PRODUCT NEWS

Product Discontinuation Notices

OMRON

March 2, 2009

Photoelectric Sensors

No.2009069E

Discontinuation Notice of Photoelectric Sensors. E3T-SR3 series

Product Discontinuation	Recommended Replacement
E3T-SR3[] (2 eyes-Retroreflective type) **E39-R37 (Reflector)**	**E3T-SR4[] (Coaxial-Retroreflective type)** **E39-R37-CA (Reflector)**

Discontinuation date : The end of March, 2010

Caution on recommended replacement

For almost applications, there is no problem of the replacement. But the optics of E3T-SR4[] is changed and improved from E3T-SR3[]. Therefore we recommend testing under the using condition. Especially, for the applications below, there might be some problems of the replacement. So please test under the using condition.

- The case of detecting transparent or semitransparent objects
- The case of detecting at longer set distance than the rating sensing distance
- The case of using in positioning

Please refer to the "Characteristic" below for the details.

Difference from discontinued product

Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
E3T-SR4[]	*	**	**	**	*	*	**
E39-R37-CA	*	**	**	**	*	*	**

** : Fully compatible
* : The change is a little/Almost compatible
-- : Not compatible
- : No corresponding specification

OMRON Corporation
Industrial Automation Company

20100921(1)

Product Discontinuation and recommended replacement

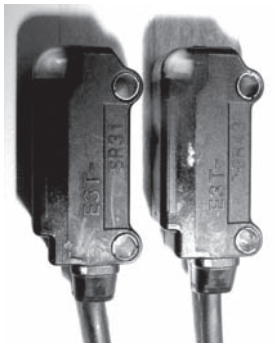
Product discontinuation	Recommended replacement
E3T-SR31 2M	E3T-SR41-S 2M
E3T-SR32 2M	E3T-SR42-S 2M
E3T-SR33 2M	E3T-SR43-S 2M
E3T-SR34 2M	E3T-SR44-S 2M
E3T-SR31 5M	E3T-SR41-S 5M
E3T-SR32 5M	E3T-SR42-S 5M
E3T-SR33 5M	E3T-SR43-S 5M
E3T-SR34 5M	E3T-SR44-S 5M
E3T-SR31R 2M	E3T-SR41R-S 2M
E3T-SR32R 2M	E3T-SR42R-S 2M
E3T-SR33R 2M	E3T-SR43R-S 2M
E3T-SR34R 2M	E3T-SR44R-S 2M
E3T-SR33 15M	E3T-SR43-S 15M
E3T-SR31-ECON 0.3M	E3T-SR41-ECON-S 0.3M
E3T-SR32-ECON 0.3M	E3T-SR42-ECON-S 0.3M
E3T-SR31-ECON 2M	E3T-SR41-ECON-S 2M
E3T-SR32-ECON 2M	E3T-SR42-ECON-S 2M
E3T-SR31-M1TJ 0.3M	E3T-SR41-M1TJ-S 0.3M
E3T-SR32-M1TJ 0.3M	E3T-SR42-M1TJ-S 0.3M
E3T-SR33-M1TJ 0.3M	E3T-SR43-M1TJ-S 0.3M
E3T-SR34-M1TJ 0.3M	E3T-SR44-M1TJ-S 0.3M
E3T-SR31-M3J 0.3M	E3T-SR41-M3J-S 0.3M
E3T-SR32-M5J 0.3M	E3T-SR42-M5J-S 0.3M
E3T-SR33-M5J 0.3M	E3T-SR43-M5J-S 0.3M
E3T-SR34-M5J 0.3M	E3T-SR44-M5J-S 0.3M
E3T-SR34-M5J 1M	E3T-SR44-M5J-S 1M
E3T-SR31-C 2M	E3T-SR41-C 2M
E3T-SR31-C 5M	E3T-SR41-C 5M
E3T-SR31-C1 0.3M	E3T-SR41-C1 0.3M
E39-R37	E39-R37-CA
E39-RS1 *	E39-RS1-CA
E39-RS2 *	E39-RS2-CA
E39-RS3 *	E39-RS3-CA

* They are not discontinued products. But it is not compatible for reflectors.
So if they are used with E3T-SR3[], please replace the set of E3T-SR3[] and them to the set of E3T-SR4[] and E39-RS[]-CA.

