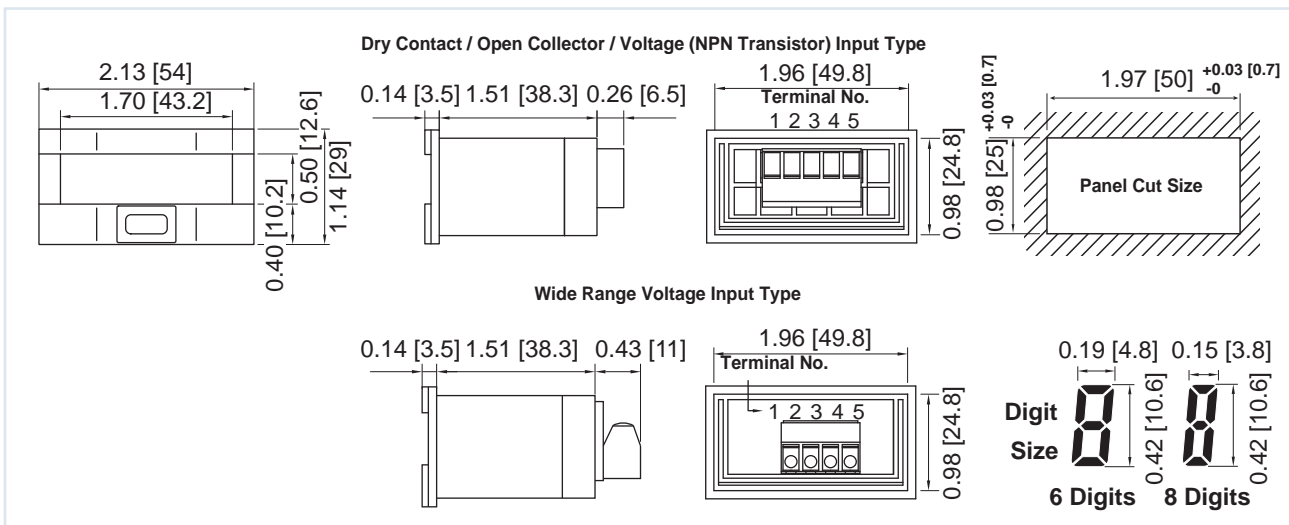
Mechanical / Environmental Specifications

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 Sink Current : 8 μA L : 0 to 5 VDC / AC Input Impedance : 300 kΩ H : 20 to 250 VDC / AC * 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 Sink Current : 8 μA L : 0 to 5 VDC / AC Input Impedance : 300 kΩ H : 20 to 250 VDC / AC * 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

G48 - 3□□□

Preset

0 : 1 Level Preset
 1 : 2 Level Preset
 / 1 Level Preset
 + Prewarn
 (Selectable)

Power Source

5 : 100 to 240 VAC
 6 : 12 to 24 VDC

Output

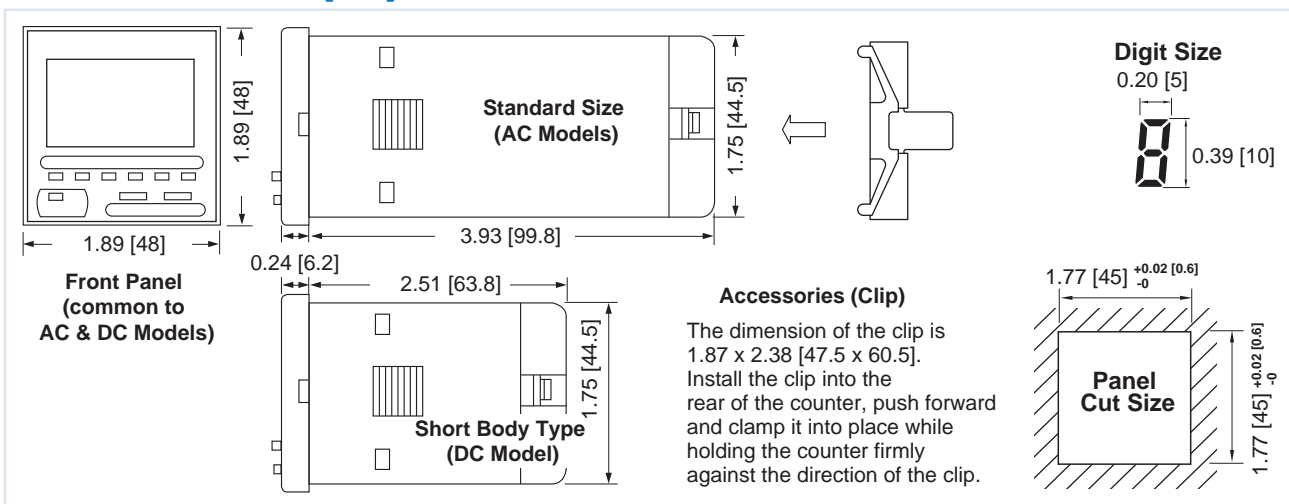
N : Relay output (1a)
 CN : Relay output (1c)
 TN : NPN
 Open Collector output



Specifications

Model	G48-305N / G48-305CN / G48-305TN	G48-315N / G48-315TN	G48-306N / G48-306CN
Display	LCD with backlight ; Digit Size : 0.39 x 0.2 " [10 x 5 mm]		
No. of Digits	6		
Preset Level	1 Level	2 Levels / 1 Level Preset + Prewarn	1 Level
Setting Range	-99999 to 999999		
Prewarn Range	-	0 to 999999	-
Input Mode	Contact / Open Collector / Voltage (Selectable)		
Input Signal	Open Collector ; Sink current approx. 10mA (DC power model : power supply volt / 1.2KΩ) L : 0 - 4V / Voltage (Input impedance 7KΩ) L : 0 - 4V H : 6 - 30V (Available to use 2-wire DC sensor)		
Count Speed	30 Hz, 1 kHz, 5 kHz (Selectable)		
Count Mode	Add, Subtract, Add/Subtract (Add/Subtract individual input, Add/Subtract direction, 90° quadrature input)		
Count Range	-99999 to 999999		
Prescale	Multiplying : 0.001 - 99.999 / Dividing : 1 - 999 (0 setting is not available / Multiplier and divider combinable)		
Input Inhibition	Incoming pulses can be inhibited by Input B only with Add mode and Subtract mode.		
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) : load of AC250V 5A / DC30V 5A MAX. Relay output (1c) : load of AC250V 5A / DC30V 5A MAX. Non-contact output NPN Open-collector : DC45V / 100mA MAX.		
Output Delay	G48-305TN / G48-315TN 30Hz : 6ms MAX. ; 1kHz, 5kHz : 3ms MAX. Other type 30Hz : 13ms MAX. ; 1kHz, 5kHz : 10ms MAX.		
Output Mode	1-Level Preset : Standard, Equal, Lower Limit, Upper Limit 1-Level Preset + Prewarn : Standard, Equal 2-Level Preset : Standard, Equal, Upper-Lower Limit, Upper-Upper Limit		
Output Time	Standard output : One shot (10 - 9990ms / 10ms step) or HOLD (or HOLD 1 or HOLD 2) (selectable) For other output modes : HOLD while the count value meets the conditions		
Error Display	In Add/Subtract individual input, Add/Subtract direction, 90° quadrature mode, error message will be displayed on the LCD if the count range is exceeded (overflow error : $\alpha\text{-}\bar{E}r$ underflow error : $\mu\text{-}\bar{E}r$)		
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 %	
Sensor Power Source	12 VDC 100 mA	-	
Power Consumption	Approx. 7 VA for 240 VAC	Approx. 1.2 W for 24 VDC	
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(UL508)*, cUL(CSA C22.2 No.14)*	* G48-305N / G48-306N / G48-315N only	
Weight	Approx. 6.0 oz [170 g]	Approx. 3.9 oz [110 g]	

