

# E8Y

## Micropressure Sensor with Easy-to-Read Digital Display

- Repeat accuracy of  $\pm 1\%$  FS (setting resolution: 0.01 kPa), high-precision pressure control available.
- Compact design (31 × 30 × 30 mm) saves mounting space.
- Easy-to-read red LED indicator.
- Analog current output models available (E8Y-A□Y).
- Pressure port Rc (PT) 1/8 models available (-R).
- EN and UL approved.



## Ordering Information

### Sensors

Pressure range *	Digital output	Linear output	Model
0 to 200 Pa	NPN open collector	---	E8Y-AR2C
0 to 500 Pa			E8Y-AR5C
0 to 2.00 kPa			E8Y-A2C
0 to 5.00 kPa		4 to 20 mA	E8Y-A5C
0 to 200 Pa			E8Y-AR2Y
0 to 2.00 kPa			E8Y-A2Y
0 to 5.00 kPa	PNP open collector		E8Y-A5Y
0 to 5.00 kPa			E8Y-A5B

Note: Order the optional E89-Y1 Panel-mounting Bracket.  
 A model number ending in -R indicates the pressure port is die-cast for Rc (PT) 1/8 models.

### Accessories (Order Separately)

#### Panel Attachment Parts Set (For □36 and □45 Models)

Model
E89-Y1 *

\* Includes the cover, guide, frame, and holder.

Pressure Sensors

Sensing Guide

Pressure Sensors

Other Information

E8F2

E8MS  
/E8M

E8Y

E8Y-□-□

## Ratings

Model		E8Y-AR2C	E8Y-AR5C	E8Y-A2C E8Y-A2C-R	E8Y-A5B E8Y-A5C E8Y-A5C-R	E8Y-AR2Y	E8Y-A2Y E8Y-A2Y-R	E8Y-A5Y E8Y-A5Y-R	
<b>Power supply voltage</b>	12 to 24 VDC $\pm 10\%$ with a ripple (p-p) of 10% max.								
<b>Current consumption</b>	50 mA max.					75 mA max.			
<b>Pressure type</b>	Differential pressure								
<b>Rated pressure range</b>	0 to 200 Pa	0 to 500 Pa	0 to 2.00 kPa	0 to 5.00 kPa	0 to 200 Pa	0 to 2.00 kPa	0 to 5.00 kPa		
<b>Withstand pressure</b>	5 kPa		50 kPa		5 kPa	5 kPa			
<b>Applicable fluid</b>	Non-corrosive gas and non-flammable gas								
<b>Linear output</b>	<b>Output current</b>	---	---	---	---	4 to 20 mA			
	<b>Permissible load resistance</b>	---	---	---	---	0 to 250 $\Omega$			
	<b>Precision</b>	---	---	---	---	$\pm 2.5\%$ FS	$\pm 1.0\%$ FS		
	<b>Linearity</b>	---	---	---	---	$\pm 2.5\%$ FS	$\pm 1.0\%$ FS		
<b>Digital output</b>	<b>Output form</b>	NPN open collector (NO/NC) *							
	<b>Load current</b>	100 mA							
	<b>Output applied voltage</b>	30 VDC max.							
	<b>Residual voltage</b>	1.0 V max. with a load current of 100 mA or 0.4 V max. with a load current of 16 mA							
	<b>Repeat accuracy</b>	$\pm 2.5\%$ FS	$\pm 1.0\%$ FS			$\pm 2.5\%$ FS	$\pm 1.0\%$ FS		
<b>Display</b>	<b>Display</b>	3-digit 7-segment red LED							
	<b>Indicator lamp</b>	Orange LED indicator (OUT1: lit when digital output is ON) Orange LED indicator (OUT2: lit when digital output is ON)							
<b>Response speed</b>	0.5 s max.								
<b>Display accuracy</b>	$\pm 1.0\%$ FS								
<b>Setting resolution</b>	1 Pa		0.01 kPa		1 Pa	0.01 kPa			
<b>Protection circuits</b>	Reverse polarity protection, load short-circuit protection								
<b>Ambient temperature</b>	Operating: $-10$ to $55^{\circ}\text{C}$ (with no icing)								
<b>Ambient humidity</b>	Operating: 25% to 85% (with no condensation)								
<b>Storage temperature</b>	$-25$ to $65^{\circ}\text{C}$								
<b>Accessories</b>	Mounting Brackets (A and B), Instruction manual								

\* The E8Y-A5B provides a PNP open-collector (NO/NC) output.

