

Discontinuation Notice of photoelectric Sensor

E3M-V series

Product Discontinuation

Recommended Replacement



E3M-V series



E3ZM-V series

Discontinuation date : The end of March, 2012

Caution on recommended replacement

- 1) Dimensions are different. (Small size)
Please refer to "Dimensions" and "Mounting dimensions".
- 2) The materials of the case are different.
E3M-V : PBT
E3ZM-V : SUS
- 3) Light source (wavelength) are different.
E3M-V : Green LED (525 nm)
E3ZM-V : White LED (450 to 700 nm)
- 4) It becomes code model from a connector model.

Difference from discontinued product

Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
E3ZM-V	--	--	*	--	**	**	*

** : Fully compatible

* : The change is a little / Almost compatible

-- : Not compatible

- : No corresponding specification

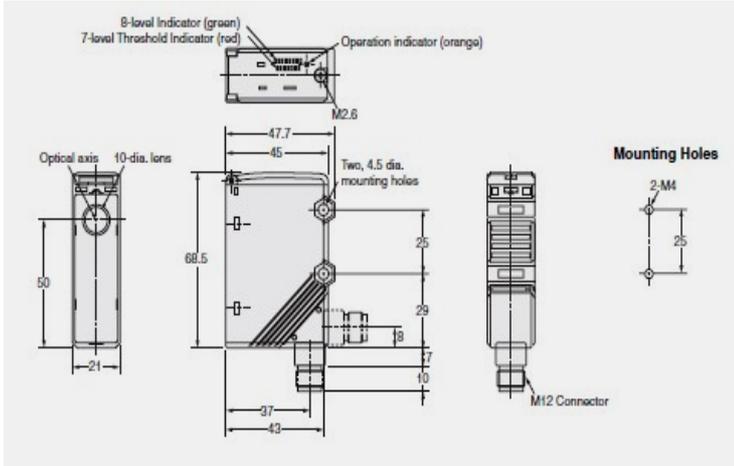
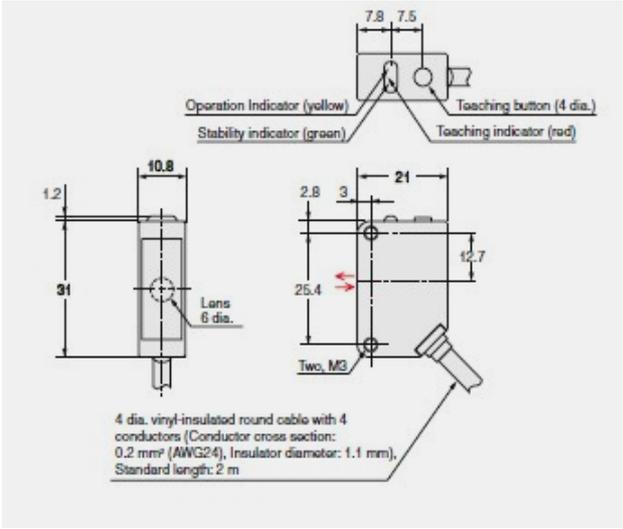
Product Discontinuation and recommended replacement

Product discontinuation	Recommended replacement
Model	Model
E3M-VG11	E3ZM-V61 2M
E3M-VG12 2M	E3ZM-V61 2M
E3M-VG16	E3ZM-V81 2M
E3M-VG17 2M	E3ZM-V81 2M
E3M-VG21	E3ZM-V61 2M
E3M-VG22 2M	E3ZM-V61 2M
E3M-VG26	E3ZM-V81 2M
E3M-VG27 2M	E3ZM-V81 2M

Body color

Product discontinuation	Recommended replacement
E3M-V series	E3ZM-V series
Black	Silver

Dimensions / Mounting dimensions

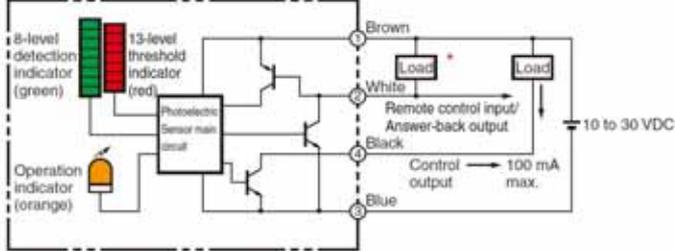
Product discontinuation E3M-V series	Recommended replacement E3ZM-V series
<p>Connector Model E3M-VG11/VG21 E3M-VG16/VG26</p>   <p>8-level Indicator (green) 7-level Threshold Indicator (red) Operation indicator (orange) M2.6 47.7 45 Two, 4.5 dia. mounting holes 25 29 7 10 21 68.5 31 10.8 1.2 31 M12 Connector</p> <p>Mounting Holes 2-M4 25</p> <p>Optical axis 10-dia. lens</p> <p>Pre-wired Model E3M-VG17 2M/27 2M E3M-VG12 2M/22 2M</p>	<p>Pre-wired Model E3ZM-V61/V81</p>   <p>7.8 7.5 Operation Indicator (yellow) Teaching button (4 dia.) Stability indicator (green) Teaching indicator (red) 12.7 21 3 2.8 25.4 Two, M2 6 dia. 10.8 1.2 31</p> <p>4 dia. vinyl-insulated round cable with 4 conductors (Conductor cross section: 0.2 mm² (AWG24), Insulator diameter: 1.1 mm), Standard length: 2 m</p>