Dimensions in inch [mm]



Models

MZ - □□□- □

Digit

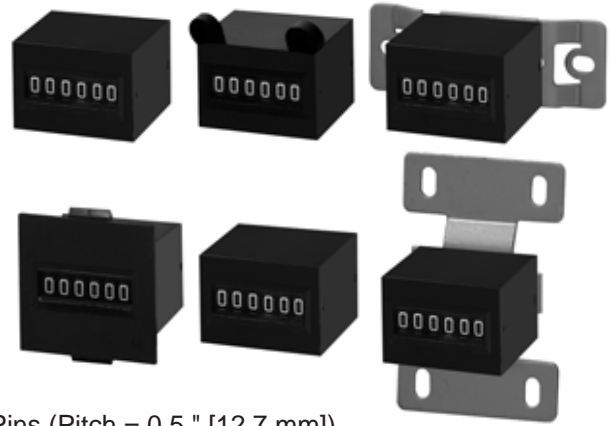
6 : 6 digits
7 : 7 digits

Voltage :

DC12V : 12 VDC
DC24V : 24 VDC

Mounting & Connection

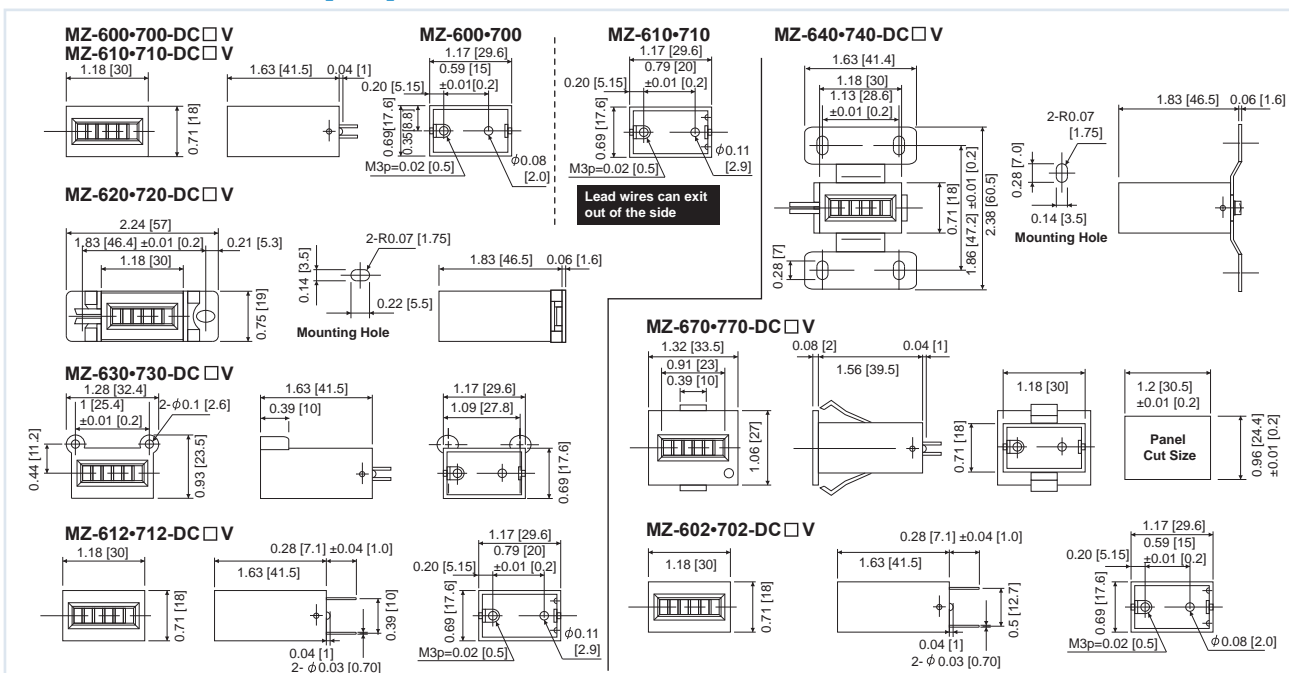
- 00 : Rear (Mounting Pitch : 0.59 " [15 mm]) / Lead wire
- 10 : Rear (Mounting Pitch : 0.79 " [20 mm]) / Lead wire
- 20 : Base (Horizontal) / Lead wire
- 30 : Behind Panel (Screw) / Lead wire
- 40 : Base (Vertical) / Lead wire
- 70 : Panel (Snap-In) / Lead wire
- 02 : Rear (Mounting Pitch : 0.59 " [15 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 - ½ count, De-energized - ½ 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

