



Back Pressure Type Indicator

LE100A

# Z-1302 Specification

IMR01C28-E1

NOV. 2024

Relevant instruction manual number: IMR01C20-X□, IMR01C21-E□, IMR01C22-E□

This manual describes items relating only to the Z-1302 specification. (Including ZK-1339 specification)

## ■ Outline

This instrument with the Z-1302 specification has the following additional specifications.

- Mounting brackets and mounting method are different from the standard model. (Same as the standard model when ZK-1339 is specified)
- The span setting by using the actual liquid was changed.
- The function of setting the measured value (PV) display to “0” was added.
- The selection of measured value (PV) display/non-display was added.
- The factory set value of digital filter and differential gap were changed.
- Details of overscale and under-scale were changed.
- Performance was changed partly.

## ■ Model code

Z-1302 or ZK-1339 is added to the end of model codes.

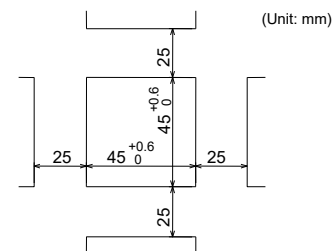
LE100A - □ - □ 6 \* □□□ N - □□ Z-1302 (or ZK-1339)

## ■ Mounting method

### ● When the panel with 1 to 4 mm in thickness

1. Make a rectangular cutout corresponding to the number of instruments to be mounted on panel by referring to the panel cutout dimensions.
2. Since the mounting brackets are already installed on the instrument, insert the instrument into the panel from the panel cutout without removal of the brackets. Firmly fix this instrument to the panel.

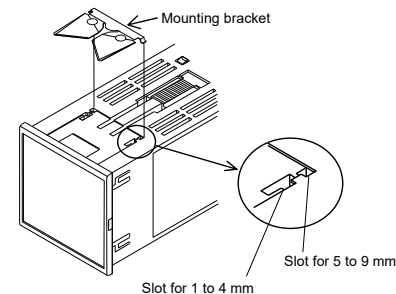
Panel cutout



Z-1302 specification corresponds to a panel thickness of 1 to 9 mm.

### ● When the panel with 5 to 9 mm in thickness

1. Make a rectangular cutout corresponding to the number of instruments to be mounted on panel by referring to the panel cutout dimensions.
2. Remove the mounting brackets (two pieces for both top and bottom sides) from the instrument with a blade screwdriver.
3. Insert the mounting brackets into the mounting slots for 5 to 9 mm of the instrument.
4. Insert the instrument into the panel from the panel cutout. Firmly fix this instrument to the panel.



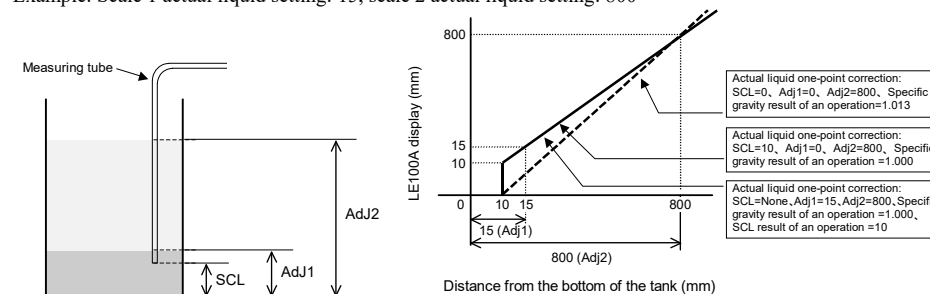
The mounting brackets and the mounting method for the ZK-1339 specification are the same as those in the standard specification. (See IMR01C20-X□)

## ■ Span setting by actual liquid

Method for the span setting by actual liquid, there are two ways of a following.

- This is the function of automatically computing and also updating the scale low (SCL) when compensating the specific gravity at actual liquid two-points correction.
- Compensate the specific gravity using the scale low (SCL) set value when compensating that at actual liquid one-point correction.

