

Product Discontinuation Notices

January 6, 2014

Pressure Sensors

No. 2011265E(2)

Discontinuation Notice of Pressure Sensor (Stainless diaphragm) E8AA series (Special product), Slim Digital Pressure Sensor E8CB series, Slim General-purpose Pressure Sensor E8EB series, Pressure Sensor E8MS/E8M series and Accessory Y92 series.

REQUEST

There was modification in portion of Product Discontinuation notices of Product News No. 2011265E of August 2011 issue. What we have changed is as follows; The addition of models and Discontinuation date of those.

Please abolish old edition, replace the latest No. 2011265E(2).

Product Discontinuation

Pressure Sensor

E8AA-M05 20M

E8AA-M10 20M

E8CB-01C 2M

E8CB-CN0C2B 2M

E8EB-01B 2M

E8EB-01C 2M

E8EB-10B 2M

E8EB-10C 2M

E8EB-10C 5M

E8EB-N0B2B 2M

E8EB-N0C2B 2M

E8MS/E8M series

Y92 series

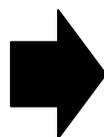
Recommended Replacement

E8AA-M05 2M

E8AA-M10 2M

E8F2 series

No recommended replacement



Discontinuation date : The end of March, 2012 (Model Y92 series are excluded.)

Discontinuation date : The end of October, 2013 (Only Model Y92 series)

Caution on recommended replacement

E8AA series

- Cable length will be changed.

E8CB series

- It will be changed from Slim type to LED digital display type(28*28*29mm).
- Wiring will be changed from 4 wired to 5 wired.
- Withstand pressure will be changed from 490 KPa to 400 KPa.

E8EB series

- It will be changed from Slim type to LED digital display type(28*28*29mm).
- Wiring will be changed from 4 wired to 5 wired.
- Withstand pressure will be changed from 2.0 MPa to 1.5 MPa.(only E8EB-10C, E8EB-10B)

E8MS/ E8M series

- Notes that dimensions, mounting dimensions and other characteristics will be different.

Difference from discontinued product

E8AA series

Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
E8AA-[]	**	*	*	**	**	**	**

E8CB series

Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
E8F2-[]	*	--	*	--	*	*	--

E8EB series

Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
E8F2-[]	*	--	*	--	*	*	--

E8MS/ E8M series

Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
E8F2-[]	--	--	--	--	*	*	--

** : Fully compatible

* : The change is a little/Almost compatible

-- : Not compatible

- : No corresponding specification

Product Discontinuation and recommended replacement

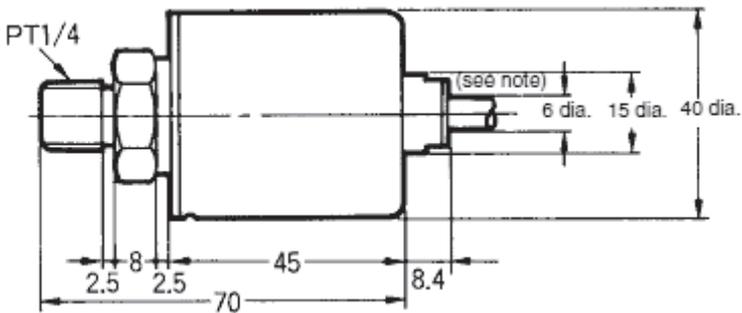
Product discontinuation	Recommended replacement
Y92F-48-S	No recommended replacement
Y92F-37-S	No recommended replacement
Y92A-40-S	No recommended replacement
E8MS-N1	No recommended replacement
E8MS-N0-1	No recommended replacement
E8MS-N0	E8F2-AN0C
E8MS-10	E8F2-B10C
E8MS-01	E8F2-A01C
E8M-N0	E8F2-AN0C
E8M-MP8	No recommended replacement
E8M-A1-S	No recommended replacement
E8M-A1 3M	No recommended replacement
E8M-10	E8F2-B10C
E8EB-N0C2B -100-0 2M	E8F2-AN0C
E8EB-N0B2B -100-0 2M	E8F2-AN0B -1.0-0
E8EB-10C 0-1000 5M	E8F2-B10C
E8EB-10C 0-1000 2M	E8F2-B10C
E8EB-10B 0-1000 2M	E8F2-B10B
E8EB-01C 0-100 2M	E8F2-A01C
E8EB-01B 0-100 2M	E8F2-A01B
E8CB-CN0C2B -100-0 2M	E8F2-AN0C
E8CB-01C 0-100 2M	E8F2-A01C
E8AA-M10 0-1000 5M	E8AA-M10 2M
E8AA-M05 20M	E8AA-M05 2M
E89-M5-S	No recommended replacement
E89-M4-S	No recommended replacement
E89-M4-R	No recommended replacement
E89-M4-1 5M	No recommended replacement
E89-M4-1 3M	No recommended replacement
E89-M4-1 10M	No recommended replacement
E89-M4	No recommended replacement
E89-M3-S	No recommended replacement
E89-M3 3M	No recommended replacement

E8AA series

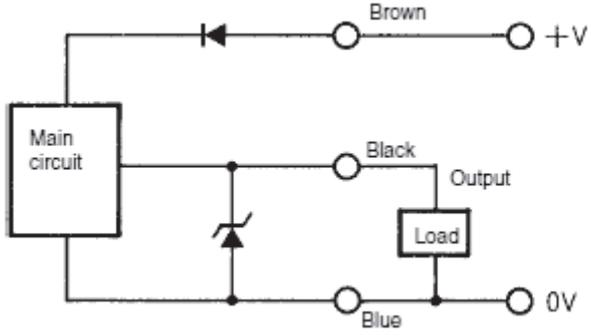
Body color

No changing

Dimensions

Product discontinuation E8AA series	Recommendable replacement E8AA series
<p>E8AA with 20m cable</p> 	<p>E8AA with 2m cable Only difference is length of the cable.</p>

Wire connection

Product discontinuation E8AA series	Recommendable replacement E8AA series
	<p>No changing</p>

Ratings and Specifications

No changing

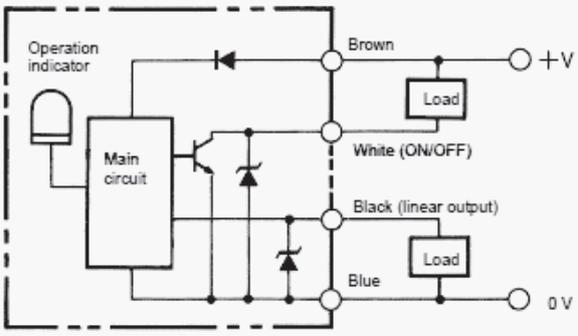
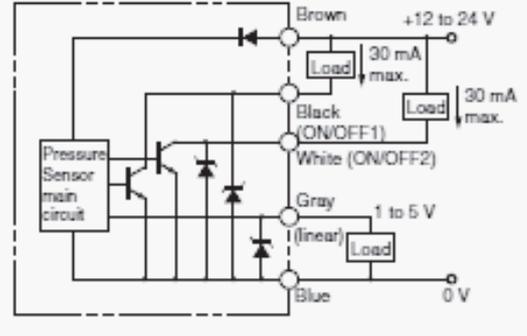
■ Ratings

Item/Model	E8AA-M05	E8AA-M10
Supply voltage	12 to 24 VDC $\pm 10\%$, ripple (p-p): 5% max.	
Current consumption	40 mA max. (standard value including 20-mA output current) at rated pressure	
Pressure type	Gauge pressure	
Pressure range	0 to 490 kPa (0 to 5 kgf/cm ²)	0 to 980 kPa (0 to 10 kgf/cm ²)
Withstand pressure	980 kPa (10 kgf/cm ²)	2.0 MPa (20 kgf/cm ²)
Applicable material	Non-corrosive gasses, non-corrosive liquids, inert gasses	
Accuracy (linear output)	$\pm 1\%$ FS max. with a resistive load of 150 Ω at 23°C	
Hysteresis (linear output)	$\pm 0.5\%$ FS max.	
Linearity (linear output)	$\pm 1\%$ FS max.	
Response time	100 ms max.	
Linear output	4 to 20 mA with a permissible resistive load of 300 Ω max.	
Ambient temperature	Operating: -10°C to 60°C (with no icing) Storage: -25°C to 70°C	
Ambient humidity	35% to 95% (with no condensation)	
Pressure leading part	R(PT) 1/4	