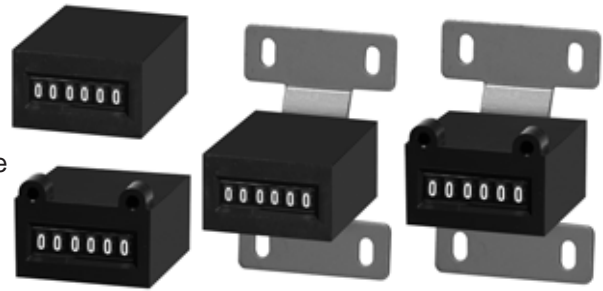
AC115V : 115 VAC
DC24V : 24 VDC

Accessory

Blank : None
B1 : with Base Plate

Mounting

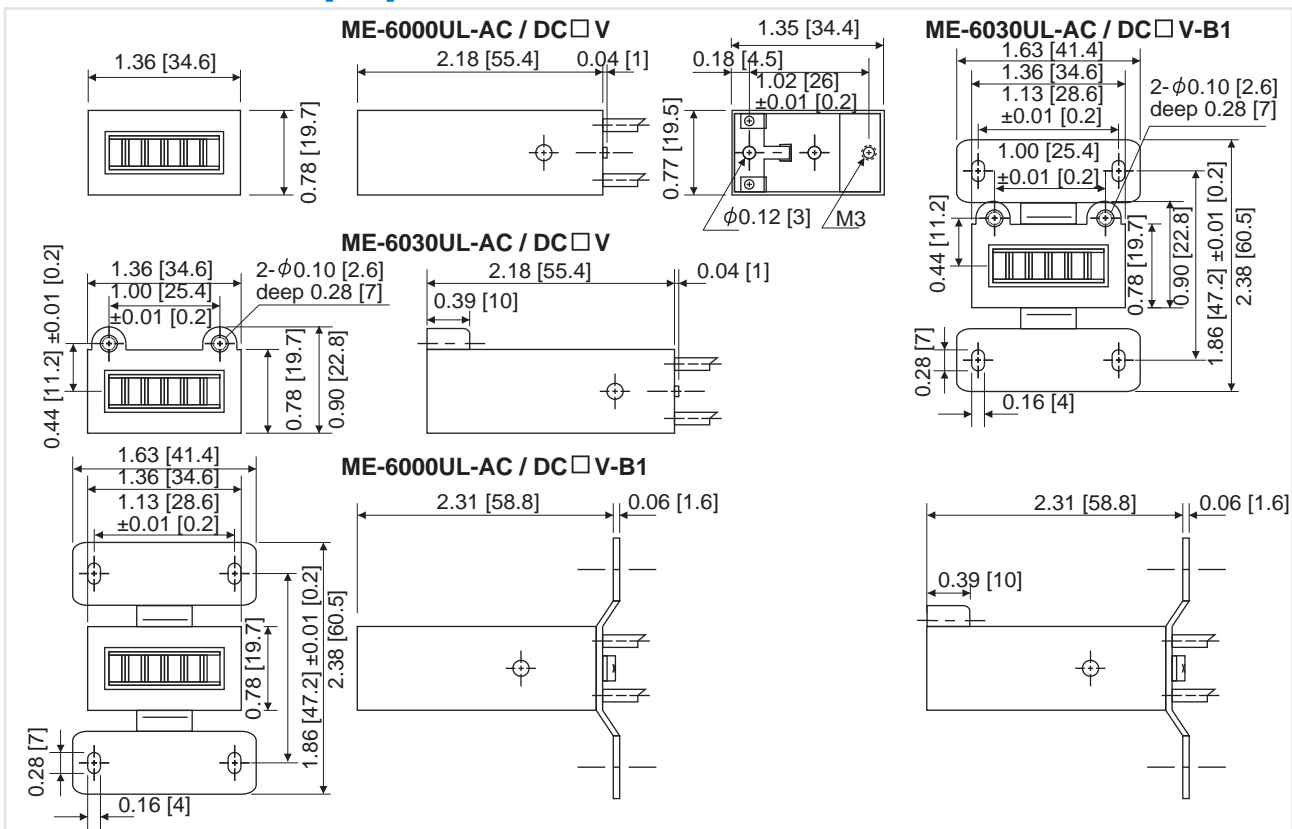
0 : Rear
3 : Behind Panel (Screw)



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

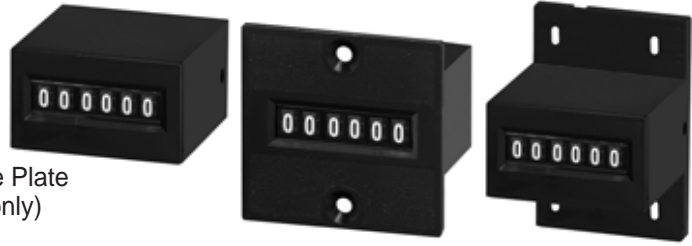
P : Panel (Screw)

Accessory

Blank : None

B2 : with Base Plate

(S Type only)

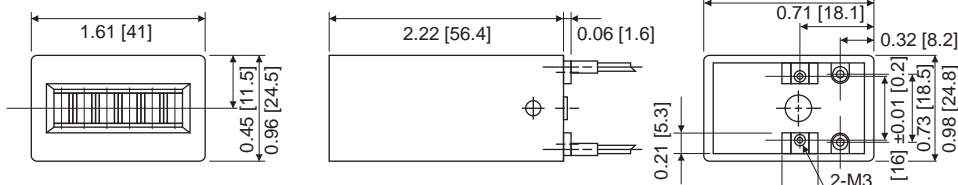


Specifications

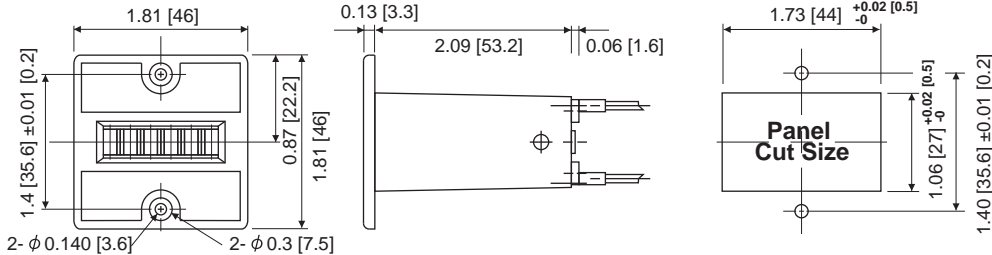
Digit Size	0.17 x 0.10 " [4.3 x 2.6 mm] (white on black)
Power Source	115 VAC 50 / 60 Hz Convertible 24 VDC
Allowable Voltage Fluctuation	±10%
Power Consumption	AC : 3.2 VA / DC : 1.7 W
Continuous Energizing	AC : less than 5 minutes / DC : Permissible
Count Method	One Pulse - One Count (Energizing - 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]

