

# Cube-Type Pressure Sensors

**OMRON**  
the problem solvers™

with advanced control options  
and **PSI** display



## Differential Pressure Sensor – E8Y

In one miniature package, the E8Y differential pressure sensor solves applications that previously required two individual sensors and a controller. It is an extremely sensitive and reliable controller with discrete outputs for direct connections to your PLC. A separate analog output makes the data available for charting. The E8Y puts intelligent control at the site, freeing up your control system for faster performance.

31 x 30 x 30 mm  
(1.22 x 1.18 x 1.18 in)

28 x 28 x 29 mm  
(1.10 x 1.10 x 1.14 in)

## Gauge Pressure Sensor – E8F2

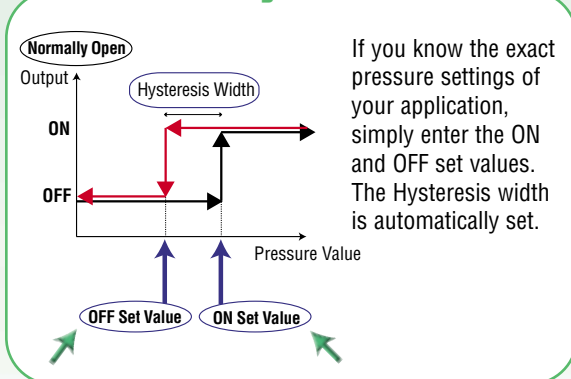
Make your pick-and-place and object detection applications perform at peak consistency with the new E8F2 gauge pressure sensor. Its large LED face simultaneously displays an analog bar graph and digital pressure values so you can monitor all aspects of your application at a glance. These models also have two independent discrete outputs for quick connections to your control device, and an analog output that simplifies data collection. Choose either vacuum or pressure models to fit your application.

- Small size
- PSI models with 2 pressure ranges
- 1-touch programming for upper and lower limits
- Hysteresis mode (ideal for detection applications)
- Window modes (ideal for maintaining a pressure range)
- Digital and analog outputs
- NPN or PNP output types
- Manual or Automatic programming
- User defined normally open or normally closed configuration
- 3 different pressure ranges

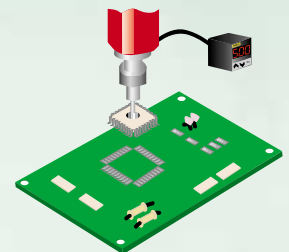
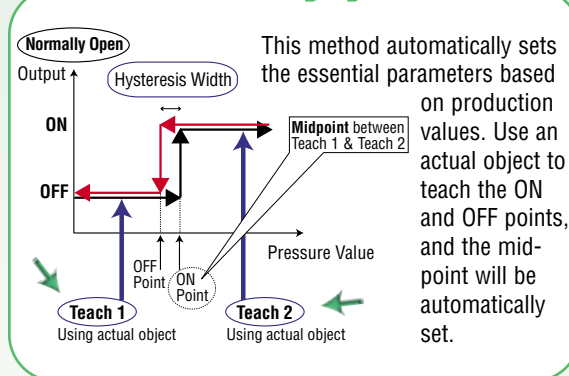
## Programming Options

Both the E8Y and E8F2 can be configured either normally open or normally closed. They also offer a choice of Hysteresis or Window mode and auto or manual programming.

