



Linear Gage Counter EC-101D

Safety Precautions

Use this product in conformance with the specifications, functions, and precautions for use described in this document. Failure to do so may impair your safety.

Foreword

To obtain the highest performance and the longest service life from this product, carefully read this document thoroughly prior to setup and operation. After reading, retain it close at hand for future reference. Be sure to follow the precautions below.

Export Control Compliance

This product is subject to the "Foreign Exchange and Foreign Trade Act" of Japan. Contact Mitutoyo for re-export and re-sale of the product, or re-provisioning of the technology.

Electromagnetic Compatibility (EMC)

This product complies with the EMC Directive and the UK Electromagnetic Compatibility Regulations; however, if this receives electromagnetic interference that exceeds these requirements, it will be out of warranty and require appropriate measures.

CONVENTIONS USED IN THIS DOCUMENT

| | | |
|----------|---------------|---|
| General | | Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death. |
| | NOTICE | Indicates a potentially hazardous situation which, if not avoided, may result in property damage. |
| Specific | | Indicates that grounding needs to be implemented. |

Precautions for Use

WARNING Do not remove the cover or disassemble the product. Otherwise you may be subject to electric shock, and there is a risk of breakage or fire due to a short circuit caused by metallic powders that have gotten inside the product.

- This product is precision equipment. Be careful not to apply excessive shock or force to any of the parts.
- Use this product in an environment where the temperature is between 0°C and 40°C and where it will be subject to minimal temperature change without condensation.
- Avoid using this product in the following places:
 - Places exposed to chips, machining oil, dust, and vibration.
 - Places subject to direct sunlight.
 - Around devices that use high voltage or current.

Warranty

In the event that this product should prove defective as a result of workmanship, material or transportation, within 1 year from the date of original purchase, it will be repaired free of charge. Contact your dealer or the nearest Mitutoyo sales office/service center for repair.

1 Overview

1.1 Major Functions

This product is a Counter that displays the counter values from connected Mitutoyo Linear Gages. The following main functions are available.

- Preset, Zero setting, Tolerance judgment
- Communication with a PC or external devices via the I/O connector

1.2 Supported Linear Gages

The following table shows the Linear Gages supported by this product and their features:

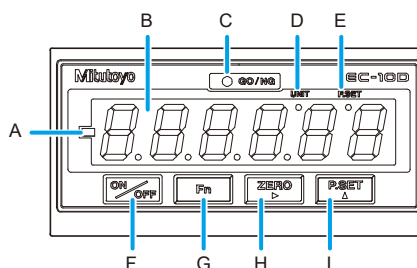
| Model No. | Supported Linear Gages | Feature |
|-----------|---|--|
| EC-101D | LGD, LGS, etc. (ID and SD are also supported) | <ul style="list-style-type: none"> • Digimatic output type • ABS function (no need for master setting) |

Tips Counter values will not be displayed correctly on the Counter in the following cases.

- If the gage that is connected displays a counter value that is more than 6 digits (whole-number digits + fractional digits).
- If the resolution (minimum reading) is 0.1 mm or more and less than 1 mm.

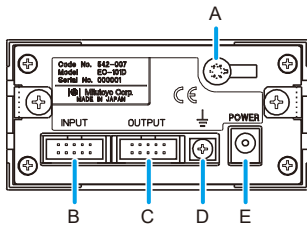
1.3 Part Names and Functions

■ Front side of the main body



| Symbol | Name | Description |
|--------|------------------------------|---|
| A | Sign indicator | Indicates the sign of a counter value or a setting value. Lights when the displayed value fills all available digits and the value is also negative. |
| B | Display | Displays the counter value from the connected Linear Gage. |
| C | Tolerance judgment indicator | Indicates the tolerance judgment result from the Linear Gage by color. |
| D | UNIT indicator | <ul style="list-style-type: none"> • Blinks while a HOLD signal is being input when the I/O connector is connected. • Lights when an E unit has been selected for the corresponding parameter. |
| E | P. SET indicator | Lights when you set a Preset value. |
| F | [ON/OFF] key | Turns on or off the display. For details, see "4.5 Turning On or Off the Display" (page 4). |
| G | [Fn] key | Switches to setup mode where you can set tolerance values or the Preset value. Tips When setting parameters, this advances the parameter number. |
| H | [ZERO] key | Sets the current value shown on the Display to 0. Tips <ul style="list-style-type: none"> • When setting a parameter, this advances the set value. • When setting the tolerance, Preset, or optional constant value, this increases the value of the selected digit. |
| I | [P.SET] key | <ul style="list-style-type: none"> • Displays the Preset value. • Cancels an error. Tips <ul style="list-style-type: none"> • When setting a parameter, this advances the set value. • When setting the tolerance, Preset, or optional constant value, this increases the value of the selected digit. |