■ Characteristics

Item/Model	E8AA-M05	E8AA-M10
Temperature influence	$\pm 0.09\%$ FS/ $^{\circ}\text{C}$ max. between -10°C and 60°C	
Voltage influence	Max. output current fluctuation of $\pm 0.5\%$ FS at 12 VDC $\pm 10\%$ or 24 VDC $\pm 10\%$ with a ripple of 5%	
Insulation resistance	100 M Ω min. (at 500 VDC) between current carry parts and case	
Dielectric strength	1,000 VAC, 1 min	
Vibration resistance	Destruction: 10 to 500 Hz, 1.5-mm double amplitude or 100 m/s ² (approx. 10G) for 2 hours each in X, Y, and Z directions	
Shock resistance	Destruction: 1,000 m/s ² (approx. 100G) 3 times each in X, Y, and Z directions.	
Degree of protection	IEC60529 IP67	
Material	Pressure port and casing: SUS316 Diaphragm: SUS316L O-ring: Fluorocarbon rubber	
Cord	Vinyl-insulated round cord, 6 dia. with 3 cores Standard length: 2 m	
Weight	Approx. 250 g	

Wire connection

Product discontinuation E8CB series	Recommendable replacement E8F2 series
<p>Output Circuits</p> 	<p>Output Circuits E8F2-A01C, E8F2-AN0C</p> 

Ratings and Specifications

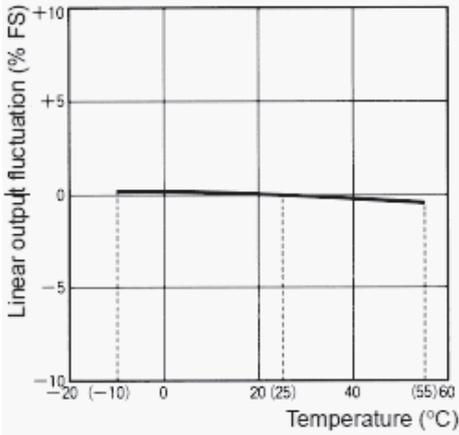
Item	Product discontinuation		Recommended replacement	
	E8CB-01C	E8CB-CN0C2B	E8F2-A01C	E8F2-AN0C
Power supply voltage	12 to 24 VDC \pm 10% with a ripple (p-p) of 5% max.		12 to 24 VDC \pm 10% with a ripple (p-p) of 10% max.	
Current consumption	20mA max.		70mA max.	
Pressure type	Gauge pressure		Gauge pressure	
Permissible pressure range	0 to 100 kPa	0 to -100 kPa	0 to 100 kPa	0 to -101 kPa
Pressure setting range	0 to 100 kPa	0 to -100 kPa	0 to 100 kPa	0 to -101 kPa
Withstand pressure	490 kPa		400 kPa	
Applicable material	Noncorrosive and nonflammable gases		Noncorrosive and nonflammable gases	
Repeat accuracy (ON/OFF output)	\pm 1% FS max.		\pm 1% FS max.	
Linearity (linear output)	\pm 1% FS max.		\pm 1% FS max.	
Response time	5 ms max.		5 ms max.	
Linear output	1 to 5 V with an output impedance of 20 Ω and a permissible resistive load of 10 k Ω min.		1 to 5 V with an output impedance of 1 k Ω and a permissible resistive load of 500 k Ω .	
ON/OFF output	NPN open collector		NPN open collector	
Load current	80 mA max.		30 mA max.	
Output applied voltage	30 VDC max.		30 VDC max.	
Residual voltage	1 V max. (with a load current of 80 mA) and 0.4 V max. (with a load current of 20 mA)		1 V max. with 30 mA load current	
Protection circuits	Reverse polarity protection, load short-circuit protection		Reverse polarity protection, load short-circuit protection	
Display	Red LED ON with output transistor Turned ON.		3.5-digit red LED Green LED bar indicator The orange LED is lit for two independent outputs with output transistor turned ON. Green unit indicator	
Ambient temperature	Operating: -10°C to 55°C (with no icing) Storage: -25°C to 70°C (with no icing)		Operating: 0 to 55°C (with no icing) Storage: -10 to 60°C (with no icing)	
Ambient humidity	Operating/Storage: 35% to 95% (with no icing)		Operating/Storage: 35% to 85% (with no condensation)	
Temperature influence	\pm 0.12% FS/ $^{\circ}$ C between 0°C and 50°C and \pm 0.2% FS/ $^{\circ}$ C max. between -10°C and 0°C or 50°C and 55°C		\pm 3%FS max.	
Insulation resistance	50 M Ω min. (at 500 VDC) between current carrying parts and case		100 M Ω min. (at 500 VDC) between current-carrying parts and case	
Dielectric strength	1,000 VAC at 1 min		1,000 VAC at 1 min	
Vibration resistance (destruction)	10 to 500 Hz, 1.5-mm double amplitude or 100 m/s ² (10G) for 2 hours each in X, Y, and Z directions		10 to 500 Hz, 1.0-mm double amplitude or 150 m/s ² , three times each for 11 min in the X, Y, and Z directions	
Shock resistance (destruction)	1,000 m/s ² (100G) 3 times each in X, Y, and Z directions		300 m/s ² 3 times each in the X, Y, and Z directions	
Degree of protection	IP54 (IEC)		IP50 (IEC)	
Pressure port	R (PT) 1/8 and M5 female screws		R (PT) 1/8 taper screw and M5 female screw	
Connection method	Prewired (standard cord length: 2 m)		Prewired (standard cord length: 2 m)	
Weight (packaged)	Approx. 70 g		Approx. 110 g	
Material (Pressure port)	Aluminum		Aluminum die-cast	

Engineering data (typical)

**Product discontinuation
E8CB series**

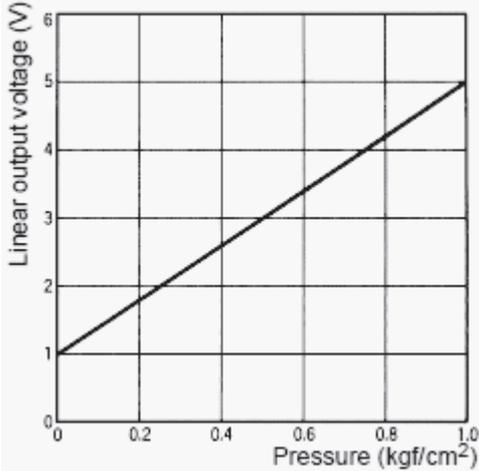
Temperature vs. Linear Output Fluctuation

E8CB-01C



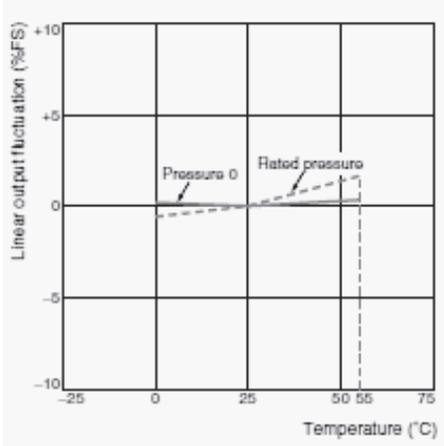
Pressure vs. Linear Output Voltage (Typical)

E8CB-01C

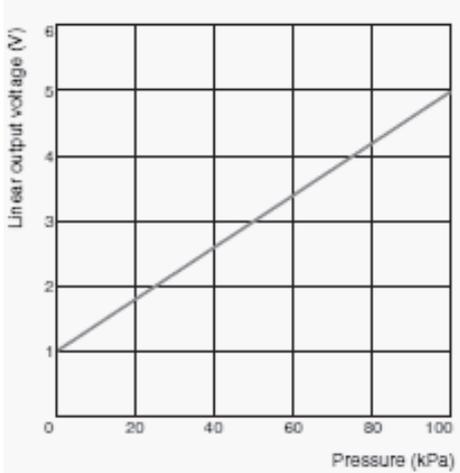


**Recommendable replacement
E8F2 series**

E8F2-A01□



E8F2-A01□



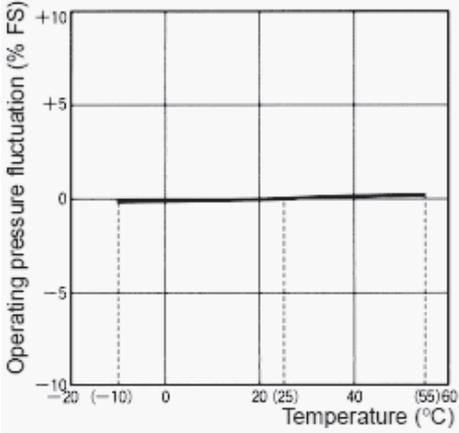
Engineering data (typical)

**Product discontinuation
E8CB series**

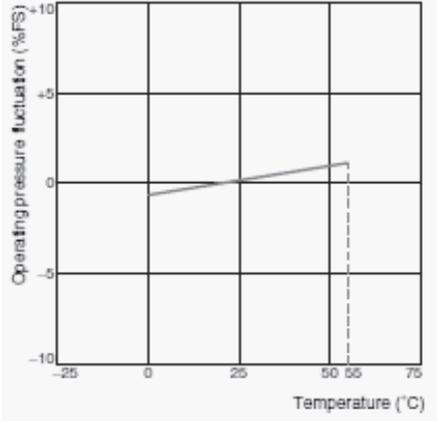
**Recommendable replacement
E8F2 series**