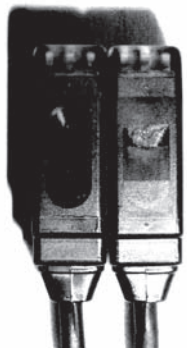
Body color

Product discontinuation E3T-SR3[]	Recommended replacement E3T-SR4[]

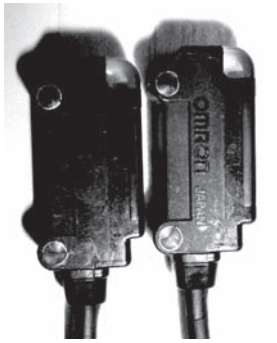
The change is a little for the design of front.



Left



Front

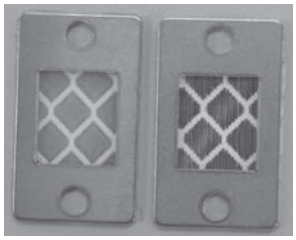


Right

Left of picture: E3T-SR3[] (Product discontinuation)
Right of picture: E3T-SR4[] (Recommended replacement)

Product discontinuation E39-R37	Recommended replacement E39-R37-CA

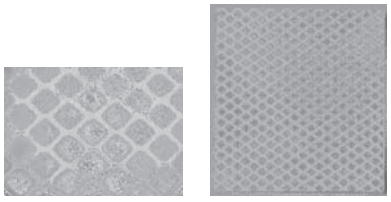
The change is a little for the pattern of reflective surface.



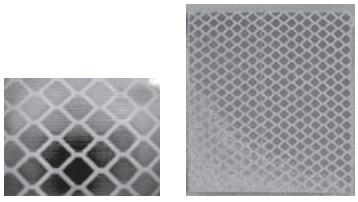
Left of picture: E39-R37 (Product discontinuation)
Right of picture: E39-R37-CA (Recommended replacement)

Product discontinuation E39-RS1 E39-RS2 E39-RS3 * Not product discontinuation	Recommended replacement E39-RS1-CA E39-RS2-CA E39-RS3-CA

The change is a little for the pattern of reflective surface.