■ Rear side of the main body



| Symbol | Name | Description |
|--------|----------------------------------|---|
| A | Cable clamp | For securing the power cable. |
| B | Linear Gage input connector | For connecting a Linear Gage. |
| C | OUTPUT connector (I/O connector) | For connecting an I/O connecting cable. |
| D | Grounding terminal | For connecting a grounding wire. |
| E | DC jack | For connecting the AC adapter. |

2 Setup

2.1 Unpacking

When unpacking for the first time, check that the following components are contained in the box.

| Name | Q'ty |
|---|-----------|
| Linear Gage Counter (this product) | 1 |
| Washer (plain washer round, nominal diameter: 4) | 6 |
| Rubber foot | 4 |
| AC adapter (100 V - 240 V) 06AGC585JA (Japan, USA, Canada, & Co.) 06AGC585D (Germany, & Co.) 06AGC585E (UK, & Co.) 06AEG302DC (China for CCC) 06AGC585K (Korea for KC) | 1 of them |
| User's Manual (this document) | 1 |
| Warranty | 1 |

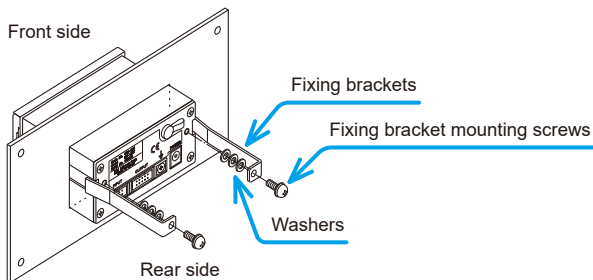
2.2 Mounting on a Panel

■ Dimensions for the mounting holes in the panel

| Width (mm) | Height (mm) | Panel thickness (mm) |
|--------------|--------------|----------------------|
| 92.0 to 92.8 | 45.0 to 45.8 | 1.0 to 3.2 |

■ Panel mounting procedure

- Loosen the fixing bracket mounting screws (see the following figure), and then remove the fixing brackets.
- Insert the Counter main body from the front side of the panel.
- From the back of the panel, reattach the fixing brackets that you removed in step 1 to the Counter and secure them.



Tips Refer to the following table and select the number of washers to use according to the thickness of the panel.

| Panel thickness (mm) | 1.0 to 1.3 | 1.4 to 1.7 | 1.8 to 2.5 | 2.5 to 3.2 |
|----------------------|------------|------------|------------|------------|
| Number of washers | 0 | 1 | 2 | 3 |

2.3 Attaching Rubber Feet

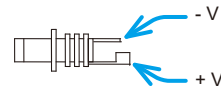
When placing this product on a desk, attach the supplied rubber feet (4 pieces) to the 4 corners of the bottom surface of the Counter to prevent slipping and to minimize vibration.

Tips This product cannot be mounted in a panel with the rubber feet attached.

2.4 Connections

■ Power source

Use the supplied AC adapter and the supplied AC cable. If you will not use the supplied AC adapter, prepare a DC power source (voltage: 9 V to 12 V, output current: 1 A or more) for each Counter. Solder the power cable to the terminals of the optional DC plug as shown in the following figure.



NOTICE Never use this power source with other electric equipment that runs at a high voltage and/or large current.

Tips If you use a commercial power source, use a power cable with a length of 30 m or shorter. Avoid outdoor wiring.

■ Connecting cables for external equipment

You must supply an I/O connector connecting cable for connecting external equipment.

Tips For details about I/O connecting cables, see "5 External Input/Output Function" (page 5).