**Temperature vs. Operating Pressure
(Typical)**

E8CB-01C

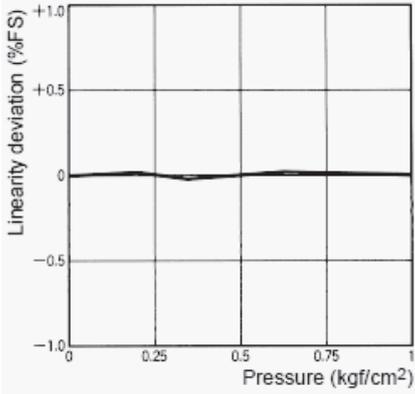


E8F2-A01□

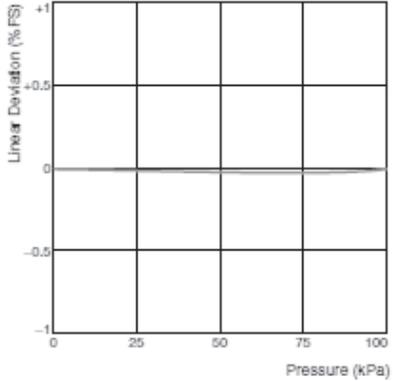


Linearity (Typical)

E8CB-01C



E8F2-A01□

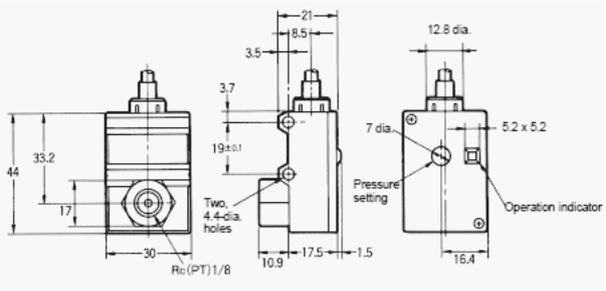
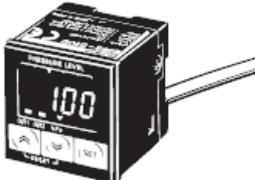
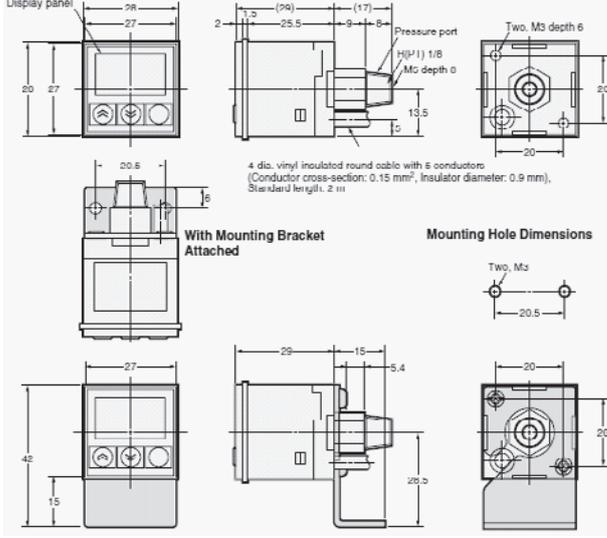


E8EB series

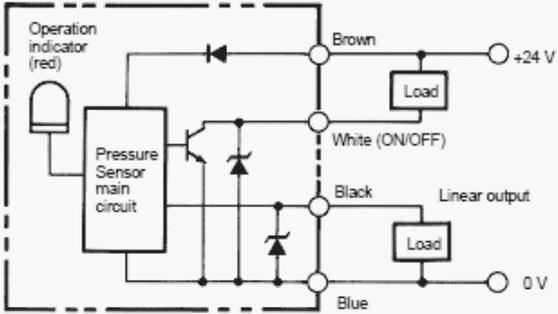
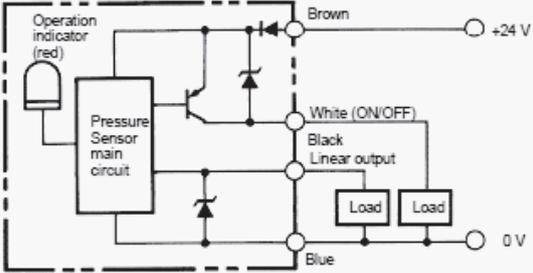
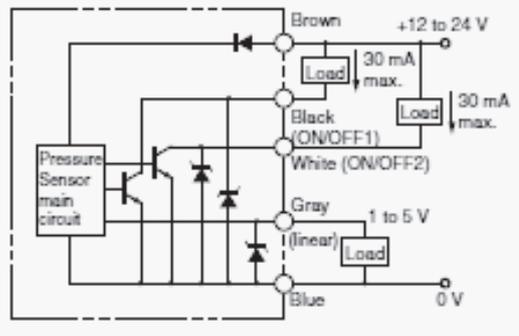
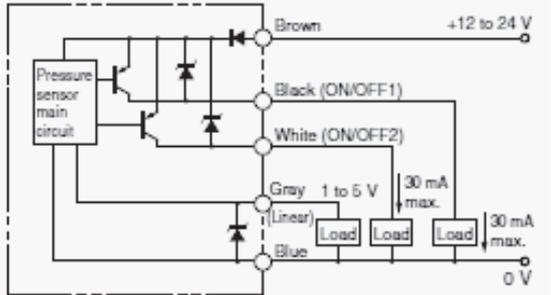
Body color

Item	Product discontinuation E8EB series	Recommended replacement E8F2 series
Color	Black/Silver	Black/Silver

Dimensions

Product discontinuation E8EB series	Recommendable replacement E8F2 series
  <p>Vinyl-insulated round cord with four conductors, 3.8 dia. (standard length: 2 m)</p>	  <p>4 dia. vinyl insulated round cable with 6 conductors (Conductor cross-section: 0.15 mm², Insulator diameter: 0.9 mm), Standard length: 2 m</p> <p>With Mounting Bracket Attached</p> <p>Mounting Hole Dimensions</p>

Wire connection

Product discontinuation E8EB series	Recommendable replacement E8F2 series
<p>Output Circuits NPN open collector type E8EB-10C, E8EB-01C, E8EB-N0C2B</p>  <p>PNP open collector type E8EB-10B, E8EB-01B, E8EB-N0B2B</p> 	<p>NPN open collector type E8F2-A01C, E8F2-B10C, E8F2-AN0C</p>  <p>PNP open collector type E8F2-A01B, E8F2-B10B, E8F2-AN0B</p> 

Ratings and Specifications

Item	Product discontinuation			Recommended replacement		
	E8EB-10C E8EB-10B	E8EB-01C E8EB-01B	E8EB-N0C2B E8EB-N0B2B	E8F2-A01C E8F2-A01B	E8F2-B10C E8F2-B10B	E8F2-AN0C E8F2-AN0B
Power supply voltage	12 to 24 VDC $\pm 10\%$ with a ripple (p-p) of 5% max.			12 to 24 VDC $\pm 10\%$ with a ripple (p-p) of 10% max.		
Current consumption	20mA max.			70mA max.		
Pressure type	Gauge pressure			Gauge pressure		
Permissible pressure range	0 to 1MPa	0 to 100kPa	0 to-100kPa	0 to 100kPa	0 to 1MPa	0 to -101kPa
Pressure setting range	0 to 1MPa	0 to 100kPa	0 to-100kPa	0 to 100kPa	0 to 1MPa	0 to -101kPa
Withstand pressure	2MPa	290kPa		400kPa	1.5MPa	400kPa
Applicable material	Noncorrosive and nonflammable gases			Noncorrosive and nonflammable gases		