Wire Connection

Product discontinuation

E3M-V series

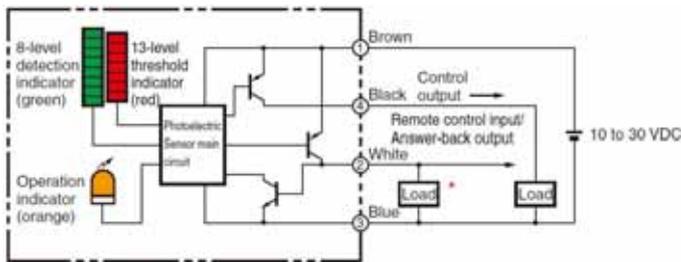
E3M-VG 1/VG 2 (NPN Output)



[Connector Pin Arrangement]



E3M-VG 6 / VG 7 (PNP Output)



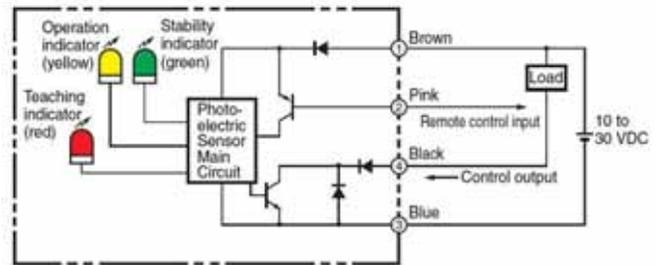
[Connector Pin Arrangement]



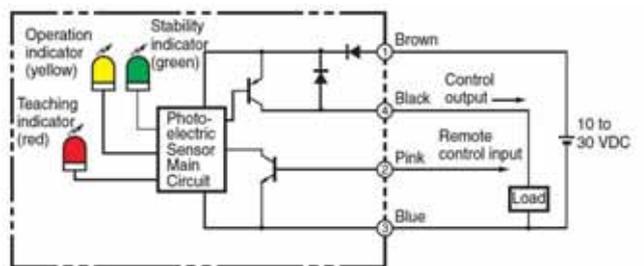
Recommended replacement

E3ZM-V series

E3ZM-V61 (NPN Output)



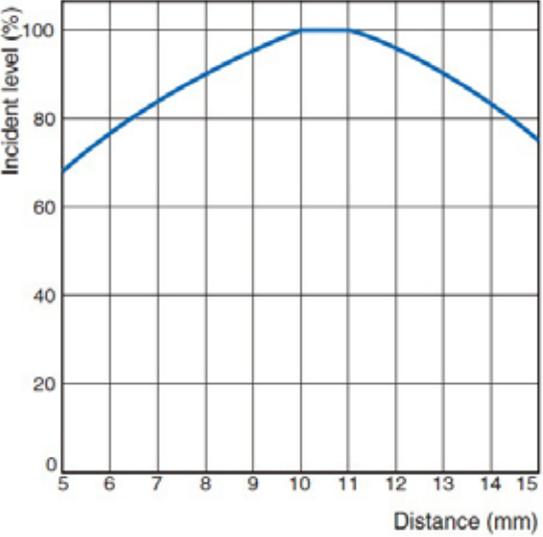
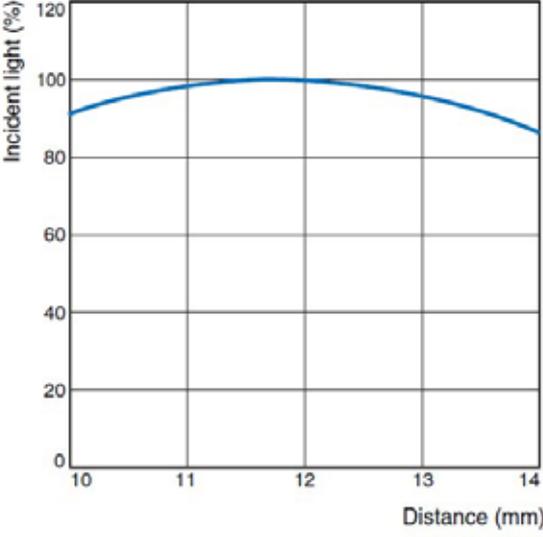
E3ZM-V 81 (PNP Output)