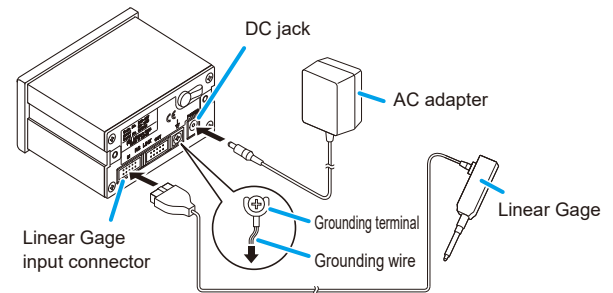
■ Connection procedure

- NOTICE**
- When making connections, connect the AC adapter last.
 - Do not run the power cable and Linear Gage connecting cable through a cable duct together with other power lines.
 - Secure the power cable and connecting cables for external equipment to your equipment with a cable tie, cable holder, etc.



Be sure to connect this product to ground. If this product is not grounded, it will be more susceptible to electrical noise.

Make connections as shown in the figure below.



2.5 Operation Check

Check the cable connections with the following procedure to confirm that the connections are correct.

- Connect the power.
 - The Counter enters the stand-by state.
- Press [P.SET].
 - The Counter changes to the Counter display.



- Check that the counter value is shown on the Display.
- Check that the counter value on the Counter changes by moving the contact point of the Linear Gage up and down.

3 Parameter Setting

The settings of the Linear Gage that you will use, the display of the Counter, and external output are specified by setting parameters. Set parameters before you begin measuring.

3.1 Procedure for Setting Parameters

Parameters are set in Parameter mode. As an example, this section explains the operational procedure for setting the Counter direction (the direction in which the spindle of a Linear Gage is pressed in) to the minus (-) direction.

1 Connect the power.

- » The Counter enters the stand-by state.



2 Press and hold [Fn], and then press [P.SET].

- » The Counter enters Parameter mode. (The set value of parameter number 00 will blink.)



3 Press [P.SET] once to set the value to 1 (parameter setting).

- » Parameters can now be modified. (The set value remains blinking.)



Tips If the setting value is 0, you can view the parameter values, but you cannot change them.

4 Repeatedly press [Fn] to advance the parameter number to 11.

- » The current value of parameter number 11 will blink. (Parameter number 11 sets the Counter direction.)



5 Repeatedly press [P.SET] to set the value to 1 (" - " direction).

- » The value will be set to 1. (The Counter direction will be set to the " - " direction.)



6 Press and hold [Fn], and then press [P.SET].

- » The Counter will return to the stand-by state.



3.2 Basic Parameters

This section explains the basic parameters related to measuring. Be sure to set these settings before measuring.

Tips Correct measurement results may not be obtained if the settings are incorrect.

| [Parameter number] /Setting item | Description (the values in bold indicate the default value) |
|----------------------------------|--|
| [00] Parameter mode | Used to view or modify parameters. 0: View parameters 1: Set parameters 2: Set an optional constant value*1 |
| [11] Counter direction | Sets whether the numeral will increase or decrease when the spindle of the Linear Gage is pushed in. 0: + direction 1: - direction |
| [12] Counting method | Sets the counting method according to the type of the Linear Gage to be connected.*2 0: INC 1: ABS 2: Multi-Unit |
| [15] Unit system selection*3 | The unit for displayed values can be set to "mm" or "E units". E=1/25.4 mm. After the unit is set, the default value will not be restored even if the parameters are re-initialized. 0: mm 1: E 5/100,000 reading*4 2: E 1/10,000 reading*4 3: mm (when connecting an E gage, 1/10,000 reading) |

*1 The optional constant value setting is available only when the value of parameter number 16 is set to 3. For details, see [4.6 Optional Constant Value Setting] (page 4).

*2 Select "0: INC" when an INC (incremental) type Linear Gage is connected. Either "0: INC" or "1: ABS" can be selected when an ABS (absolute) type Linear Gage is connected.

When "0: INC" is selected:

Count and display the current position of the Linear Gage when starting up the Counter. Perform Zero setting, etc., when resetting the display value.

When "1: ABS" is selected:

The Counter memorizes the Linear Gage origin (0 point) when starting up the Counter and displays the counting value from the origin. The origin that was memorized will be remained even if the Counter is re-started.

When you connect the Multi-Unit, set the value to 2. Do not set the SELECT switch of the Multi-Unit to "EX".

*3 The Preset value and tolerance value that had been set will be cleared if the setting is changed.