Ratings and Specifications

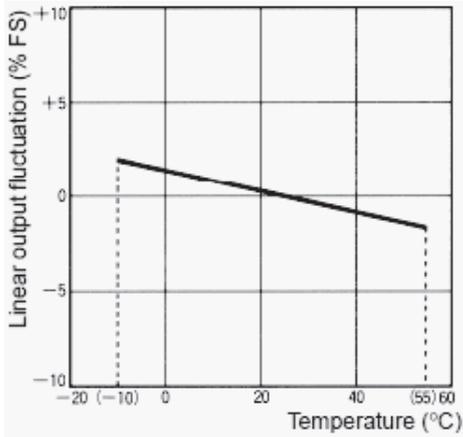
Item	Product discontinuation			Recommended replacement		
	E8EB-10C E8EB-10B	E8EB-01C E8EB-01B	E8EB-N0C2B E8EB-N0B2B	E8F2-A01C E8F2-A01B	E8F2-B10C E8F2-B10B	E8F2-AN0C E8F2-AN0B
Repeat accuracy (ON/OFF output)	±1% FS max.			±1% FS max.		
Linearity (linear output)	±1% FS max.			±1% FS max.		
Response time	5 ms max.			5 ms max.		
Linear output	1 to 5 V with an output impedance of 20Ω and a permissible resistive load of 10 kΩ min.			1 to 5 V with an output impedance of 1 kΩ and a permissible resistive load of 500 kΩ.		
ON/OFF output	E8EB-□C: NPN open collector E8EB-□B: PNP open collector			E8F2-□C: NPN open collector E8F2-□B: PNP open collector		
Load current	80 mA max.			30 mA max.		
Output applied voltage	30 VDC max.			30 VDC max.		
Residual voltage	NPN: 1 V max. (at the load current of 80 mA) and 0.4 V max. (at the load current of 20 mA) PNP: 2 V max. (at the load current of 80 mA) and 1.5 V max. (at the load current of 20 mA)			1 V max. with 30 mA load current		
Display	Red LED ON with output transistor Turned ON.			3.5-digit red LED. Green LED bar indicator. The orange LED is lit for two independent outputs with output transistor turned ON. Green unit indicator		
Ambient temperature	Operating: -10°C to 55°C (with no icing) Storage: -25°C to 70°C (with no icing)			Operating: 0 to 55°C (with no icing) Storage: -10 to 60°C (with no icing)		
Ambient humidity	Operating: 35% to 85% (with no condensation)			Operating/Storage: 35% to 85% (with no condensation)		
Temperature influence	±0.12% FS/°C between 0°C and 50°C ±0.2% FS/°C max. between -10°C and 0°C or 50°C and 55°C	±0.2% FS/°C between 0°C and 50°C ±0.3% FS/°C max. between -10°C and 0°C or 50°C and 55°C		±3% FS max.		
Insulation resistance	100 MΩ min. (at 500 VDC) between current carry parts and case			100 MΩ min. (at 500 VDC) between current-carrying parts and case		
Dielectric strength	500 VAC for 1 min between current carry parts and case			1,000 VAC at 1 min		
Vibration resistance (destruction)	10 to 500 Hz, 1.5-mm double amplitude or 100 m/s ² (approx. 10G) whichever is smaller, for 2 hours each in X, Y, and Z directions			10 to 500 Hz, 1.0-mm double amplitude or 150 m/s ² , three times each for 11 min in the X, Y, and Z directions		
Shock resistance (destruction)	1,000 m/s ² (approx. 100G) 3 times each in X, Y, and Z directions			300 m/s ² 3 times each in the X, Y, and Z directions		
Degree of protection	IP54(IEC60529)			IP50(IEC60529)		
Pressure port	RC (PT) 1/8			R (PT) 1/8 taper screw and M5 female screw		
Connection method	Prewired (standard cord length: 2 m)			Prewired (standard cord length: 2 m)		
Weight (packaged)	Approx. 120 g			Approx. 110 g		
Material (Pressure port)	Zinc die-cast			Aluminum die-cast		

Engineering data (typical)

**Product discontinuation
E8EB series**

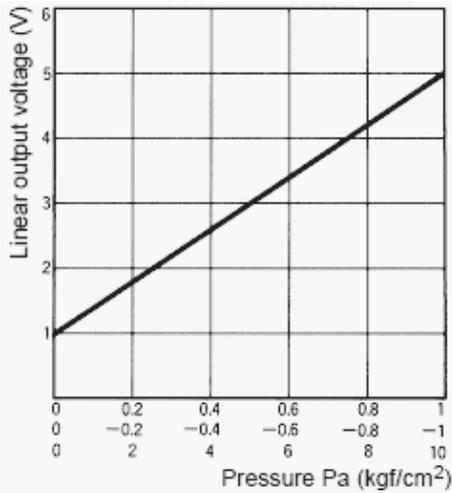
Linear Output Fluctuation vs. Temperature Characteristics (Typical)

E8EB-01C



Pressure vs. Linear Output Voltage (Typical)

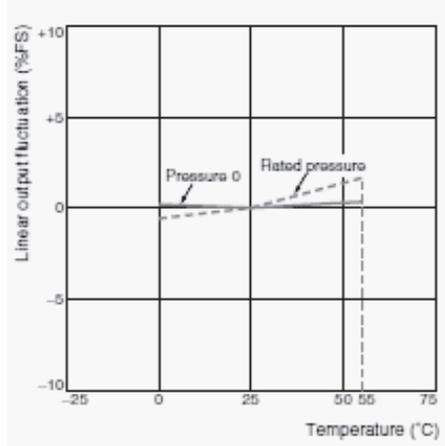
E8EB



**Recommendable replacement
E8F2 series**

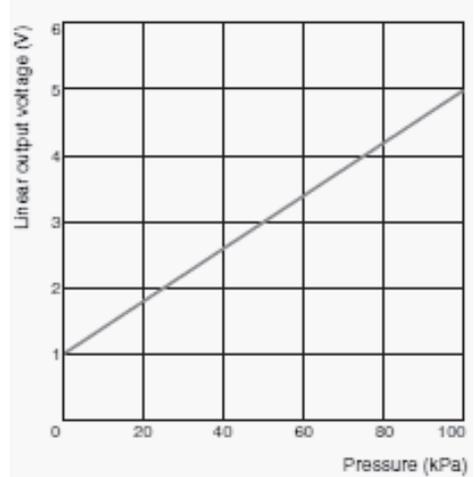
Temperature vs. Linear Output Fluctuation (Typical)

E8F2-A01□



Pressure vs. Linear Output Voltage (Typical)

E8F2-A01□

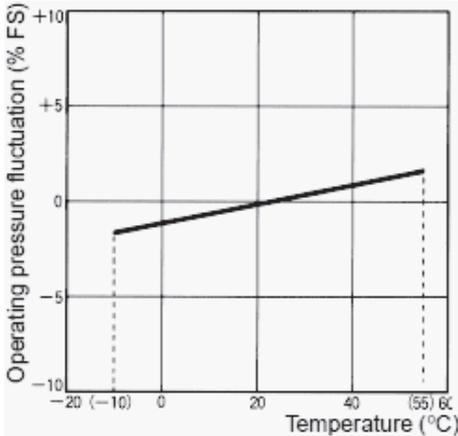


Engineering data (typical)

**Product discontinuation
E8EB series**

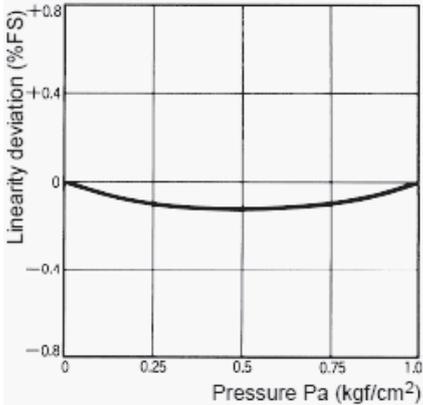
**Temperature vs. Operating Pressure
(Typical)**

E8EB-01C



Linearity (Typical)

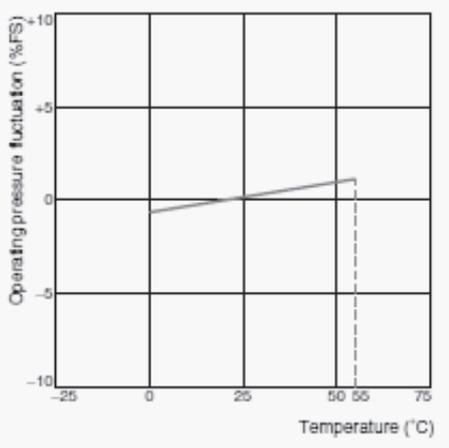
E8EB-01C



**Recommendable replacement
E8F2 series**

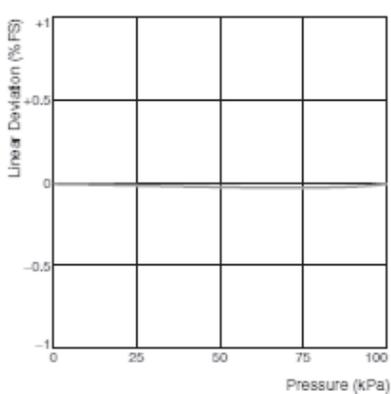
**Temperature vs. Operating Pressure
(Typical)**

E8F2-A01□



Linearity (Typical)

E8F2-A01□



E8MS/E8M series

Body color

Product discontinuation	Recommendable replacement
E8M: Silver E8M-MP8: Grey E8MS-A1: Silver/ Black E8MS: Silver	E8F2 series: Black/Silver