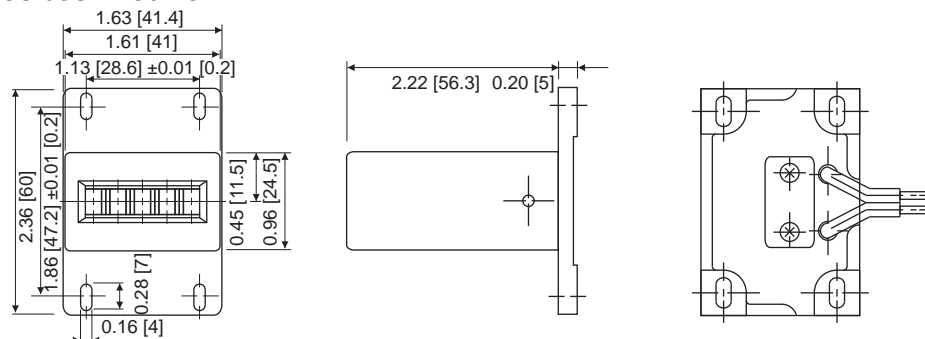
MCU-6SUL-AC / DC □ V



MCU-6PUL-AC / DC □ V



MCU-6SUL-AC / DC □ V-B2



Models

MCF - □□UL - □

Digit

4 : 4 digits
6 : 6 digits

Voltage AC115 V : 115 VAC
DC24V : 24 VDC

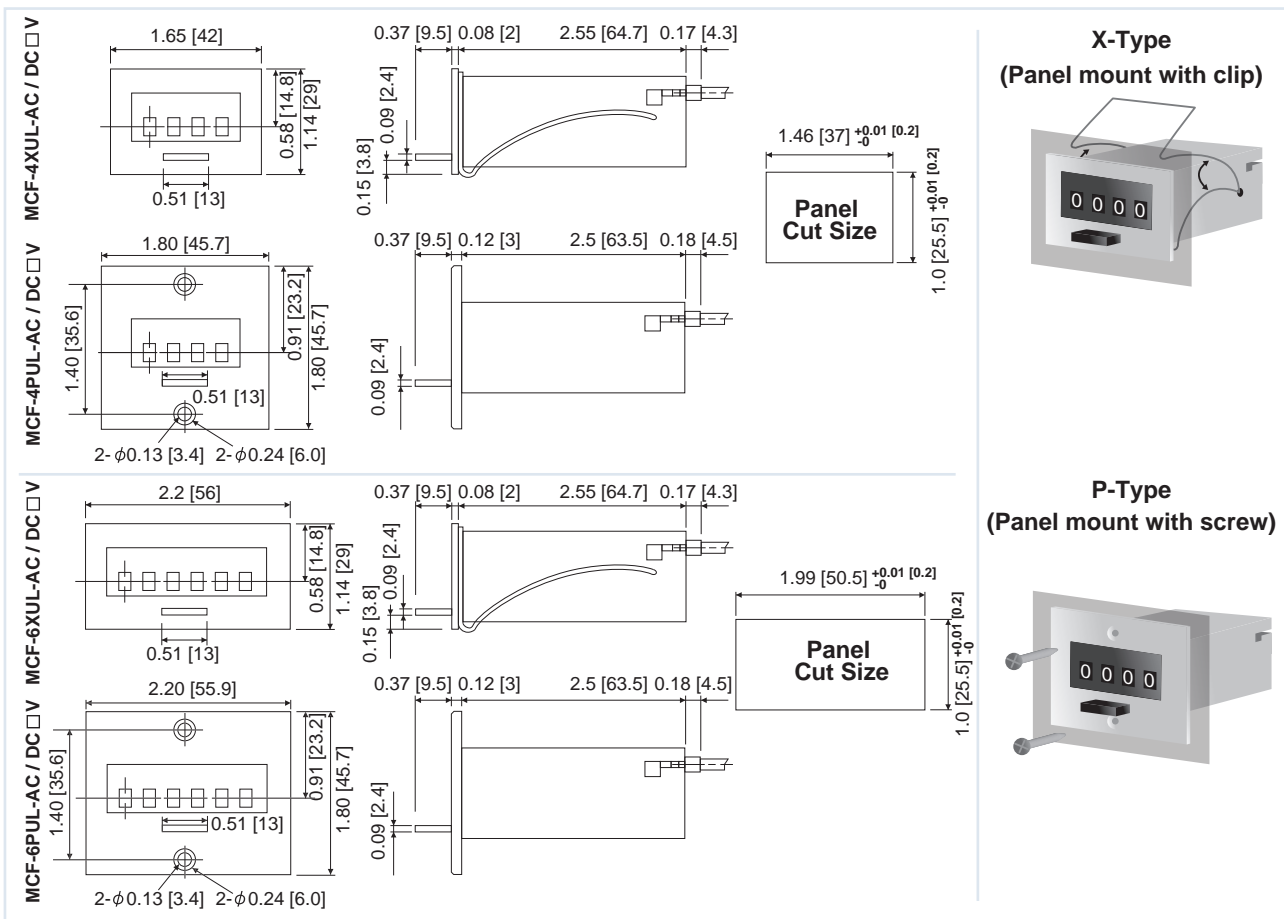
Mounting X : Panel (Clip)
P : Panel (Screw)



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)