*4 When an E type gage is connected, the minimum reading of the Counter will be the resolution of the gage.

3.3 Advanced Parameters

This section explains the parameters related to the display, functions, and external output of the Counter. Configure the settings appropriate to your application.

| [Parameter number] /Setting item | Description (the values in bold indicate the default value) |
|--|---|
| [10] Parameter initialization*1 | If you set the value of this parameter to 1, the set values for all parameters, except for the unit setting, can be reset to their default values (initialized). Once this setting has been enabled, this parameter is reset so its set value is 0 (do not initialize). 0: Do not initialize 1: Initialize |
| [14] Display at startup | Selects stand-by state or Counter display to display at startup. 0: [-----] display 1: 0.000 |
| [16] Calculation with a constant | Sets whether to multiply the counter value by a predetermined factor, by an arbitrary factor, or to not multiply it. The value obtained by multiplying the counter value by the set constant value will be displayed as the measurement result. For details about optional constant value setting, see [4.6 Optional Constant Value Setting] (page 4). 0: Do not calculate 1: 2 times 2: 10 times 3: Arbitrary value |
| [17] Hide the lowest-order digit | Hides the lowest-order digit. However, the lowest-order digit will be included in printouts. 0: Display all digits 1: Hide the lowest-order digit |
| [20] Tolerance judgment/ Digimatic output switchover | Switches between tolerance judgment result output and Digimatic output. 0: Tolerance judgment result output 1: Digimatic output |
| [29] Digimatic input WAIT*2 | Sets the wait time for the Digimatic input signal. Change this when the Counter cannot read the input signals from a Digimatic device. 0: No wait 1: 200 ms WAIT 2: 400 ms WAIT |
| [35] Key protect | Key operations can be disabled to prevent operation errors. 0: Key operation enabled 1: Key operation disabled |

*1 The Preset value and tolerance value that had been set will be cleared if the setting is changed.

*2 The display speed can be changed. When you connect the Multi-Unit, set the value to 1.


4 Basic Operations

4.1 Zero Setting

The current value of the Counter can be set to 0 at any point within the Linear Gage measuring range. This section explains the operational procedure.


1 Press [ZERO] with the counter value displayed.

- » The counter value will be set to 0.

Tips Also, you can set the current value of the Counter to 0 using the Preset function. For details, see  "4.2 Preset" (page 4).

4.2 Preset

The current value of the Counter can be set to an arbitrary value at any point within the Linear Gage measuring range.

- Tips**
- The factory default setting of the Preset value is 0. Also, you can set the current value of the Counter to 0 using this function.
 - For details about the procedure for modifying the Preset value, see  "4.4 Setting the Preset Value and Tolerance Values" (page 4).
 - When the gage type is set to "ABS", the effective Preset count / Zero setting count is one million times each.


This section explains the operational procedure.

1 Press [P.SET] with the counter value displayed.

- » The current value will be changed to the Preset value that was previously set.

4.3 Tolerance Judgment

With the tolerance value (the upper limit and the lower limit) setting, the 3-step tolerance judgment will be performed as follows:

Tips For details about I/O output, see  "5 External Input/Output Function" (page 5).

| Judgment conditions | Tolerance judgment indicator | I/O output (PIN number) |
|--|------------------------------|-------------------------|
| Measurement result < Lower limit | Amber indicator on | -NG (4) |
| Lower limit ≤ Measurement result ≤ Upper limit | Green indicator on | GO (3) |
| Upper limit < Measurement result | Red indicator on | +NG (2) |

4.4 Setting the Preset Value and Tolerance Values

Perform the setting in setup mode in the order Preset value, tolerance value. This section explains the operational procedure.

1 Set a Preset value.

- 1 Press [Fn] to switch to setup mode.
 - » The P.SET indicator will turn on.
 - » The previous Preset value will be displayed. (The example on the right shows the previous value as 0.)



- 2 Press [ZERO].

- » The input digit will shift to the right. (The currently selected digit will blink.)



- 3 Press [P.SET].

- » The Preset value will be modified.

Tips The ± sign is also set at the most significant digit. To set the Preset value to a negative value, repeatedly press [P.SET] until the Sign indicator lights.

- 4 Repeat steps 2 and 3 until you have set the desired Preset value.

- 5 Press [Fn].