Dimensions

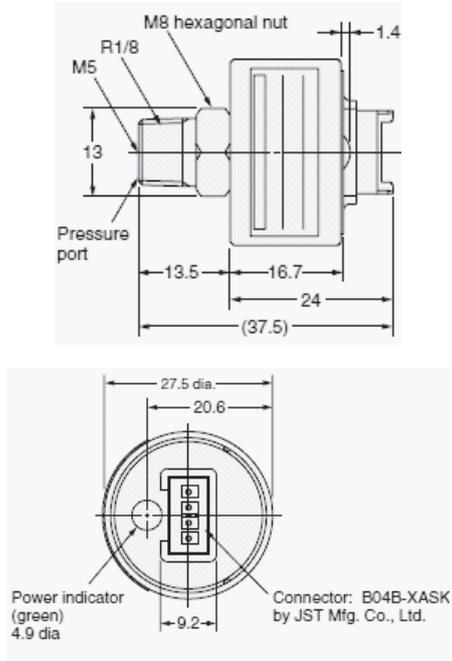
Product discontinuation E8MS/E8M series	Recommendable replacement E8F2 series
<p>Sensor E8M-A1-S</p> <p>M5 pressure port (Positive) (depth: 7 mm)</p> <p>Two, M4 mounting holes</p> <p>4.0-dia. vinyl-insulated round cable (0.3/1.04 dia.) with 4 conductors. Standard length: 3 m</p> <p>Power indicator (green)</p> <p>M5 pressure port (Negative) (depth: 7 mm)</p> <p>E8MS-01, E8MS-10, E8MS-N0, E8MS-N1</p> <p>M5 (depth: 7.5 mm) R (PT)1/8</p> <p>Pressure port</p> <p>Connector: DF13B-3P-1.25V (21) by Hirose Electric</p>	<p>Display panel</p> <p>Pressure port</p> <p>Two, M3 depth 6</p> <p>4-dia. vinyl-insulated round cable with 5 conductors (Conductor cross-section: 0.15 mm², insulator diameter: 0.9 mm). Standard length: 2 m</p> <p>With Mounting Bracket Attached</p> <p>Mounting Hole Dimensions</p> <p>Two, M3</p>

Dimensions

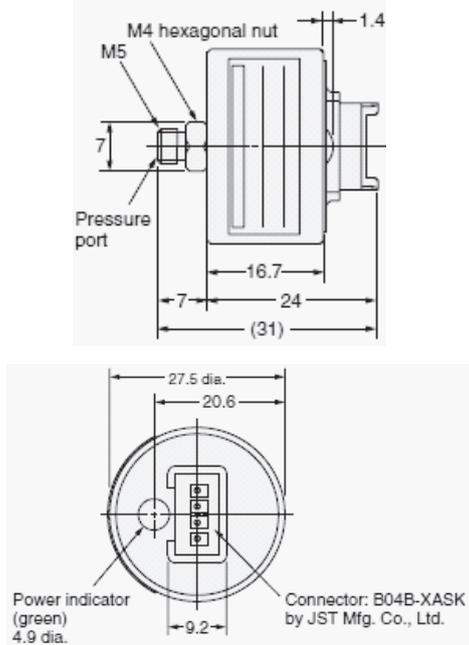
Product discontinuation E8MS/E8M series

Recommendable replacement E8F2 series

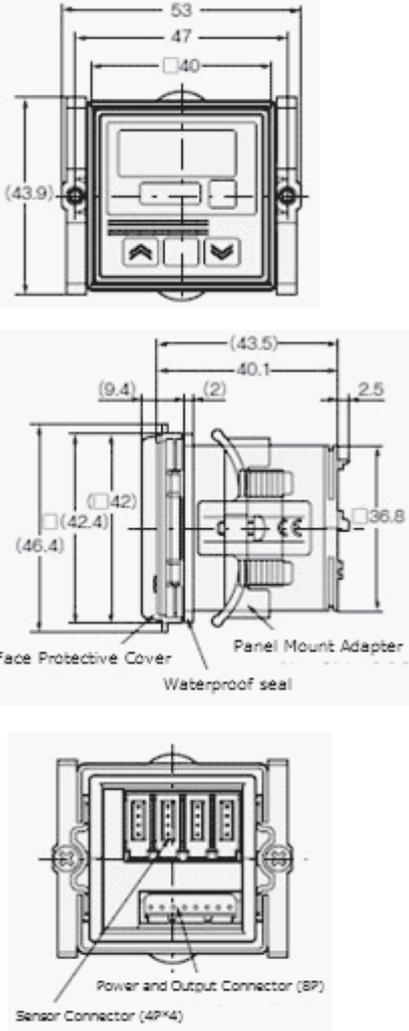
E8M-10



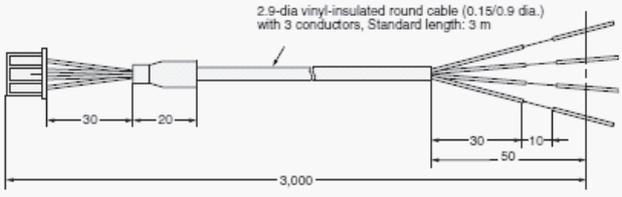
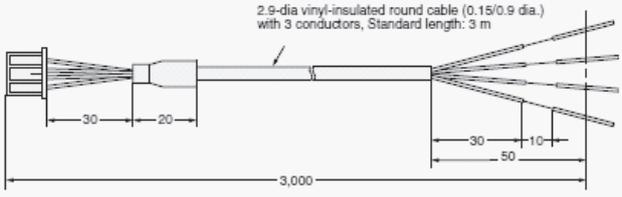
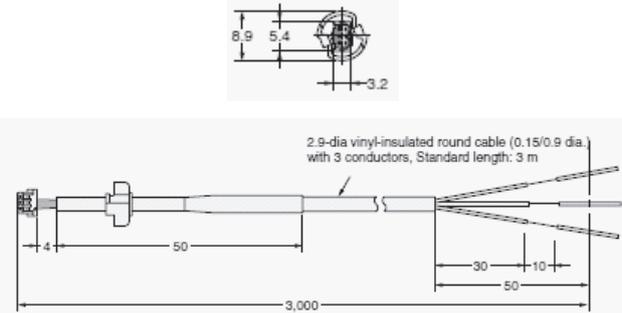
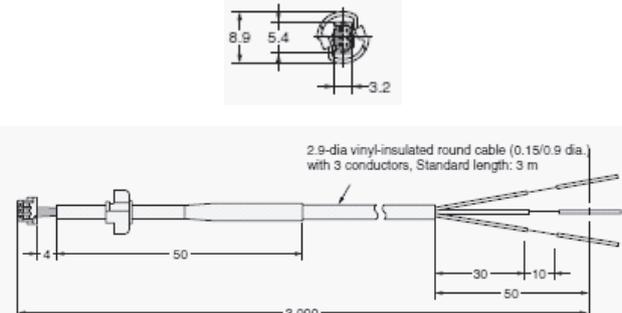
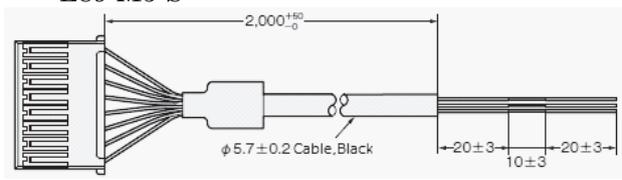
E8M-NO



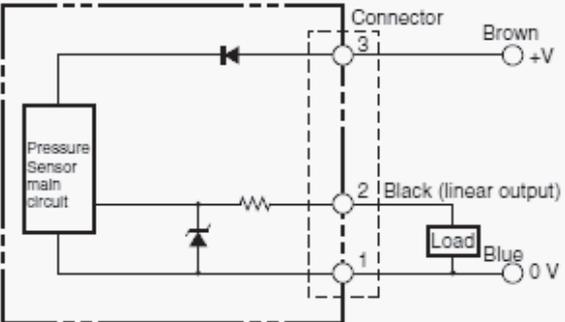
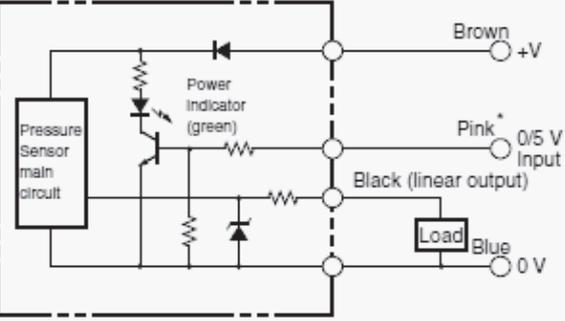
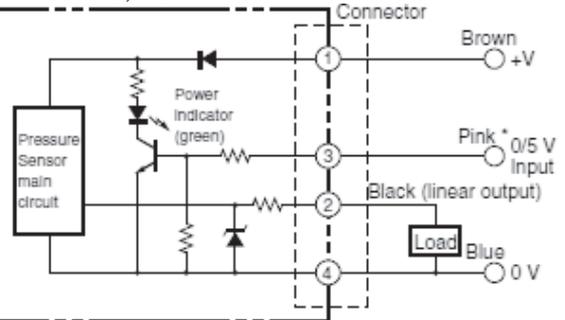
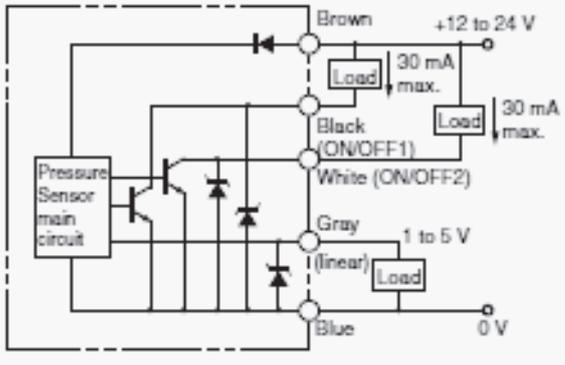
Dimensions