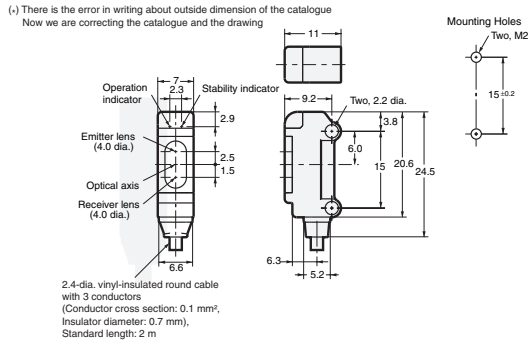
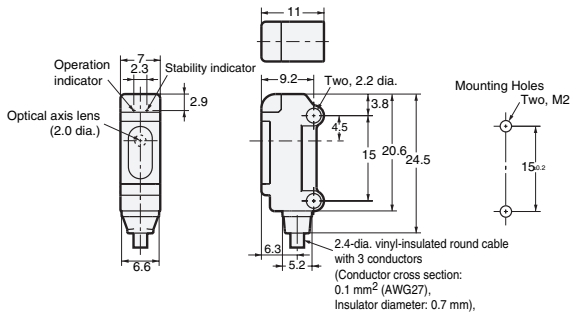
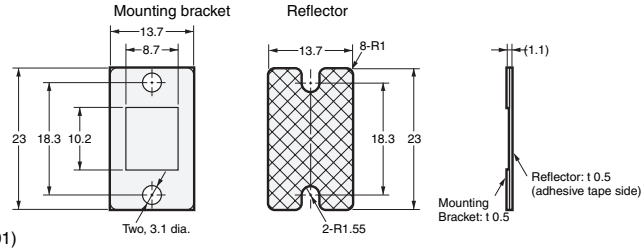
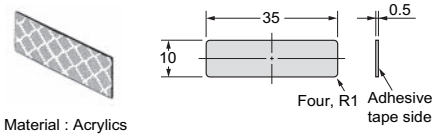
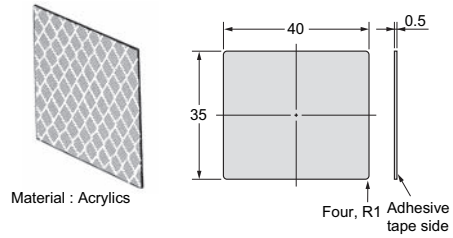
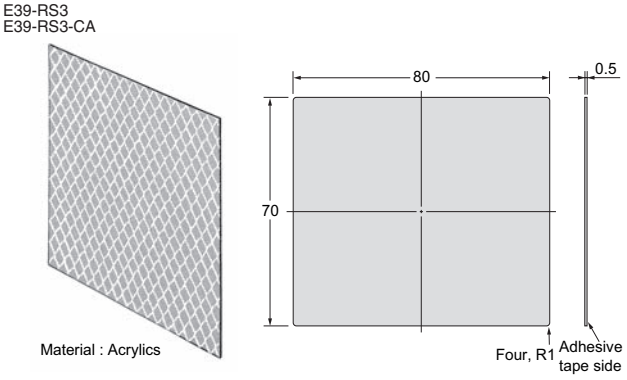


E39-RS[]



E39-RS[]-CA
(Recommended replacement)

Outside dimensions and mounting dimensions

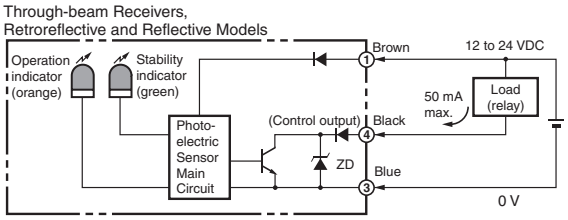
Product discontinuation E3T-SR3[]	Recommended replacement E3T-SR4[]
	
It is fully compatible for the outside dimension and the mounting dimension. The change is a little for the position of emitter lens. The emitter lens position of E3T-SR4[] is lower by 0.5 mm than of E3T-SR3[]. And there is the lens (the emitter and receiver lens is common.) of E3T-SR4[] between the emitter and the receiver lens of E3T-SR3[]. So, for the almost applications, there is no problem of the replacement. But we recommend testing under the using condition.	
Product discontinuation E39-R37	**Recommended replacement E39-R37-CA**
It is fully compatible.  Material: Mounting plate: stainless steel (SUS301) Reflective surface: acrylic  **Note:** The reflective plate and mounting plate (1) come as a set.	
Product discontinuation E39-RS1 E39-RS2 E39-RS3 * Not product discontinuation	**Recommended replacement E39-RS1-CA E39-RS2-CA E39-RS3-CA**
It is fully compatible. E39-RS1 E39-RS1-CA  Material : Acrylics E39-RS2 E39-RS2-CA  Material : Acrylics E39-RS3 E39-RS3-CA  Material : Acrylics	

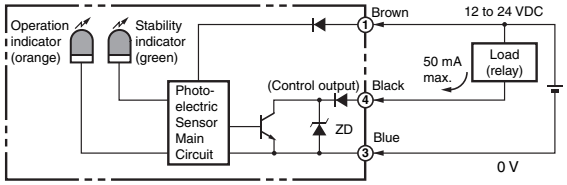
Rating and specifications

Please note the available reflectors with each sensor.