- » The Preset value will be applied, and the lower limit of the previous tolerance will be displayed. (The example on the right shows the previous value as -1.000.)
- » The Tolerance judgment indicator will light in amber.



- 2 Set tolerance values.

- 1 Press [ZERO].

- » The input digit will shift to the right. (The currently selected digit will blink.)



- 2 Press [P.SET].

- » The tolerance value will be modified.

Tips The ± sign is also set at the most significant digit. To set the tolerance value to a negative value, repeatedly press [P.SET] until the Sign indicator lights.

- 3 Repeat steps 1 and 2 until you have set the desired tolerance value.

- 4 Press [Fn].

- » The tolerance lower limit will be applied, and the upper limit of the previous tolerance will be displayed. (The example on the right shows the previous value as 2.000.)
- » The Tolerance judgment indicator will light in red.



- 5 Set the tolerance upper limit using the same procedure in steps 1 to 3.

- 6 Press [Fn].

- » The tolerance upper limit will be applied, and the Counter will return to the Counter display.

Tips Setting tolerance values other than lower limit ≤ upper limit results in an error. Press [P.SET] to redo the input starting from the tolerance lower limit.

4.5 Turning On or Off the Display

Press [ON/OFF] to turn on or off the Counter's display.

Tips This operation is for turning on or off the Counter's display. When you are connecting a Linear Gage or the I/O cable, remove the AC adapter.

This section explains the operational procedure.

- 1 Press [ON/OFF] while the Counter display is active.

- » The Counter's display will turn off.



- 2 Press [ON/OFF] again.

- » The Counter's display will turn on.



Tips The display of the Counter differs depending on the type of the gage. For ABS types, the value that was displayed when you turned off the display will be displayed. For INC types, the current value of ID, etc., will be displayed.

4.6 Optional Constant Value Setting

You can set an arbitrary multiplication factor for the counter value. If this function is used, the accuracy cannot be guaranteed.

- Tips**
- Set the value of parameter number 16 to 3 (arbitrary value) in advance.
 - When an arbitrary constant is set, the decimal point will blink.

This section explains how to set an arbitrary multiplication factor.

- 1 Press and hold [Fn], and then press [P.SET].

- » The Counter enters Parameter mode. (The set value of parameter number 00 will blink.)



- 2 Press [P.SET] twice to set the value to 2.

- » The display appears as to the right.



- 3 Press [Fn].

- » The previous multiplication factor will be displayed. (The example on the right shows the previous value as 1.0000.)



4 Press [ZERO].

- » The input digit will shift to the right. (The currently selected digit will blink.)



5 Press [P.SET].

- » The multiplication factor will be modified.



6 Repeat steps 4 and 5 until you have set the desired tolerance value.

Tips The setting range is ± 9.9999 .

7 Press and hold [Fn], and then press [P.SET].

- » The Counter will return to the Counter display.

5 External Input/Output Function

This product has an I/O connector that enables data communication with external equipment. There are 2 types of external output modes: "Tolerance judgment output mode", which outputs the tolerance judgment result, and "Digimatic output mode", which outputs data to Digimatic equipment. Also, you can activate the Preset function and activate HOLD on the counter value through external signal input.

5.1 Connections

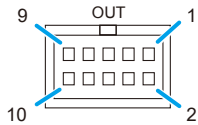
Compatible plug and connecting cable

Compatible plug:

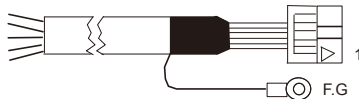
- MIL type connector FAS-10-17 (YAMAICHI)
- MIL type connector XG4M-1030-T (OMRON)

Cable: Use shielded wires and limit the connecting cable length to 3 m or less.

Pin assignment



- Tips**
- External input is valid when input voltage is "L". (External input is negative logic.)
 - "I/O" in the following table refers to the first letters of "Input/Output" respectively. Refer to the input circuit for "I", and the output circuit for "O".
 - In Digimatic output mode, the function of each pin is different. After setting the output mode, connect the cable.
 - The leads at one end of the I/O cable (option) are unbound. Process them as necessary. Connect the F.G. line (green, with a crimping terminal) in the cable to the grounding terminal of the main body.