Product discontinuation E8MS/E8M series	Recommendable replacement E8F2 series
<p>Controller E8M-MP8</p>  <p>Technical drawing of the E8M-MP8 controller showing front, side, and back views with dimensions:</p> <ul style="list-style-type: none"> Front View: Overall width 53, inner width 47, mounting hole spacing 40, and mounting hole diameter (43.9). Side View: Mounting hole diameter (9.4), panel thickness (2), total depth (43.5), distance from front face to panel (40.1), distance from front face to sensor connector (46.4), sensor connector diameter (42), sensor connector height (42.4), distance from front face to power/output connector (36.8), and power/output connector diameter (2.5). Back View: Shows the Power and Output Connector (8P) and Sensor Connector (4P*4). Panel Cut Dimensions: Shows a square cutout with a side length of 37.5 (tolerance +0.1/-0.2) and a minimum side length of 55 or more. Panel thickness is specified as 0.5 to 8mm. <p>Labels in drawings: Front Face Protective Cover, Waterproof seal, Panel Mount Adapter, Power and Output Connector (8P), Sensor Connector (4P*4).</p>	

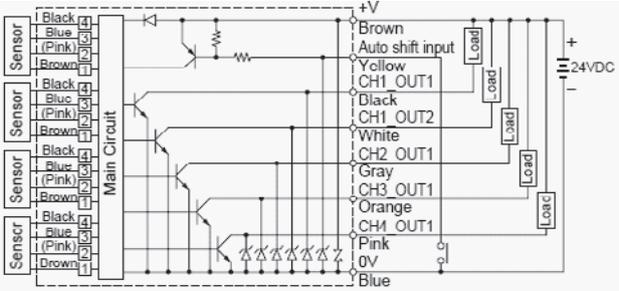
Dimensions

Product discontinuation E8MS/E8M series	Recommendable replacement E8F2 series
<p>Accessory E89-M3 3M</p>  <p>E89-M3-S</p>  <p>E89-M4</p>  <p>E89-M4-S</p>  <p>E89-M5-S</p> 	

Wire connection

Product discontinuation E8MS/E8M series	Recommendable replacement E8F2 series
<p>Output circuit Sensor E8MS-01, E8MS-10, E8MS-N0, E8MS-N1</p>  <p>E8M-A1-S</p>  <p>E8M-10, E8M-N0</p>  <p>* Input for lighting the power supply indicator. 5 V supplied: lit, 0 V: not lit</p>	<p>E8F2-A01C, E8F2-B10C, E8F2-AN0C</p> 

Wire connection

<p align="center">Product discontinuation E8MS/E8M series</p>	<p align="center">Recommendable replacement E8F2 series</p>
<p>Controller E8M-MP8</p>  <p>The diagram shows the internal wiring of the E8M-MP8 controller. On the left, there are three sensor input sections, each with four terminals: Black, Blue, (Pink), and Brown. These are connected to a 'Main Circuit' containing several transistors. On the right, there are output channels: 'Auto shift input' (Brown), 'CH1_OUT1' (Yellow), 'CH1_OUT2' (Black), 'CH2_OUT1' (White), 'CH3_OUT1' (Gray), 'CH4_OUT1' (Orange), and 'CH4_OUT1' (Pink). A '0V' terminal (Blue) is also shown. The controller is powered by a '+V' terminal connected to a 24VDC source. Various 'Load' terminals are shown connected to the output channels.</p>	

Ratings and Specifications

Sensor E8MS series

Item	Product discontinuation				Recommended replacement		
	E8MS-01	E8MS-10	E8MS-N0	E8MS-N1	E8F2-A01C	E8F2-B10C	E8F2-AN0C
Power supply voltage	12 to 24 VDC $\pm 10\%$ with a ripple (p-p) of 5% max.				12 to 24 VDC $\pm 10\%$ with a ripple (p-p) of 10% max.		
Current consumption	25mA max.				70mA max.		
Pressure type	Gauge pressure				Gauge pressure		
Permissible pressure range	0 to 100kPa	0 to 1MPa	0 to -101kPa	-101 to 100kPa	0 to 100kPa	0 to 1MPa	0 to -101kPa
Withstand pressure	400kPa	1.5MPa	400kPa		400kPa	1.5MPa	400kPa
Applicable material	Noncorrosive and nonflammable gases				Noncorrosive and nonflammable gases		
Linearity (linear output)	$\pm 1\%$ FS max.				$\pm 1\%$ FS max.		
Linear output	Voltage output: 1 to 5 V with an output impedance of 1 k Ω				1 to 5 V with an output impedance of 1 k Ω and a permissible resistive load of 500 k Ω .		
Protection circuits	Reverse polarity protection, load short-circuit protection				Reverse polarity protection, load short-circuit protection		
Ambient temperature	Operating: 0 to 50°C Storage: -15 to 60°C (with no icing)				Operating: 0 to 55°C (with no icing) Storage: -10 to 60°C (with no icing)		
Ambient humidity	Operating/Storage: 35% to 85% (with no condensation)				Operating/Storage: 35% to 85% (with no condensation)		
Temperature influence	$\pm 0.12\%$ FS/°C max.				$\pm 3\%$ FS max.		
Insulation resistance	100 M Ω min. (at 500 VDC) between current-carrying parts and case				100 M Ω min. (at 500 VDC) between current-carrying parts and case		
Dielectric strength	1,000 VAC for 1 minute				1,000 VAC at 1 min		
Vibration resistance (destruction)	10 to 150 Hz, 0.35-mm single amplitude or 50 m/s ² , 10 times each for 8 min in X, Y and Z directions				10 to 500 Hz, 1.0-mm double amplitude or 150 m/s ² , three times each for 11 min in the X, Y, and Z directions		
Shock resistance (destruction)	500 m/s ² 3 times each in X, Y and Z directions				300 m/s ² 3 times each in the X, Y, and Z directions		
Degree of protection	IP50(IEC60529)				IP50(IEC60529)		
Pressure port	R (PT) 1/8 taper screw and M5 female screw				R (PT) 1/8 taper screw and M5 female screw		
Connection method	Connector				Prewired (standard cord length: 2 m)		
Weight (packaged)	Approx. 6g				Approx. 110 g		
Material (Pressure port)	Aluminum				Aluminum die-cast		

Ratings and Specifications

E8M series

Item	Product discontinuation			Recommended replacement		
	E8M-A1-S	E8M-10	E8M-N0	E8F2-A01C	E8F2-B10C	E8F2-AN0C
Power supply voltage	12 to 24 VDC $\pm 10\%$ with a ripple (p-p) of 5% max.			12 to 24 VDC $\pm 10\%$ with a ripple (p-p) of 10% max.		
Current consumption	30mA max.			70mA max.		
Pressure type	Differential pressure	Gauge pressure		Gauge pressure		
Permissible pressure range	Differential pressure from 0 to 1,000 Pa between positive and negative ports	0 to 1MPa	0 to -101kPa	0 to 100kPa	0 to 1MPa	0 to -101kPa
Withstand pressure	Differential pressure from 0 to 2,500 Pa between positive and negative ports	1.5MPa	400kPa	400kPa	1.5MPa	400kPa
Applicable material	Noncorrosive and nonflammable gases			Noncorrosive and nonflammable gases		
Linearity (linear output)	$\pm 1\%$ FS max.			$\pm 1\%$ FS max.		
Linear output	Voltage output: 1 to 5 V with an output impedance of 1 k Ω			1 to 5 V with an output impedance of 1 k Ω and a permissible resistive load of 500 k Ω .		
Protection circuits	Reverse polarity protection, load short-circuit protection			Reverse polarity protection, load short-circuit protection		
Ambient temperature	Operating: 0 to 40°C Storage: -15 to 50°C (with no icing)			Operating: 0 to 55°C (with no icing) Storage: -10 to 60°C (with no icing)		
Ambient humidity	Operating/Storage: 35% to 85% (with no condensation)			Operating/Storage: 35% to 85% (with no condensation)		
Temperature influence	$\pm 0.25\%$ FS/ $^{\circ}\text{C}$ max.	$\pm 0.12\%$ FS/ $^{\circ}\text{C}$ max.		$\pm 3\%$ FS max.		
Insulation resistance	100 M Ω min. (at 500 VDC) between current-carrying parts and case			100 M Ω min. (at 500 VDC) between current-carrying parts and case		
Dielectric strength	1,000 VAC for 1 min			1,000 VAC for 1 min		
Vibration resistance (destruction)	10 to 150 Hz, 0.75-mm single amplitude or 100 m/s ² , 4 times each for 8 min in X, Y and Z directions			10 to 500 Hz, 1.0-mm double amplitude or 150 m/s ² , three times each for 11 min in the X, Y, and Z directions		
Shock resistance (destruction)	300 m/s ² 3 times each in X, Y and Z directions			300 m/s ² 3 times each in the X, Y, and Z directions		
Degree of protection	IP50(IEC60529)			IP50(IEC60529)		
Pressure port	M5 female screw	R (PT) 1/8 and M5 female screw	M5 male screw	R (PT) 1/8 taper screw and M5 female screw		
Connection method	Pre-wired cable (standard length: 3 m)	Connector		Prewired (standard cord length: 2 m)		
Weight (packaged)	Approx. 130g	Approx. 30g	Approx. 20g	Approx. 110 g		
Material (Pressure port)	Stainless steel (SUS303)	Stainless steel (SUS304)		Aluminum die-cast		