<table>
<tr><th colspan="2"></th><th>Product discontinuation
E3T-SR3[]</th><th>Recommended replacement
E3T-SR4[]</th></tr>
<tr><td colspan="2">Sensing distance</td><td>100mm[10mm]
(using the reflector E39-R37)</td><td>100mm[10mm]
(using the reflector E39-R37-CA)
200mm[30mm]
(using the reflector E39-R4)</td></tr>
<tr><td colspan="2">Standard sensing object</td><td colspan="2">Opaque, 27-mm dia. min</td></tr>
<tr><td colspan="2">Minimum detectable object (typical)</td><td colspan="2">Opaque, 2-mm dia. (sensing distance of 100mm)</td></tr>
<tr><td colspan="2">Directional angle</td><td colspan="2">2 to 20°</td></tr>
<tr><td colspan="2">Light source (wavelength)</td><td colspan="2">Red LED (wavelength = 650nm)</td></tr>
<tr><td colspan="2">Power supply voltage</td><td colspan="2">12 to 24 VDC +/-10%, ripple(p-p) 10% max.</td></tr>
<tr><td colspan="2">Current consumption</td><td colspan="2">20 mA max.</td></tr>
<tr><td colspan="2">Control output</td><td colspan="2">Load power supply voltage: 26.4 VDC max.
Load current: 50 mA max.
residual voltage: 2 V max. for load current of 10 to 50 mA
1 V max. for load current of less than 10 mA
Open-collector output
Light ON: E3T-SR[]1 / -SR[]3
Dark ON: E3T-SR[]2 / -SR[]4</td></tr>
<tr><td colspan="2">Protection circuits</td><td colspan="2">Power supply and control output reverse polarity protection
Output short-circuit protection
Mutual interference prevention</td></tr>
<tr><td colspan="2">Response time</td><td colspan="2">Operate or reset: 1ms max.</td></tr>
<tr><td colspan="2">Ambient illumination</td><td colspan="2">Incandescent lamp: 5,000 lx max.
Sunlight: 10,000 lx max.</td></tr>
<tr><td colspan="2">Ambient temperature range</td><td colspan="2">Operating: -25 to 55 °C
Storage: -40 to 70 °C
(with no icing or condensation)</td></tr>
<tr><td colspan="2">Ambient humidity range</td><td colspan="2">Operating: 35 to 85%
Storage: 35% to 95%
(with no condensation)</td></tr>
<tr><td colspan="2">Insulation resistance</td><td colspan="2">20 MΩ min. at 500 VDC</td></tr>
<tr><td colspan="2">Dielectric strength</td><td colspan="2">1,000 VAC, 50/60 Hz for 1 minuet</td></tr>
<tr><td colspan="2">Vibration resistance</td><td colspan="2">Destruction: 10 to 2,000 Hz, 1.5-mm double amplitude
or 300 m/s^2 for 0.5 hrs each in X, Y, and Z directions</td></tr>
<tr><td colspan="2">Shock resistance</td><td colspan="2">Destruction: 1,000 m/s^2 3 times each in X, Y, and Z directions</td></tr>
<tr><td colspan="2">Degree of protection</td><td colspan="2">IP67 (IEC60529)</td></tr>
<tr><td colspan="2">Connection method</td><td colspan="2">Pre-wired (standard length: 2 m)</td></tr>
<tr><td colspan="2">Weight</td><td colspan="2">Approx. 40 g</td></tr>
<tr><td rowspan="3">Materials</td><td>Case</td><td colspan="2">PBT (polybutylene terephthalate)</td></tr>
<tr><td>Display window</td><td colspan="2">Denatured polyarylate</td></tr>
<tr><td>Lens</td><td colspan="2">Methacrylic resin</td></tr>
<tr><td colspan="2">Accessories</td><td>Instruction manual
Installation phillips screws, nuts, spring washers, flat washers
Reflector (refer to the table below)
<table><tr><th>Model</th><th>Attached reflector</th></tr><tr><td>E3T-SR3[]</td><td>E39-R37</td></tr><tr><td>E3T-SR3[]-C</td><td>nothing</td></tr></table></td><td>Instruction manual
Installation phillips screws, nuts, spring washers, flat washers
Reflector (refer to the table below)
<table><tr><th>Model</th><th>Attached reflector</th></tr><tr><td>E3T-SR4[]-S</td><td>E39-R37-CA</td></tr><tr><td>E3T-SR4[]</td><td>E39-R4</td></tr><tr><td>E3T-SR4[]-C</td><td>nothing</td></tr></table></td></tr>
</table>