## Specifications

<b>Temperature influence</b>	E8Y-A2C/A5C: $\pm 3\%$ FS max. E8Y-AR5C: $\pm 6\%$ FS max. E8Y-AR2C: $\pm 10\%$ FS max.
<b>Humidity influence</b>	E8Y-A2C/A5C: $\pm 3\%$ FS max. E8Y-AR5C: $\pm 6\%$ FS max. E8Y-AR2C: $\pm 10\%$ FS max.
<b>Degree of protection</b>	IP40 (IEC)
<b>Dielectric strength</b>	1,000 VAC at 50/60 Hz for 1 minute
<b>Insulation resistance</b>	100 M $\Omega$ min. (at 500 VDC) between current-carrying parts and case
<b>Vibration resistance</b>	Destruction: 10 to 150 Hz, 0.75-mm single amplitude or 100 m/s <sup>2</sup> , 4 times each for 8 min in X, Y and Z directions
<b>Shock resistance</b>	Destruction: 300 m/s <sup>2</sup> 3 times each in X, Y and Z directions
<b>Pressure port</b>	4.5-dia resin pipe or Rc (PT) 1/8 taper screw (-R type)
<b>Cable</b>	Vinyl-insulated round cable 4 dia., Standard length: 2 m
<b>Weight</b>	Approx. 80 g

Pressure  
SensorsSensing  
GuidePressure  
SensorsOther  
Information

E8F2

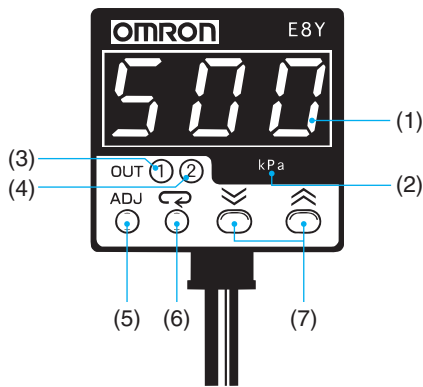
E8MS  
/E8M

E8Y

E8Y□□□

# E8Y

## Nomenclature



### Display

- (1) Numerical value/menu indication**  
Displays the measured pressure and some menu settings.
- (2) Unit**  
Shows the measuring unit. Unit currently in use is illuminated.
- (3) OUT 1 indication LED**  
In measurement mode, it lights when OUT 1 output is on. In setting mode, it flashes when OUT 1 is being set.
- (4) OUT 2 indication LED**  
In measurement mode, it lights when OUT 2 output is on. In setting mode, it flashes when OUT 2 is being set.

### Operation Key

- (5) ADJ**  
In measurement mode, it adjusts the Zero Point.  
In setting mode, it shifts to measurement mode.
- (6) MODE**  
In measurement mode, it shifts to setting mode and selects the current setting or menu option.
- (7) UP/DOWN**  
In measurement mode, pushing the DOWN key displays the ON and OFF points of OUT 1; pushing the UP key displays the ON and OFF points of OUT 2.  
In setting mode, the UP and DOWN keys increase or decrease the numeric value, respectively, or scroll through the menu options.

## Dimensions

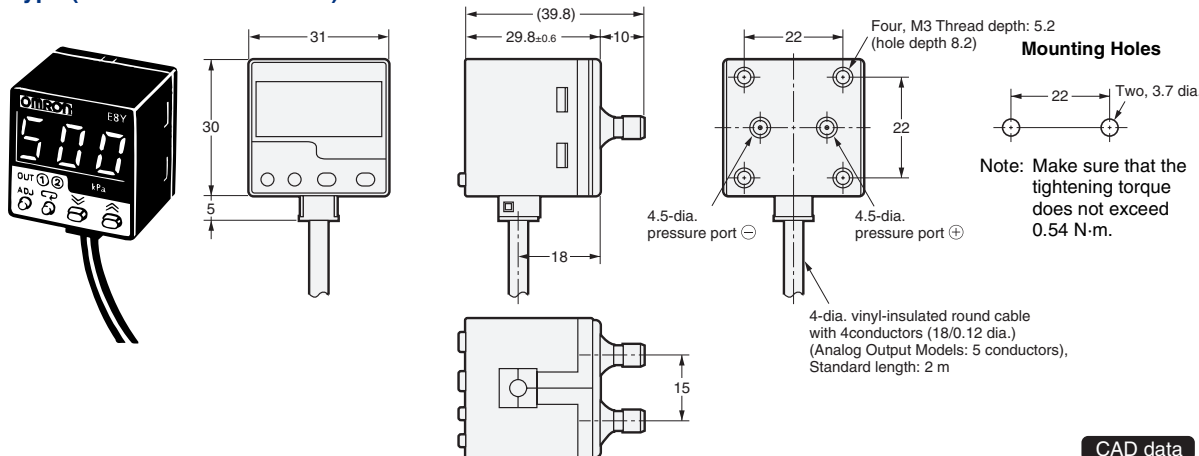
(Unit: mm)