Characteristics

Item		Product discontinuation	Recommended replacement
Mode	NPN output	E3M-VG11/12, -VG21/22	E3ZM-V61
	PNP Output	E3M-VG16/17, -VG26/27	E3ZM-V81
Sensing distance		10 ± 3 mm	12 ± 2 mm
Spot diameter		E3M-VG1□ : 1 × 4 mm (horizontal × vertical) E3M-VG2□ : 4 × 1 mm (horizontal × vertical)	2mm dia. max.
Light source (wavelength)		Green LED (525 nm)	White LED (450 to 700 nm)
Power supply voltage		10 to 30 VDC including 10% (p-p) ripple	10 to 30 VDC, including 10% ripple (p-p)
Current consumption		100 mA max.	600 mW max. (current consumption for a 30-V power supply voltage: 20 mA max.)
Control output		Load power supply voltage: 30 VDC max., Load current: 100 mA max. NPN open collector output (Residual voltage: 1.2 V max.) PNP open collector output (Residual voltage: 2 V max.)	Load power supply voltage: 30 VDC max., Load current: 100 mA max. (Residual voltage: 2 V max.) Open-collector output (NPN/PNP output depending on model)
Remote control input		NPN output ON: Short-circuit to 0 V, or 1.5 V max. (source current: 1 mA max.) NPN output OFF: Open or Vcc -1.5 V to Vcc (leakage current: 0.1 mA max.) PNP output ON: Vcc -1.5 V to Vcc (sink current: 1 mA max.) PNP output OFF: Open or 1.5 V max. (leakage current: 0.1 mA max.)	NPN output ON: Short-circuit to 0 V, or 1.5 V max. (source current: 1 mA max.) NPN output OFF: Open or Vcc -1.5 V to Vcc (leakage current: 0.1 mA max.) PNP output ON: Vcc -1.5 V to Vcc (sink current: 1 mA max.) PNP output OFF: Open or 1.5 V max. (leakage current: 0.1 mA max.)
Answer – back output.		Load power supply voltage: 30 VDC max., Load current: 100 mA max. NPN open collector output (Residual voltage: 1.2 V max.) PNP open collector output (Residual voltage: 2 V max.)	-
Bank selection		2-bank selection (Performed by remote control only. Refer to the remote control function for details.)	-
Indicator		Operation indicator (orange), Level detection indicator (green) Level threshold indicator (red)	Operating indicator (yellow), Stability indicator (green), and Teaching indicator (red)
Protection circuits		Power supply reverse polarity protection, Load short-circuit protection	Reversed power supply polarity, Load short-circuit protection, and Reversed output polarity protection
Response time		ON: 50 μs max., OFF: 70 μs max.	Operate or reset: 50 μs max.
Ambient temperature range		Operating: -20 to 55°C, Storage: -30 to 70°C (with no icing)	Operating: -40 to 60°C, Storage: -40 to 70°C (with no icing or condensation)
Ambient humidity range		Operating: 35% to 85%, Storage: 35% to 95% (with no condensation)	Operating: 35% to 85%, Storage: 35% to 95% (with no condensation)
Degree of protection		IEC 60529 IP67 (with Protective Cover attached)	IEC 60529: IP67, DIN 40050-9: IP69K

Operation ratings

Product discontinuation	Recommended replacement																																				
<p>E3M-VG1 □</p>  <table border="1"> <caption>Data for E3M-VG1 Incident Level</caption> <thead> <tr> <th>Distance (mm)</th> <th>Incident level (%)</th> </tr> </thead> <tbody> <tr><td>5</td><td>70</td></tr> <tr><td>6</td><td>80</td></tr> <tr><td>7</td><td>88</td></tr> <tr><td>8</td><td>92</td></tr> <tr><td>9</td><td>96</td></tr> <tr><td>10</td><td>100</td></tr> <tr><td>11</td><td>100</td></tr> <tr><td>12</td><td>96</td></tr> <tr><td>13</td><td>92</td></tr> <tr><td>14</td><td>88</td></tr> <tr><td>15</td><td>75</td></tr> </tbody> </table>	Distance (mm)	Incident level (%)	5	70	6	80	7	88	8	92	9	96	10	100	11	100	12	96	13	92	14	88	15	75	<p>E3ZM-V □ □</p>  <table border="1"> <caption>Data for E3ZM-V Incident Light</caption> <thead> <tr> <th>Distance (mm)</th> <th>Incident light (%)</th> </tr> </thead> <tbody> <tr><td>10</td><td>90</td></tr> <tr><td>11</td><td>100</td></tr> <tr><td>12</td><td>100</td></tr> <tr><td>13</td><td>95</td></tr> <tr><td>14</td><td>85</td></tr> </tbody> </table>	Distance (mm)	Incident light (%)	10	90	11	100	12	100	13	95	14	85
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Operation methods

Product discontinuation	Recommended replacement
Operation with select switch and teaching button.	Operation with teaching button.