

Differential Pressure Sensor

E8Y

"Cube" Type Differential Pressure Sensor with LED Display Offers High Precision Sensing

- Repeat accuracy of $\pm 1\%$ FS (setting resolution: 0.01kPa), high-precision of pressure control available
- Compact style: 31 x 30 x 30 mm saves mounting space
- Easy-to-see red LED indicator
- 1,000 Pa range of High-precision Models (-A1C), PNP output models (-A1B or A5B) addition.
- Linear current output models available (E8Y-A□Y)

Pressure port Rc (PT) 1/8 models available (-R)
EN standards



Ordering Information

Sensors

Pressure range *	Digital output	Linear output	Model
0 to 1.00 kPa	NPN open collector	---	E8Y-A1C
0 to 2.00 kPa			E8Y-A2C
0 to 5.00 kPa			E8Y-A5C
0 to 1.00 kPa		4 to 20 mA	E8Y-A1Y
0 to 2.00 kPa			E8Y-A2Y
0 to 5.00 kPa			E8Y-A5Y
0 to 1.00 kPa	PNP open collector	---	E8Y-A1B
0 to 5.00 kPa			E8Y-A5B

Note: Be sure to order panel-mounting bracket of E89-Y1.

Accessories (Order Separately)

Panel attachment parts set

Model
E89-Y1 *

* Cover, guide, frame and holder

Ratings

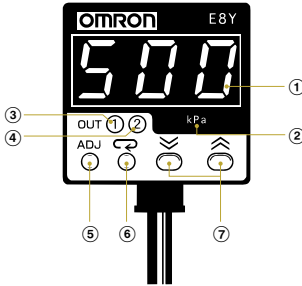
Model	E8Y-A1B E8Y-A1C E8Y-A1C-R	E8Y-A2C E8Y-A2C-R	E8Y-A5B E8Y-A5C E8Y-A5C-R	E8Y-A1Y E8Y-A1Y-R	E8Y-A2Y E8Y-A2Y-R	E8Y-A5Y E8Y-A5Y-R
Power supply voltage	12 to 24 VDC $\pm 10\%$ with a ripple (p-p) of 10% max.					
Current consumption	50 mA max.			75 mA max.		
Pressure type	Differential pressure					
Rated pressure range	0 to 1.00 kPa	0 to 2.00 kPa	0 to 5.00 kPa	0 to 1.00 kPa	0 to 2.00 kPa	0 to 5.00 kPa
Proof pressure	20kPa	50kPa		20kPa	50kPa	
Applicable fluid	Non-corrosive gas and non-flammable gas					
Linear output	Output current	---	---	---	4 to 20 mA	
	Permissible resistive load	---	---	---	0 to 250 Ω	
	Precision	---	---	---	$\pm 1.0\%$ F.S.	
	Linearity	---	---	---	$\pm 1.0\%$ F.S.	
Digital output	Output form	PNP or NPN open collector (NO/NC)				
	Load current	100 mA				
	Output applied voltage	30 VDC max.				
	Residual voltage	1 V max. with a load current of 100 mA or 0.4 V max. with a load current of 16 mA				
	Repetition precision	$\pm 1.0\%$ F.S.				
Display	Display	3 digit red LED				
	Indicator lamp	Yellow LED indicator (OUT1: when digital output is ON: lit) Yellow LED indicator (OUT2: when digital output is ON: lit)				
	Unit	The set-up unit is lit in red.				
Response speed	0.5s					
Display accuracy	$\pm 1.0\%$ F.S.					
Setting resolution	1Pa	0.01kPa		1Pa	0.01kPa	
Protective circuits	Reverse polarity connection, load short-circuiting					
Ambient temperature	-10°C to 55°C (14°F to 131°F) with no icing					
Ambient operating humidity	25% to 85% (with no condensation)					
Storage temperature	-25°C to 65°C (-13°F to 149°F)					
Accessories	Mounting bracket and instruction sheet					