Pressure Sensors

### Sensors

#### Standard Port Type (Pressure Port: 4.5 dia.)

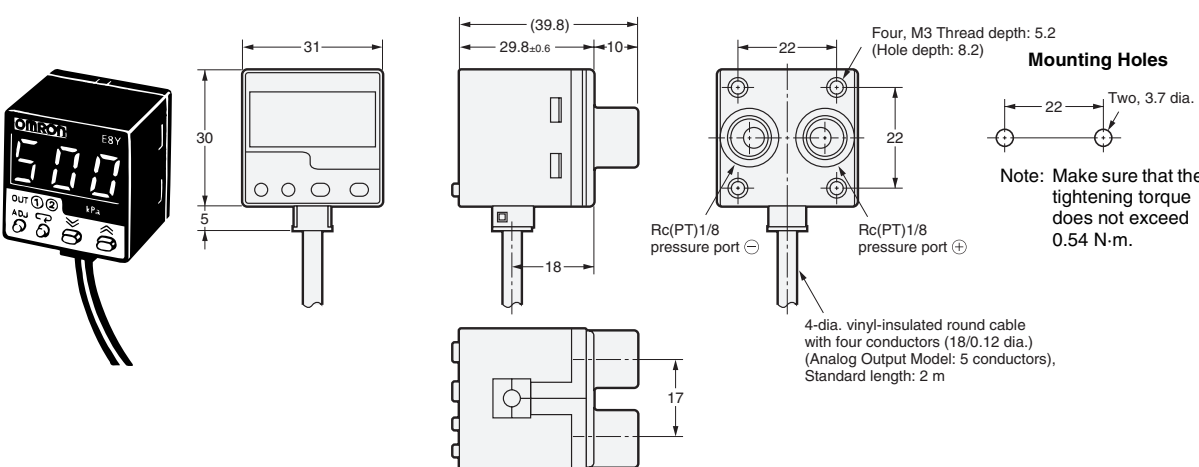
- E8Y-AR5C
- E8Y-AR2C
- E8Y-A2C
- E8Y-A5C
- E8Y-A5B
- E8Y-AR2Y
- E8Y-A2Y
- E8Y-A5Y



CAD data

#### Die-case Port Type (Pressure port: Rc(PT)1/8)

- E8Y-A2C-R
- E8Y-A5C-R
- E8Y-A2Y-R
- E8Y-A5Y-R



E8F2

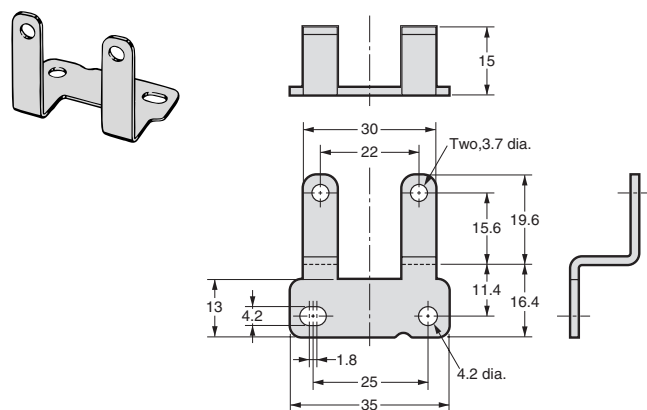
E8MS /E8M

E8Y

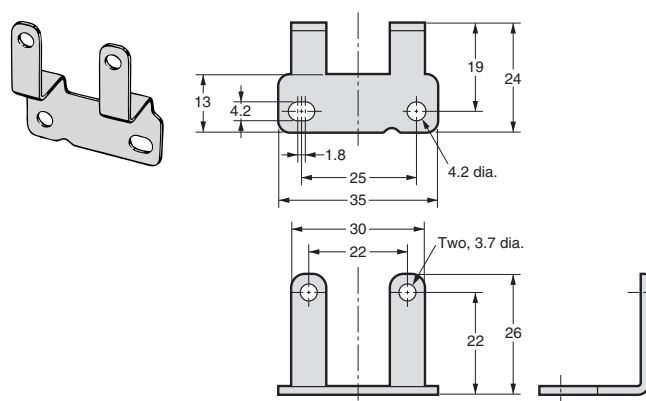
E8Y □-□

Accessories (Provided)

Mounting Bracket A



Mounting Bracket B



Refer to the *E8Y Pressure Sensor Datasheet* (Cat. No. F045) for details.

Pressure  
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E8F2

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