Ratings and Specifications

Controller

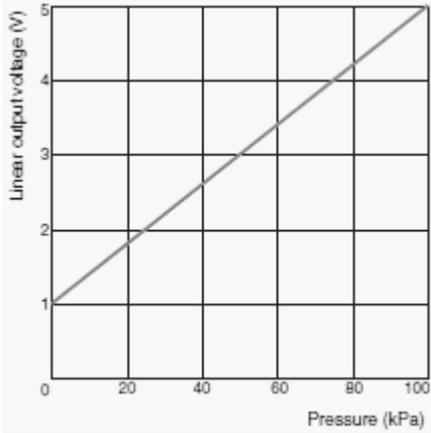
Item	Product discontinuation	Recommended replacement		
	E8M-MP8	E8F2-A01C	E8F2-B10C	E8F2-AN0C
Power supply voltage	24 VDC \pm 10%, ripple (p-p) of 10% max.	12 to 24 VDC \pm 10% with a ripple (p-p) of 10% max.		
Current consumption	200mA max.	70mA max.		
Repeat accuracy	\pm 0.1% FS max.	\pm 1% FS max.		
Response time	5 ms max.	5 ms max.		
ON/OFF output	NPN open collector	NPN open collector		
Load current	80 mA max.	30 mA max.		
Output applied voltage	30 VDC max.	30 VDC max.		
Residual voltage	0.8 V max. with a flow current of 30 mA,	1 V max. with 30 mA load current		
Protection circuits	Reverse polarity protection, load short-circuit protection	Reverse polarity protection, load short-circuit protection		
Display	Measurement value: LED indicator (red) with a character height of 10.8 mm for 3 1/2 digits for a single channel selected. Message: LED indicator (red) with a character height of 10.8 mm for 3 1/2 digits. Measurement and setting channel: LED indicator (green) with a character height of 7.2 mm for 1 digit. Comparative output: LED indicator (orange) that is lit when the output transistor is turned ON Others: LED indicator (green) for connecting channel and unit display (green)	3.5-digit red LED Green LED bar indicator The orange LED is lit for two independent outputs with output transistor turned ON. Green unit indicator		
Ambient temperature	Operating: 0 to 50°C Storage: -10 to 60°C (with no icing)	Operating: 0 to 55°C (with no icing) Storage: -10 to 60°C (with no icing)		
Ambient humidity	Operating/Storage: 35% to 85% (with no condensation)	Operating/Storage: 35% to 85% (with no condensation)		
Temperature influence	\pm 1%FS max.	\pm 3%FS max.		
Insulation resistance	100 M Ω min. (at 500 VDC) between current-carrying parts and case	100 M Ω min. (at 500 VDC) between current-carrying parts and case		
Dielectric strength	1,000 VAC for 1 min	1,000 VAC for 1 min		
Vibration resistance (destruction)	10 to 150 Hz, 0.75-mm single amplitude or 100 m/s ² , 4 times each for 8 min in X, Y and Z directions	10 to 500 Hz, 1.0-mm double amplitude or 150 m/s ² , three times each for 11 min in the X, Y, and Z directions		
Shock resistance (destruction)	300 m/s ² 3 times each in X, Y and Z directions	300 m/s ² 3 times each in the X, Y, and Z directions		
Degree of protection	IP40(IEC60529)	IP50(IEC60529)		
Connection method	Panel mounting Power supply and output: 7-pin terminal Sensor I/O: 4-pin connector	Prewired (standard cord length: 2 m)		
Weight (packaged)	Approx. 90 g	Approx. 110 g		
Material (Pressure port)	Zinc die-cast	Aluminum die-cast		

Engineering data (typical)

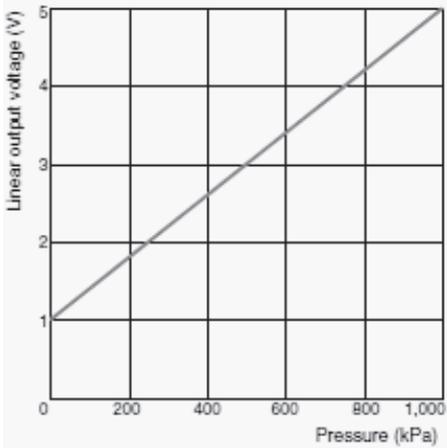
**Product discontinuation
E8MS/E8M series**

Linear Output Voltage vs. Pressure (Typical)

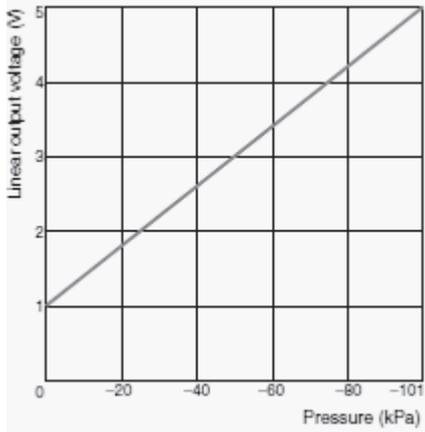
E8MS-01



E8MS-10/E8M-10



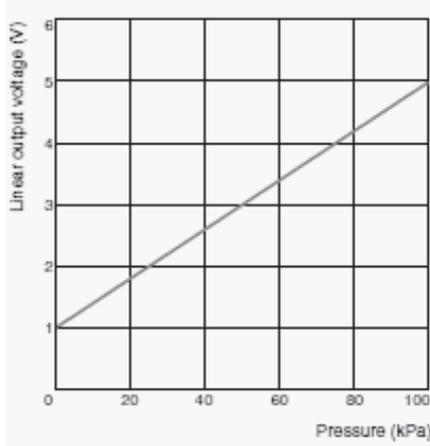
E8MS-N0/E8M-N0



**Recommendable replacement
E8F2 series**

Pressure vs. Linear Output Voltage (Typical)

E8F2-A01

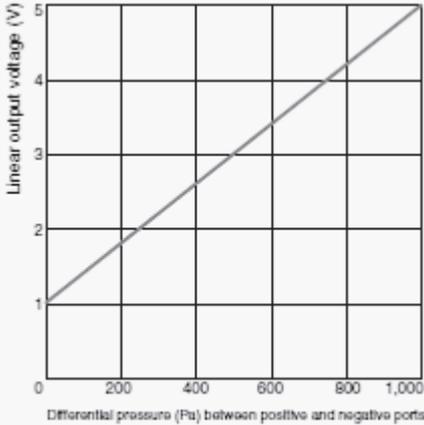


Engineering data (typical)

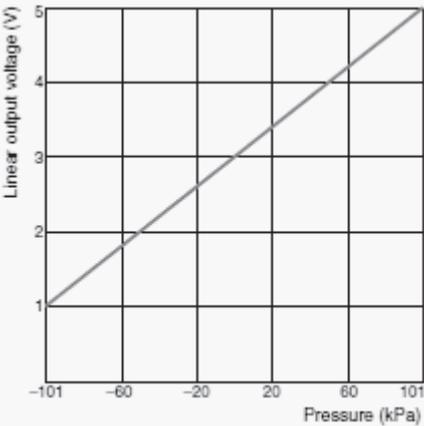
**Product discontinuation
E8MS/E8M series**

**Recommendable replacement
E8F2 series**

E8M-A1-S

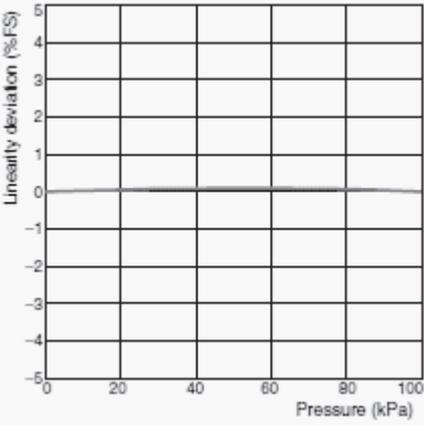


E8MS-N1



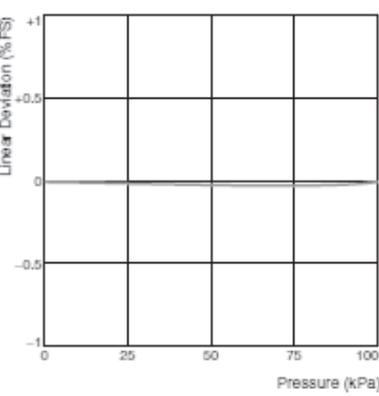
Linearity (Typical)