Performance

Temperature influence	E8Y-A2C/A5C: $\pm 3\%$ FS max. E8Y-A1C: $\pm 5\%$ FS max.
Ambient humidity	E8Y-A2C/A5C: $\pm 3\%$ FS max. E8Y-A1C: $\pm 5\%$ FS max.
Protective structure	IEC Standard IP40
Dielectric strength	1,000 VAC at 50/60 Hz for 1 minute
Insulation resistance	50 M Ω min. (at 500 VDC) between current carry parts and case
Vibration resistance	Endurance: 10 to 500 Hz, 1.0-mm double amplitude or 100 m/s ² , 3 times each for 11 min. in X, Y and Z directions
Shock resistance	Endurance: 300 m/s ² (30G) 3 times each to X, Y and Z directions
Pressure port	Resin pipe for 4.5 dia., zinc die-cast for Rc (PT) 1/8 taper screw
Cable	Vinyl-insulated round cable 4 dia.; Standard length: 2 m
Weight	Approx. 80 g

Note: When E8Y-A1C or A1C-R or A1Y or A1Y-R exceeds 999Pa, a unit will serve as kPa and will also change a display.

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

Selects the current number 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.

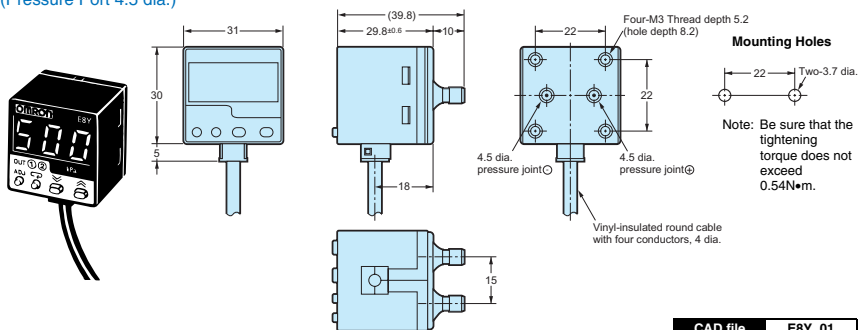
Dimensions (Unit: mm)

Sensors

Standard Port (Pressure Port 4.5 dia.)

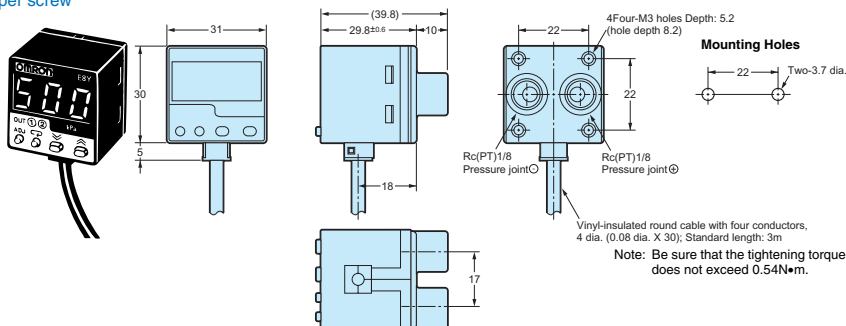
Type

- E8Y-A1B
- E8Y-A1C
- E8Y-A2C
- E8Y-A5B
- E8Y-A1Y
- E8Y-A2Y
- E8Y-A5Y



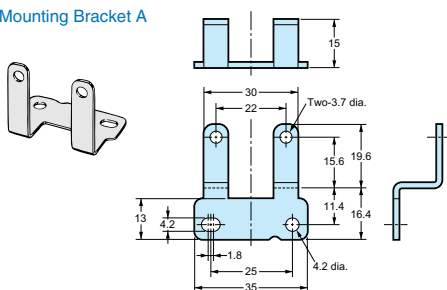
Pressure port: resin pipe for 4.5 dia., zinc die-cast for Rc (PT) 1/8 taper screw

- E8Y-A1C-R
- E8Y-A2C-R
- E8Y-A5C-R
- E8Y-A1Y-R
- E8Y-A2Y-R
- E8Y-A5Y-R



Accessories (supplied)

Mounting Bracket A



Mounting Bracket B