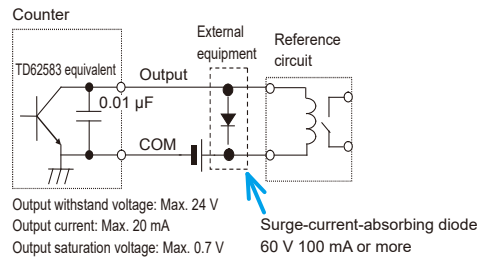


● Tolerance judgment output mode

| Pin number | I/O | Name | Function | Option I/O cable color |
|------------|-----|-------|--|------------------------|
| 1 | - | COM | Internally connected to GND | Light brown/Black |
| 2 | O | +NG | Tolerance judgment result output | Light brown/Red |
| 3 | O | GO | • Relevant output terminal: "L" | Yellow/Black |
| 4 | O | -NG | • Output on error: both +NG and -NG are "L" | Yellow/Red |
| 5 | I | HOLD | HOLD input (Error cancel) | Bright green/Black |
| 6 | I | P.SET | Preset input | Bright green/Red |
| - | - | - | No connection should be made other than those shown above. | |

■ Output circuit

Transistor is on when the output is "L" (open collector).

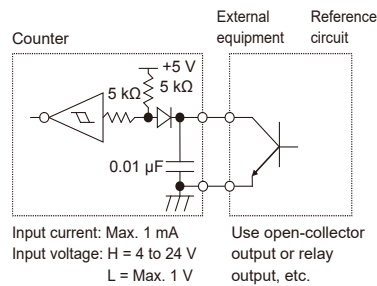


NOTICE

- When using relays, incorporate a surge-current-absorbing diode or a protective circuit. If no protection is incorporated, the IC in the Counter may be damaged.
- The output current when the tolerance judgment result is output is 20 mA at maximum.

■ Input circuit

Input is valid when the input voltage is "L".



5.2 Digimatic Output Function

■ Printing by Digimatic Mini-Processor

You can print the measurement data by connecting to a Digimatic Mini-Processor (DP-1VR). Connect the DP-1VR to the OUTPUT connector (I/O connector) of the Counter with the optional connection cable (RS LINK/Digimatic).

- Tips** A maximum of 6 digits can be printed. If a Counter display overflow occurs, the correct value will not be printed. If an overflow occurs, "F" will be displayed in the most significant digit, e.g., "F0.0005". Modify the Preset value to output the measurement with the most significant digit displayed correctly.

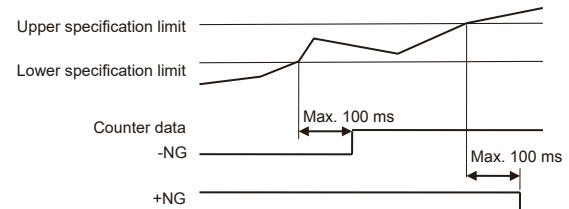
■ Data output by USB Input Tool

Measurement data can be output to a PC by connecting to USB Input Tool.

- Tips** For details, see the User's Manual for USB Input Tool.

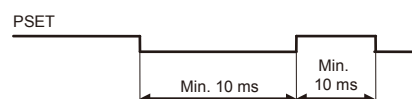
5.3 Timing Chart

● Tolerance judgment result output

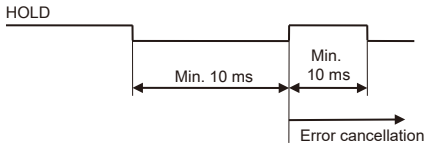


- Tips** The length of time until the tolerance judgment result output accurately reflects the counter data depends on the connected equipment. The length of time "Max. 100 ms" shown in the previous timing chart is valid if a LGD-type Linear Gage is connected.

● Preset



● HOLD



6 Troubleshooting

6.1 Troubleshooting

When the Counter does not operate as expected, refer to the cause of the trouble and the solutions shown below:

| Cause | Solution |
|--|---|
| Symptom 1: The counter value is incorrect (not counting). | |
| Parameters are not correctly set for the type of the Linear Gage, etc. | Set correct parameters. For details, see [] "3.2 Basic Parameters" (page 3). |
| The HOLD signal (UNIT is blinking) is being input. | Check the external input. |
| Calculation with a constant function is set. | Cancel calculation with a constant function. (Set parameter number 16 to 0.) |
| Symptom 2: Cannot execute Zero setting. | |
| The Preset value is a value other than 0. | Set the Preset value to 0. For details, see [] "4.1 Zero Setting" (page 4). |
| Symptom 3: The Counter executes Zero setting unexpectedly. | |
| A power interruption (sudden drop in power voltage) has occurred. | Check the power supply. For details about how to cancel the error, see [-----] in the List of Error Codes. [] "6.2 List of Error Codes" (page 6) |
| Symptom 4: Cannot modify the parameter settings. | |
| "Set parameters" (set value 1) has not been set for Parameter mode. | Set the value for parameter number 00 to 1. For details, see [] "3.1 Procedure for Setting Parameters" (page 3). |