Wire Connection

Product discontinuation E3T-SR31/-SR32	Recommended replacement E3T-SR41/-SR42
It is fully compatible.  	

Product discontinuation E3T-SR33/-SR34	Recommended replacement E3T-SR43/-SR44
It is fully compatible.  	

Reflector

It is not compatible for reflectors.
So please replace to the set of recommended sensor and reflector.

	Sensing distance	Product discontinuation E3T-SR3[]	Recommended replacement E3T-SR4[]
Small reflector	200mm[30mm]	nothing	E39-R4 (attached to E3T-SR4[])
	100mm[10mm]	E39-R37 (attached to E3T-SR3[])	E39-R37-CA (attached to E3T-SR4[]-S)
Tape reflector	100mm[10mm]	E39-RS1 * (not attached to sensor)	E39-RS1-CA (not attached to sensor)
	100mm[10mm]	E39-RS2 * (not attached to sensor)	E39-RS2-CA (not attached to sensor)
	100mm[10mm]	E39-RS3 * (not attached to sensor)	E39-RS3-CA (not attached to sensor)

*Not product discontinuation

Characteristic

The optics of E3T-SR4[] is changed and improved from E3T-SR3[]. Therefore, at the rating sensing distance, the excess gain of E3T-SR4[] is higher than of E3T-SR3[]. And the maximum sensing distance of E3T-SR4[] is shorter than of E3T-SR3[]. But E3T-SR4[] is the same as E3T-SR3[] for the rating sensing distance. Please refer to the graph below for the detail.
For almost applications, there is no problem of the replacement. But, for the applications below, there might be some problems of the replacement. So we recommend testing under the using condition.

- The case of detecting transparent or semitransparent objects
  It might not be possible to detecting them, because the excess gain of E3T-SR4[] is higher than of E3T-SR3[]. Please examine to replace to the sensor that have function of sensitivity adjustment (Ex. fiber sensor).

- The case of detecting at longer set distance than the rating sensing distance
  The sensing distance might not be enough, because the maximum sensing distance of E3T-SR4[] is shorter than of E3T-SR3[]. If it is possible to replace to through-beam type, please examine E3T-ST/-FT. If it is necessary to replace to retro-reflective type, please examine E3Z-R.

- The case of using in positioning
  The position of detecting might be changed, because there is some difference for the characteristic and the lens position. Please examine to change and adjust the mounting position.

<Excess gain vs. Set distance>
About the difference between E3T-SR4[] and E3T-SR3[]
- For the rating sensing distance (set distance: 10 to 100 mm),
  the excess gain of E3T-SR4[] is higher than of E3T-SR3[].
- For over the rating sensing distance (set distance: over 100 mm),
  the excess gain of E3T-SR4[] is less than of E3T-SR3[].
  And the maximum sensing distance of E3T-SR4[] is shorter than of E3T-SR3[].

<Parallel operating range>
About the difference between E3T-SR4[] and E3T-SR3[]
- For the rating sensing distance (set distance: 10 to 100 mm),
  it is fully compatible at the rating sensing distance.
- For over the rating sensing distance (set distance: over 100 mm),
  the operating range of E3T-SR4[] is smaller than of E3T-SR3[].
  And the maximum sensing distance of E3T-SR4[] is shorter than of E3T-SR3[].