E8MS-01



Linearity (Typical)

E8F2-A01

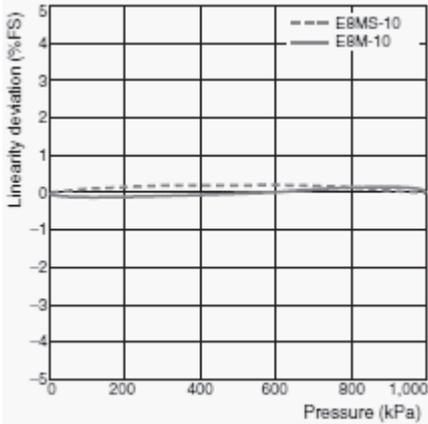


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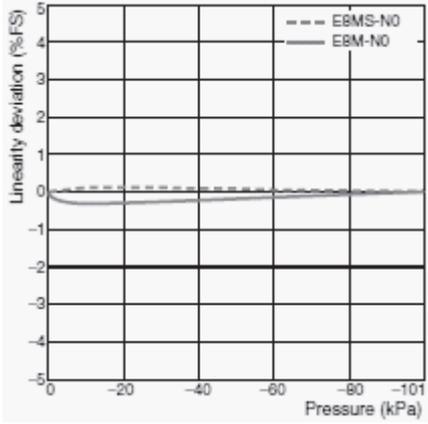
**Product discontinuation
E8MS/E8M series**

**Recommendable replacement
E8F2 series**

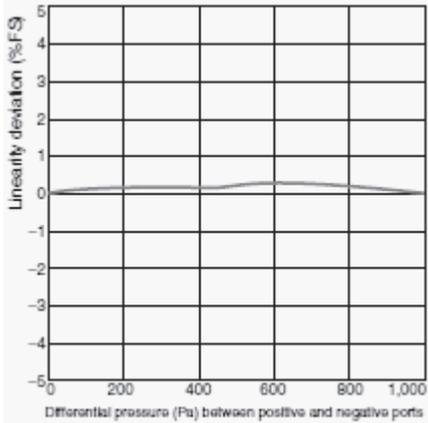
E8MS-10/E8M-10



E8MS-N0/E8M-N0



E8M-A1-S

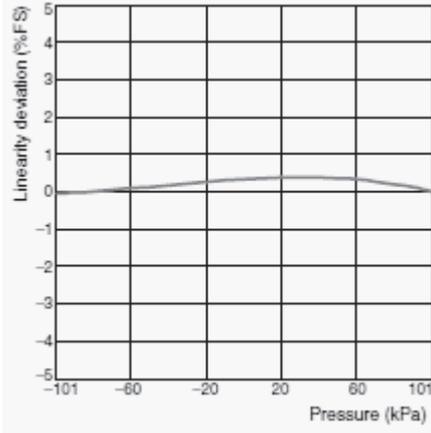


Engineering data (typical)

**Product discontinuation
E8MS/E8M series**

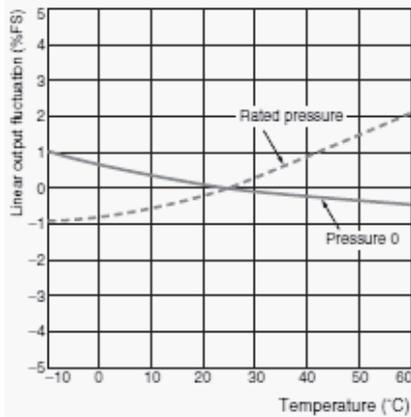
**Recommendable replacement
E8F2 series**

E8MS-N1

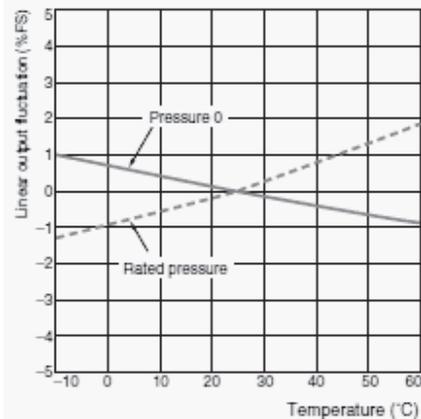


Linear Output Fluctuation vs. Temperature(Typical)

E8MS-01

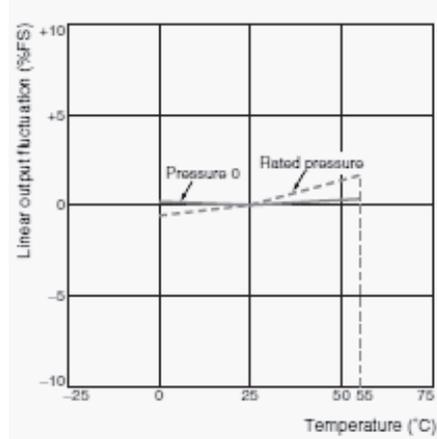


E8MS-10



Temperature vs. Linear Output Fluctuation (Typical)

E8F2-A01□

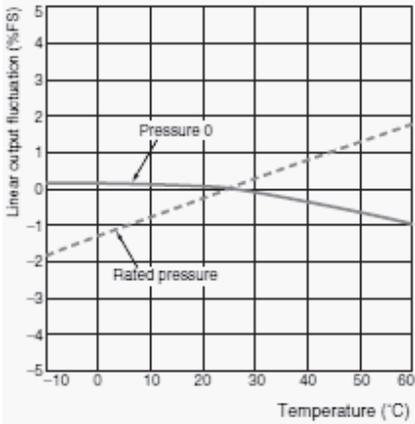


Engineering data (typical)

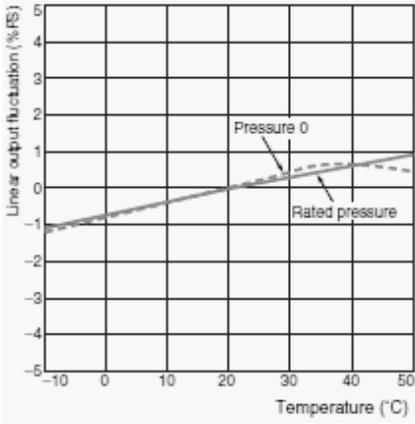
**Product discontinuation
E8MS/E8M series**

**Recommendable replacement
E8F2 series**

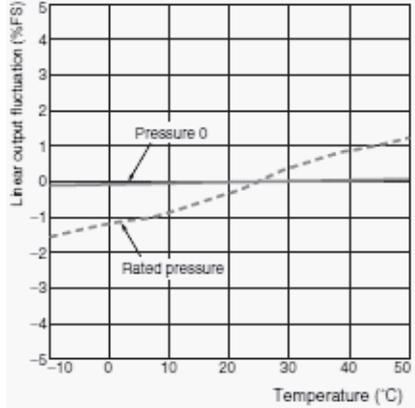
E8MS-N0



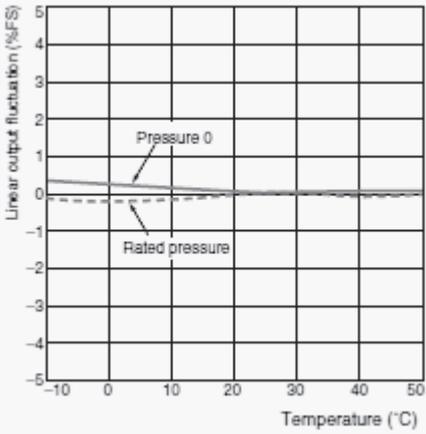
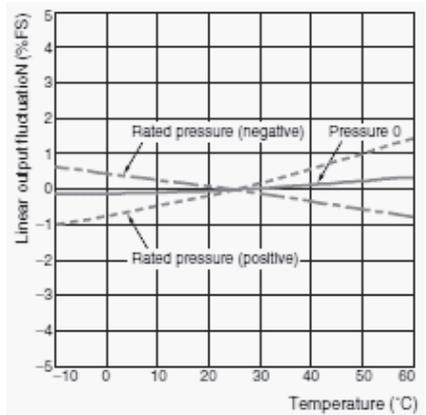
E8M-A1-S



E8M-10



Engineering data (typical)

Product discontinuation E8MS/E8M series	Recommendable replacement E8F2 series
<p>E8M-N0</p>  <p>E8MS-N1</p> 	

Specifications and prices in this product news are as of the issue date and are subject to change without notice. Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.