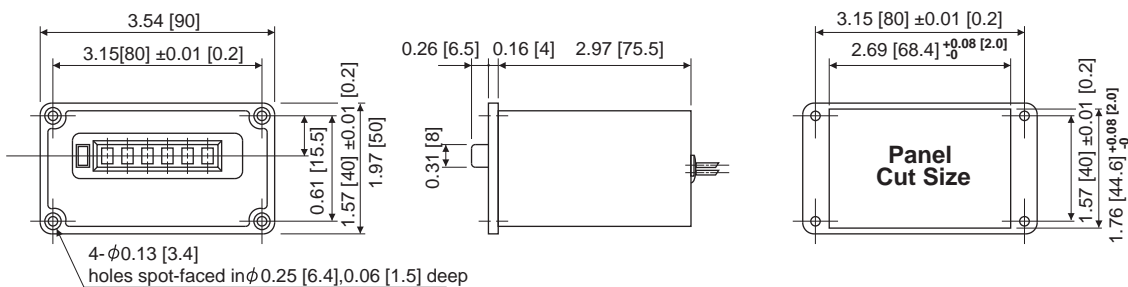


Specifications

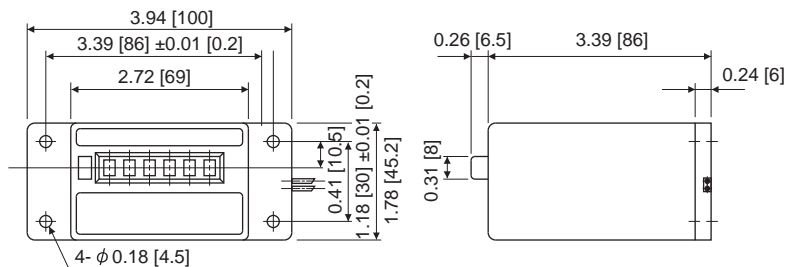
Digit Size	6 digits : 0.21 x 0.11 " [5.4 x 2.8 mm] (white on black)
Power Source	115 VAC 50 / 60 Hz Convertible 24 VDC
Allowable Voltage Fluctuation	±10 %
Power Consumption	AC : 3.5 VA / DC : 3.3 W
Continuous Energizing	Permissible
Count Method	One Pulse - One Count (Energizing - ½ count, De-energized - 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 □ V : Approx. 9.35 oz [265 g], MCR-6CNUL-AC / DC □ 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

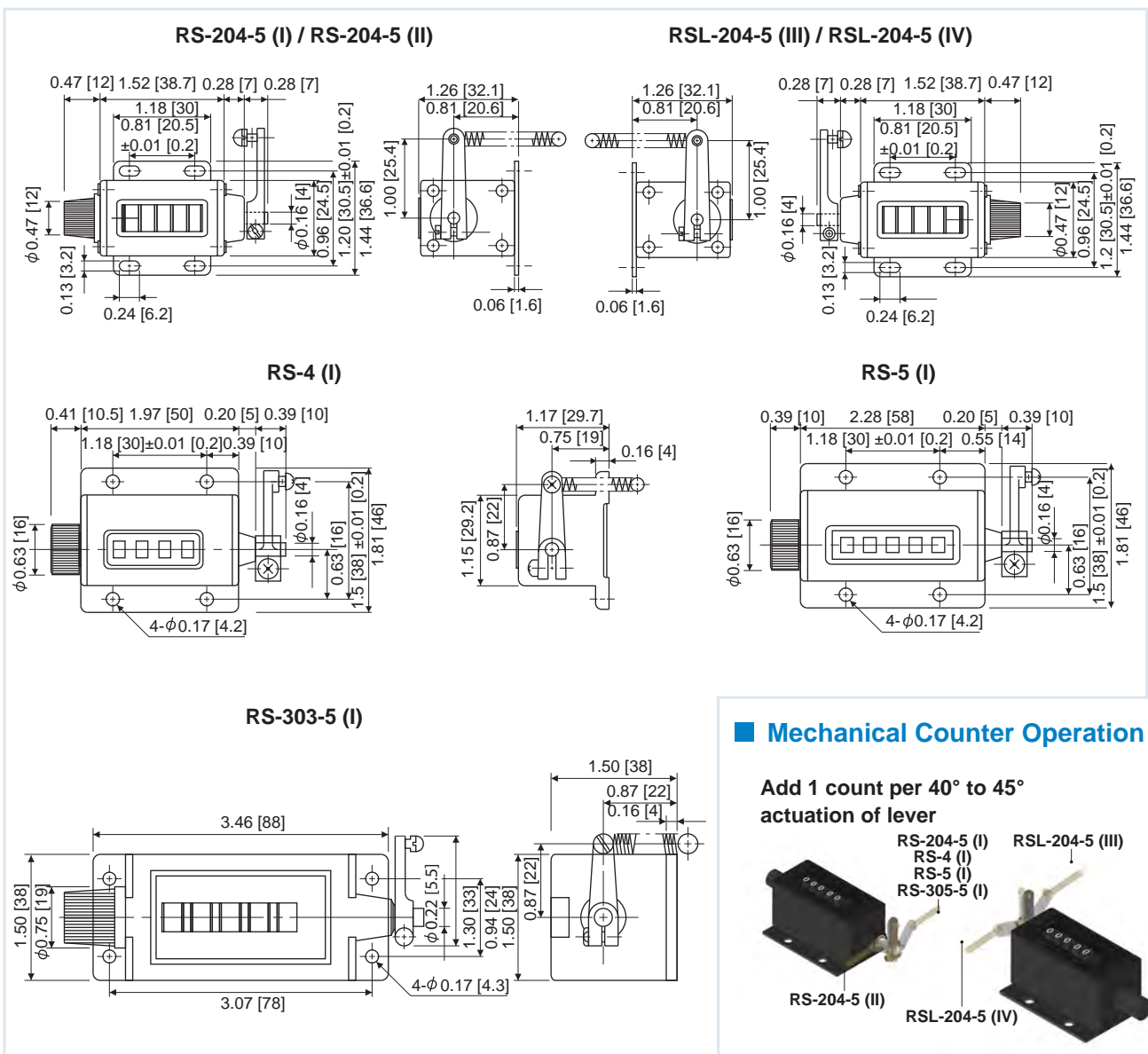
	Type (I)	Type (II)	Type (III)	Type (IV)
Model	RS-204-5 (I)	RS-204-5 (II)	RSL-204-5 (III)	RSL-204-5 (IV)
	RS-4 (I)			
	RS-5 (I)			
	RS-303-5 (I)			
Rotating Shaft				
	Right Top-Going	Right Top-Coming	Left Top-Going	Left Top-Coming



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] / RS-303-5 : 0.24 x 0.18 " [6.0 x 4.5mm]
Maximum Count Speed	RS-204, RSL-204 Series : 1,000 counts/minute / RS-4 (I), RS-5 (I), RS-303-5 (I) : 300 counts/minute
Count Range	0 to 99999 / RS-4 : 0 to 9999
Reset	Knob
Weight	Approx. 1.76 to 4.23 oz [50 to 120 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]



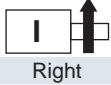
RL / SR Series

Models

Count Type	Model	Digits	Digit Size	Weight (Approx.)	Maximum Count Speed
Direct Drive	RL-219-5 (I)	5	0.24 x 0.18 " [6.0 x 4.5mm]	3.88 oz [110 g]	50 rotations/minute
	SR-4 (I)	4	0.17 x 0.11 " [4.3 x 2.8mm]	2.12 oz [60 g]	200 rotations/minute

Direct Drive





Add 10 counts per complete revolution (1 count per 1/10 revolutions) of the shaft