6.2 List of Error Codes

| Display | Cause | Solution/ Error cancellation method |
|---------|--|---|
| Err 10 | Abnormal power voltage | Connect to the specified power. Automatic cancellation |
| [-----] | In stand-by state after power-on or a power interruption | Re-check the power if a power interruption has occurred. • Press [P.SET]. • Input an external HOLD signal. |
| Err 30 | The counter value is 8 digits or more. | Modify the Preset value. • Press [P.SET]. • Input an external HOLD signal. |
| Err 40 | Linear Gage malfunction or excess speed | • Check the Linear Gage connection. • Revise the measurement conditions. • Press [P.SET]. • Input an external HOLD signal. |
| F***** | The counter value is 6 digits or more. | Return the counter value to within 6 digits. |
| Err 90 | Tolerance value setting error | Input the tolerance value again. Press [P.SET]. |
| Err 95 | Key protection | Cancel the key protection parameter. (Set parameter number 35 to 0.) Automatic cancellation |

Tips

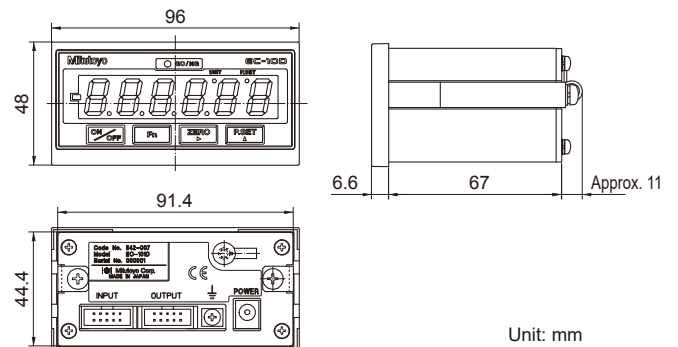
- When an error occurs in tolerance judgment output (the value for parameter number 20 is 0), both pin numbers 2 (+NG) and 4 (-NG) will be "L".
- If an error occurs while you are setting parameters, the Preset value, or the tolerance value, the error will be displayed after you return to the counter state. However, the error signal will be output immediately to any external output.
- Errors can also be canceled with an external PSET signal.
- All decimal points blink for about 8 seconds when an error is canceled.

7 Specifications

Basic specifications

| | |
|--|---|
| Code No. | 542-007 |
| Model No. | EC-101D |
| Number of display axis | 1 axis |
| Display | Minus (-) sign and 6 numeric digits (green LED) |
| Minimum reading (Count display range) | Set automatically according to the gage 0.01 (±9999.99) mm 0.001 (±999.999) mm |
| Power source voltage | DC +9 V to 12 V |
| Power consumption | Max. 4.8 W (Max. 400 mA) |
| Operating temperature (humidity) range | 0°C to 40°C (20% RH to 80% RH, without condensation) |
| Storage temperature (humidity) range | -10°C to 50°C (20% RH to 80% RH, without condensation) |
| External dimensions | 96 (W) × 48 (H) × 85 (D) mm |
| Mass | Approx. 220 g |
| CE marking/ UKCA marking | EMC Directive/Electromagnetic Compatibility Regulations: EN IEC 61326-1 Immunity test requirement: Clause 6.2 Table 2 Emission limit: Class B RoHS Directive/The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations: EN IEC 63000 |
| Interface | I/O, Digimatic output |

External dimensions drawing



Options

| Part No. | Name |
|----------|--|
| 936937 | Connection cable (RS LINK/Digimatic) (1 m) |
| 965014 | Connection cable (RS LINK/Digimatic) (2 m) |
| 214938 | DC plug (MP-121M) |
| 21HZA222 | I/O cable (2 m) |

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