### Manual Hysteresis Mode

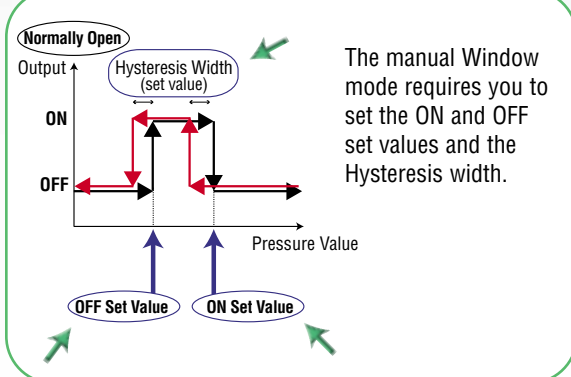


### 2-Point Auto-Teaching Hysteresis Mode

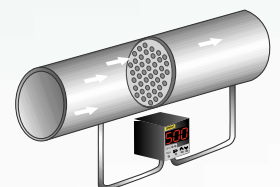
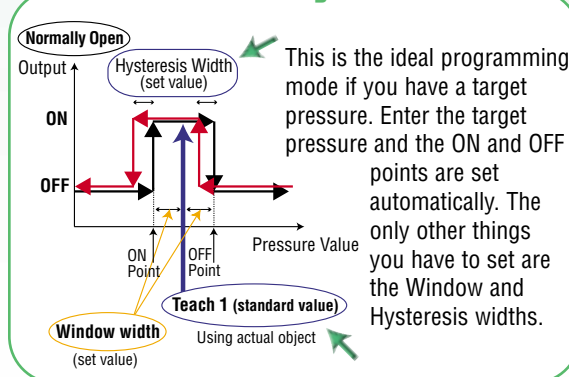


These programming methods are ideal for detection applications.

### Manual Window Mode



### I-Point Auto-Teaching Window Mode



The 'Window mode' is ideal for applications where you have to maintain a specific pressure range.

NOTE: The above charts show a 'Normally Open' configuration. Reverse them for a 'Normally Closed' configuration.



## Specifications

### E8Y

### E8F2

<b>Pressure type</b>	Differential pressure	Gauge pressure
<b>Power supply voltage</b>	12 to 24 VDC	12 to 24 VDC
<b>Rated pressure</b>	0 to 0.290 psi 0 to 0.725 psi	0 to 145 psi 0 to 14.5 psi 0 to -14.5 psi
<b>Linearity</b>	±1% FS max.	±1% FS max.
<b>Response time (digital output)</b>	0.5 sec. max.	5 ms max.
<b>Display accuracy</b>	±1% FS	±3% FS
<b>Linear output</b>	4 to 20 mA ±1% FS with a permissible resistive load of 250 Ω	1 to 5 V ±5% FS with an output impedance of 1 kΩ and a permissible resistive load of 500 kΩ
<b>Digital output</b>	NPN open collector (NO/NC) Load current: 100 mA max. 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	NPN open collector (NO/NC) Load current: 30 mA max. Applied voltage: 30 VDC max. Residual voltage: 1 V max. with a load current of 30 mA
<b>Pressure port</b>	Rc (PT) 1/8 inch female screw or 4.5 mm dia. pipe	Rc (PT) 1/8 inch male screw and M5 female screw
<b>Dimensions (W x H x D)</b>	31 x 30 x 30 mm	28 x 28 x 29 mm
<b>Catalog number</b>	Data sheet: F045-E3-2	Data sheet: D086-E3-2

## E8Y

### Ordering Information

Type	Digital output	Analog output	Pressure range	Port/mounting	Part number
Miniature differential pressure sensor	NPN open collector (2 independent outputs)	-	0 to 0.290 psi	4.5 mm dia. pipe	<b>E8Y-A2C-D</b>
				Rc (PT) 1/8 inch	<b>E8Y-A2C-RD</b>
		4 to 20 mA	0 to 0.725 psi	4.5 mm dia. pipe	<b>E8Y-A5C-D</b>
				Rc (PT) 1/8 inch	<b>E8Y-A5C-RD</b>
			0 to 0.290 psi	4.5 mm dia. pipe	<b>E8Y-A2Y-D</b>
				Rc (PT) 1/8 inch	<b>E8Y-A2Y-RD</b>
0 to 0.725 psi	4.5 mm dia. pipe	<b>E8Y-A5Y-D</b>			
	Rc (PT) 1/8 inch	<b>E8Y-A5Y-RD</b>			

## E8F2

### Ordering Information

Type	Digital output	Analog output	Pressure range	Part number
Positive pressure sensor	NPN open collector (independent, two outputs)	1 to 5 V	0 to 14.5 psi	<b>E8F2-D01C</b>
			0 to 145 psi	<b>E8F2-D10C</b>
Negative pressure sensor	NPN open collector (independent, two outputs)		0 to -14.6 psi	<b>E8F2-DN0C</b>

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