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



KZ Series

Models

Count Type	Type (I)	Type (II)	Type (III)	Type (IV)
Revolution	KZ-105 (I)	KZ-105 (II)	KZ-105 (III)	KZ-105 (IV)
Direct Drive	KZ-205 (I)	KZ-205 (II)	KZ-205 (III)	KZ-205 (IV)
Ratchet	KZ-305 (I)	KZ-305 (II)	KZ-305 (III)	KZ-305 (IV)
Rotating Shaft				
	Right Top-Going	Right Top-Coming	Left Top-Going	Left Top-Coming

Specifications

Count Range	Reset	Digits	Digit Size	Weight (Approx.)	Compliance
0 to 99999	None	5	0.17 x 0.09 " [4.2 x 2.3mm]	0.35 - 0.49 oz [10 to 14 g]	RoHS
Ambient Temp. : Operating			23 to 104 °F [-5 to +40 °C] (Should not be frozen)		
Ambient Humid. : Operating			35 - 85 %RH max. (Non-condensing)		

Count Method

Revolution (KZ-105) : Adds 1 count for every complete revolution of the shaft
 Direct Drive (KZ-205) : Adds 10 counts for every complete revolution (1 count / 1/10 shaft revolution) of the shaft
 Ratchet (KZ-305) : Adds 1 count for each 40 - 45° actuation of lever



Maximum Count Speed

KZ-105 : 1000 rotations/minute | KZ-205 : 100 rotations/minute | KZ-305 : 500 counts/minute



SP1-101 / SP1-102 Series

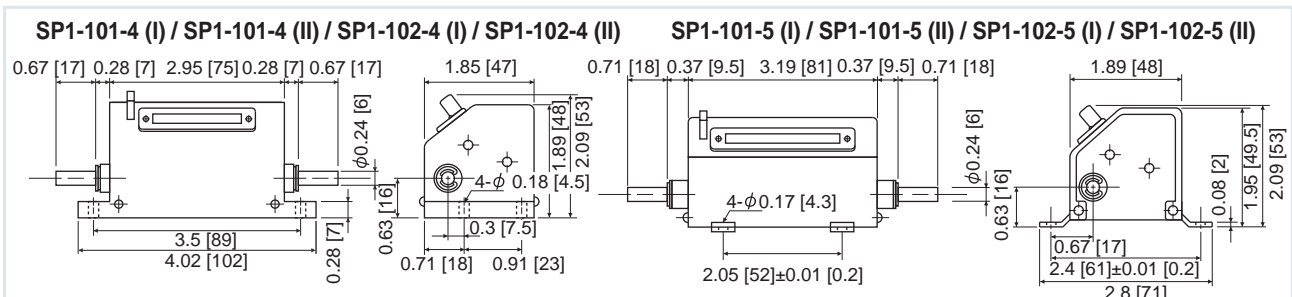
Models

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

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]



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

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]		

Model	Sensor	Resolution	Maximum Count Speed	Weight (Approx.)	Rotation Torque	Proper Counter
CT1-3:1AC-YP	Photoelectronic Sensor, 1 Non-contact Output (Open collector output)	1 yard	700 yard/min	26 oz [730 g]	2.12 ozf-in [153 gcm]	Electronic Counter
CT1-3:10AC-YP		0.1 yard	500 yard/min	26 oz [730 g]		
CT1-3:100AC-YP		0.01 yard	250 yard/min	26 oz [740 g]		
CT1-3:1000AC-YP		0.001 yard	100 yard/min	28 oz [790 g]		
CT1-3:1000ACH-YP		0.001 yard	100 yard/min	28 oz [790 g]		
CT1-3:1RC-YP	Photoelectronic Sensor, 2 Non-contact Outputs (Open collector output / 90° Quadrature)	1 yard	700 yard/min	26 oz [740 g]		Bidirectional Electronic Counter
CT1-3:10RC-YP		0.1 yard	500 yard/min	26 oz [740 g]		
CT1-3:100RC-YP		0.01 yard	250 yard/min	26 oz [750 g]		
CT1-3:1000RC-YP		0.001 yard	100 yard/min	28 oz [780 g]		
CT1-3:1000RCH-YP		0.001 yard	100 yard/min	28 oz [780 g]		

Specifications

Model	Output	Power Source	Current Consumption	Output Voltage	Maximum Load Current	Residual Voltage	Output Impedance				
CT1-3:1-YP	Contact	-	Microswitch Contact Output, Switching Capacity : 250 VAC 5 A , 125 VDC 0.5 A (Resistance Load)								
CT1-3:10-YP											
CT1-3:1A-YP	1 Non-contact Output (Voltage Output)	5 to 24 VDC ±10 %	35 mA	H : Power-supply voltage-1V min.	100 mA	-	3.9 kΩ				
CT1-3:10A-YP				L : 0.8V max.							
CT1-3:100A-YP				H : Power-supply voltage-1V min.				20 mA			
CT1-3:1000A-YP				L : 0.5V max.							
CT1-3:1R-YP	2 Non-contact Outputs (Voltage Output / 90° Quadrature)	5 to 24 VDC ±10 %	70 mA	H : Power-supply voltage-1V min.	100 mA	-	3.9 kΩ				
CT1-3:10R-YP				L : 0.8V max.							
CT1-3:100R-YP				H : Power-supply voltage-1V min.				20 mA			
CT1-3:1000R-YP				L : 0.5V max.							
CT1-3:1AC-YP	1 Non-contact Output (Open collector output)	5 to 24 VDC ±10 %	35 mA	-	100 mA	0.8V max.	-				
CT1-3:10AC-YP											
CT1-3:100AC-YP								5 to 12 VDC ±10 %	40 mA	20 mA	0.5V max.
CT1-3:1000AC-YP								24 VDC ±10 %	60 mA		
CT1-3:1RC-YP	2 Non-contact Outputs (Open collector output / 90° Quadrature)	5 to 24 VDC ±10 %	70 mA	-	100 mA	0.8V max.	-				
CT1-3:10RC-YP											
CT1-3:100RC-YP								5 to 12 VDC ±10 %	40 mA	20 mA	0.5V max.
CT1-3:1000RC-YP								24 VDC ±10 %	60 mA		