Example: Scale 1 actual liquid setting: 15, scale 2 actual liquid setting: 800



If it is necessary to change the automatically computed scale low (SCL) to any other scale low limit, it can be changed in span setting mode.

## ■ Measured value (PV) display to “0”

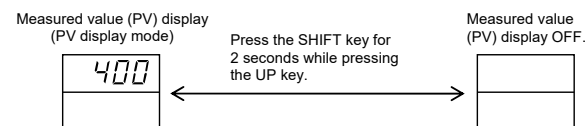
The function of setting the measured value (PV) display to “0” when the measuring tube does not touch liquid.

## ■ Measured value (PV) display/non-display

Transfer the measured value (PV) display/non-display.

<Transfer with LE100A>

At the PV display mode, press the SHIFT key for 2 seconds while pressing the UP key.



<Transfer with communication>

Following communication identifier is added.

(Attribute R/W: Read and Write)				
Name	Identifier	Attribute	Description	Factory set value
Measured value (PV) display/non-display	DW	R/W	0: Display 1: Non-display	0

■ The factory set value of digital filter and differential gap

#1: Factory set value

Symbol	Name	Range	Description	#1
	Digital filter	0: OFF 1 to 100 seconds	In order to lessen the effect of measuring liquid fluctuations (waves) by purge gas, set the time of the first order lag filter.	1
	Differential gap of the output 1-8	0.0 to 10.0 % of span	Sets the differential gap of the output 1-8.	0.1

<Communication Identifier>

(Attribute R/W: Read and Write)

Name	Identifier	Attribute	Description	Factory set value
Digital filter	<b>F1</b>	R/W	0: OFF 1 to 100 seconds	1
Output 1 differential gap	<b>HA</b>	R/W	0.0 to 10.0 % of span	0.1
Output 2 differential gap	<b>HB</b>	R/W	0.0 to 10.0 % of span	0.1
Output 3 differential gap	<b>HC</b>	R/W	0.0 to 10.0 % of span	0.1
Output 4 differential gap	<b>HD</b>	R/W	0.0 to 10.0 % of span	0.1
Output 5 differential gap	<b>HE</b>	R/W	0.0 to 10.0 % of span	0.1
Output 6 differential gap	<b>HF</b>	R/W	0.0 to 10.0 % of span	0.1
Output 7 differential gap	<b>HG</b>	R/W	0.0 to 10.0 % of span	0.1
Output 8 differential gap	<b>HH</b>	R/W	0.0 to 10.0 % of span	0.1

■ Over-scale and underscale

Added the details of error number “Err8” (Input capture hardware error) to the details of over-scale and underscale.

The error number “Err8” was deleted from error display.

Display	Details	Alarm output	Solution
 [Flashing]	• Measured value is beyond the effective input range. • Input capture hardware error	All points ON • Output state according to the Output type selection.	• Check input pressure value • Check measuring tube
 [Flashing]	• Measured value is below the effective input range. • Input capture hardware error	• Output timer setting is invalid.	• Check measuring tube connection.

■ Performance

Measured (display) accuracy: Within  $\pm(0.2 \% + 1 \text{ digit of span})$  [Including hysteresis of pressure sensor]  
Amount of long-term drift:  $\pm(0.3 \% \text{ of span})$  [6 months]  
 $\pm(0.4 \% \text{ of span})$  [One year]  
Long-term drift: Zero drift by long period use of pressure sensor  
Temperature characteristics: Zero output:  $\pm(0.04 \% \text{ of span})/^{\circ}\text{C}$   
Span output:  $\pm(0.04 \% \text{ of span})/^{\circ}\text{C}$



- Measured (display) accuracy and amount of long-term drift:  
Ambient temperature within  $23^{\circ}\text{C} \pm 1^{\circ}\text{C}$  and pressure generation device value by static pressure measurement. (Accuracy of pressure generator: Within 0.1 % of span)
- Span = 0 to 1000 mm H<sub>2</sub>O = 0 to 9.807 kPa (Specific gravity of water: 1.000)