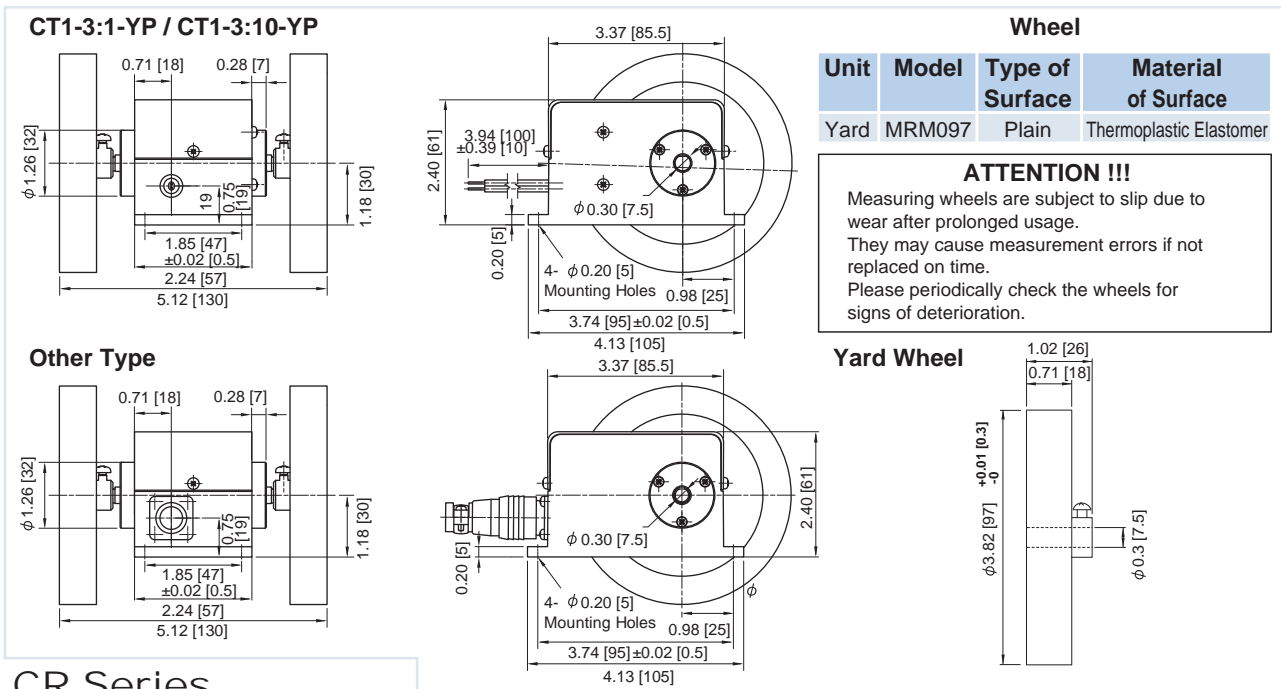
* 2 wheels are furnished as standard accessories.
 When you order, please specify type of wheels : meter or yard.
 Please pay attention to copy products in the market.

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



CT1 Series

■ Dimensions in inch [mm]



CR Series

■ 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

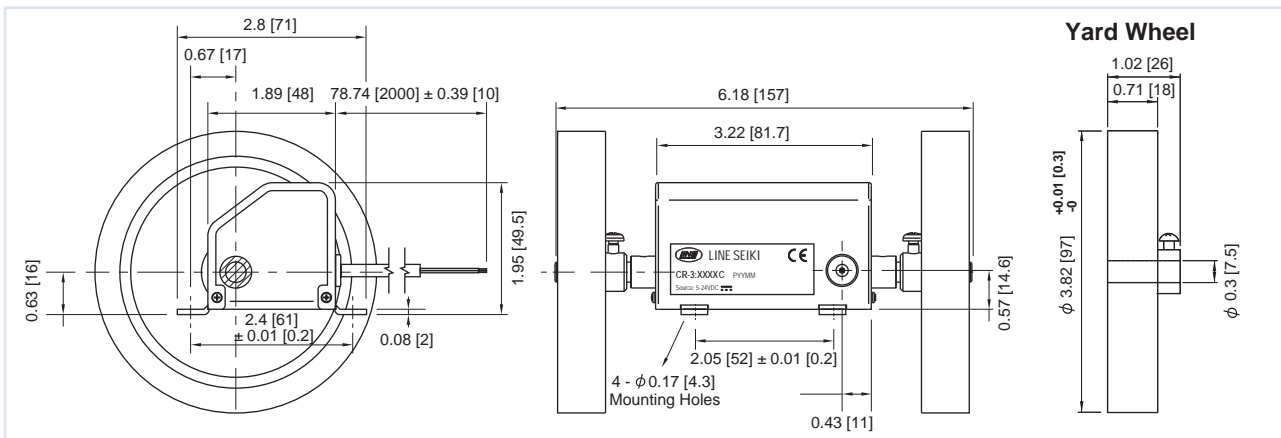
Model	Output	Power Source	Current Consumption	Maximum Load Current	Cable Type
CR-3:1AC-YP	1 Output	5 to 24 VDC ±10 %	35 mA	100 mA	2-meters, Shielded Cable
CR-3:10AC-YP					
CR-3:100AC-YP					
CR-3:1RC-YP	2 Outputs (90° Quadrature)		44 mA		
CR-3:10RC-YP					
CR-3:100RC-YP					



* 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]	Remarks	Should not be frozen, Non-condensing
Ambient Humid. : Operating	35 to 85 %RH	Compliance	CE, RoHS

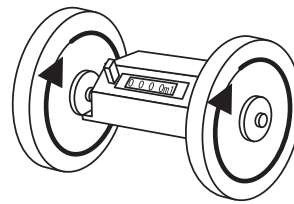
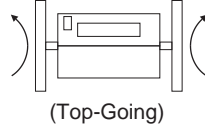
■ Dimensions in inch [mm]



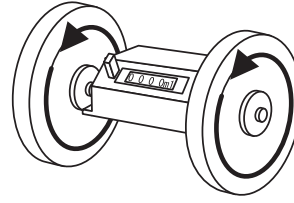
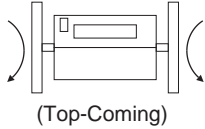
Models

RY1 Series

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

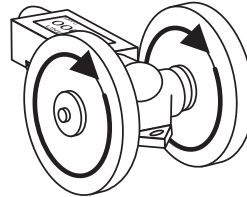
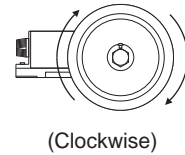


RY1-3:10-5 (II)
RY1-3:100-5 (II)
SP1-102-5 (II)-12FT



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



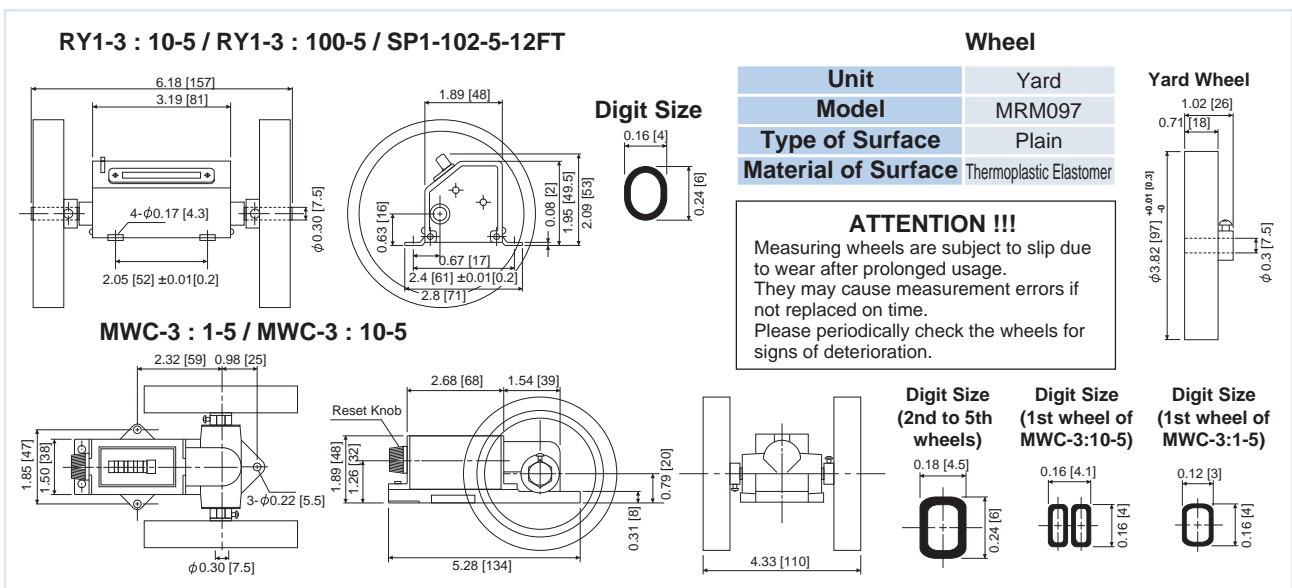
MWC-3:10-5 (I)-YP



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]



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 0 to 999999 count 0.0 to 99999.9 m 0.00 to 99999.9 y 0.00 to 99996.1 inch 0.0 to 99999.7 f
Resolution	0.1 r/min	1 count, 0.1 rpm fpm m f, 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, count, m, y, inch, f 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 (H) x 2.28 (W) x 1.10 (D) " [122 (H) x 58 (W) x 28 (D) mm] Approx. 4.6 oz [130 g]	
Compliance	CE, RoHS	

Functions

TM-5000

TM-5010E

TM-4015

Contact Adapter with Rotating Shaft

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

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)

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

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	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 (H) x 2.28 (W) x 1.08 (D) " [125 (H) x 58 (W) x 27.4 (D) mm] / 4.9 oz [140 g] TM-7020 : 5.67 " 5.67 (H) x 2.28 (W) x 1.42 (D) " [144 (H) x 58 (W) x 36 (D) mm] / 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.

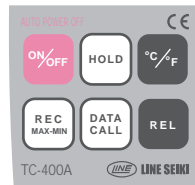
ZTM004 ZM4052 / 4053

Contact Adapter with Rotating Shaft

<ul style="list-style-type: none"> ① Emitter / Receiver Part ② Displays and Indicators ②a Measurement Data Display ②b Prescale Setting Indicator ②c Unit Display 	<ul style="list-style-type: none"> ②d Low-battery Indicator ②e Contact Measurement Indicator ②f Memory Number & MAX-MIN Display ②g Laser On Indicator ②h On Target Indicator 	<ul style="list-style-type: none"> ③ Measurement Button ④ Keys / Switches ④a Enter Key ④b Memory Call Key ④c Clear Key 	<ul style="list-style-type: none"> ④d Linear/Surface Speed Key (Unit Selecting Key) ④e Rotational Speed Key (Unit Selecting Key) ④f Measurement Mode Key
		<ul style="list-style-type: none"> ⑤ Contact Adapter ⑤a Rubber Tip ⑤b Surface Speed Wheel 	

Model : TC-400A

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



Specifications

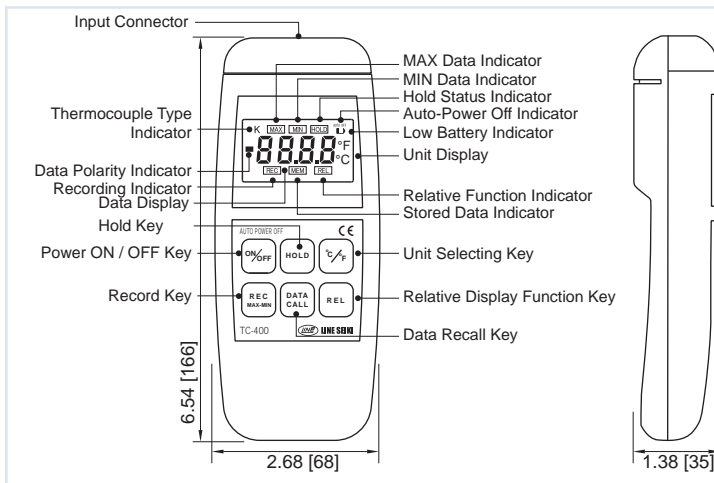
Sensor Type	Type K
Measuring Range	-256 °F [-160 °C] to +2,502 °F [+1,372 °C]
Resolution	≤+391.8 °F [+199.9 °C] : 0.2 °F [0.1 °C], ≥+392 °F [+200 °C] : 2 °F [1 °C]
Accuracy at Ambient Temp.	32 °F [0 °C] to 391.8 °F [199.9 °C] : ±(0.1 % of reading + 1.3 °F [0.7 °C]) 77 °F [25 °C] ± 9 °F [5 °C] ≤31.8 °F [-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]

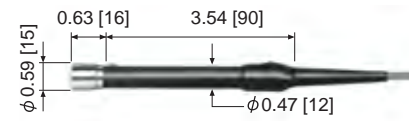


Digit Size

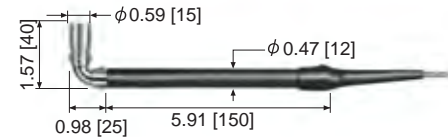
0.22 [5.64]



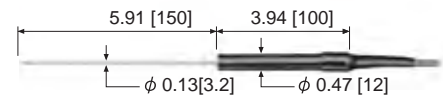
KF-01A



KF-02A



KS-21A





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