

Mounting Brackets

E39-L/F39-L

Slits/Reflectors

E39-S/E39-R

CSM_E39-L_F39-L_E39-S_E39-R_DS_E_15_1

Mounting Brackets [Refer to Dimensions on page 5.]

Model	Fitting materials	Count	Accessories			Applicable sensor (mounting pitch on sensor side)	Page Dimensions
			Description	Material	Count		
E39-L2	Iron, zinc plating	1	Hexagonal bolts M4 × 12 (with spring and plain washers)	Iron, zinc plating	2	E3S-RS30E4□ (25.4) E3S-R1E4□ (25.4)	5
E39-L4	Iron, zinc plating	1	Slotted/Phillips screws M3 × 12 (with spring and plain washers)	Iron, zinc plating	2	E32-T16 (20)	
E39-L6	Iron, zinc plating	1	Hexagonal bolts M4 × 12 (with spring and plain washers)	Iron, zinc plating	2	E3S-RS30E4□ (25.4) E3S-R1E4□ (25.4)	
E39-L31	Iron, zinc plating	1	Slotted/Phillips screws, M3 × 12 (with spring washers)	Iron, zinc plating	2	E3C-S50 (8)	
E39-L40	Iron, zinc plating	1	Phillips screws M4 × 25 (with spring and plain washers) Nuts M4	Iron, zinc plating Iron, zinc plating	2 2	E3JK	
E39-L41	Iron, zinc plating	2	Phillips screws M3 × 14 (with spring washers) Plain washer M3	Iron, zinc plating Iron, zinc plating	4 4	E3C-1 (10)	6
E39-L42	Iron, black coating	2	Phillips screws M3 × 10 (with spring washers) Plain washer M3	Iron, zinc plating Iron, zinc plating	4 4	E3C-2 (20) E3C-DS10 (19) E3C-VS1G (19) E3C-VS3R (19)	
E39-L43	Stainless steel (SUS304)	1	Slotted/Phillips screws M3 × 8 (with spring and plain washers)	Stainless steel (SUS304)	2	E3Z pre-wired model (25.4)	
E39-L44	Stainless steel (SUS304)	1	Slotted/Phillips screws M3 × 8 (with spring and plain washers)	Stainless steel (SUS304)	2	E3Z pre-wired model (25.4)	
E39-L51	Iron, zinc plating	1	Slotted/Phillips screws M4 × 30 (with spring and plain washers) Nuts M4	Iron, zinc plating Iron, nickel plating	2 2	E3JM (40)	
E39-L53	Iron, zinc plating	1	---	---	---	E3JM (40)	6
E39-L54V	Stainless steel (SUS304)	1	---	---	---	E32-T54V	
E39-L69	Stainless steel (SUS304)	1	Slotted/Phillips screws M3 × 12 (with spring and plain washers)	Stainless steel (SUS304)	2	E3S-R1□ (20) E3S-R3□ (20)	
E39-L70	Stainless steel (SUS304)	1	Slotted/Phillips screws M3 × 12 (with spring and plain washers)	Stainless steel (SUS304)	2	E3S-R6□ (20) E3S-R8□ (20)	
E39-L83	Stainless steel	1	---	---	---	E32-T24S E32-A03	
E39-L85	Stainless steel (SUS304)	1	Hexagonal bolts M4 × 12 (with spring and plain washers)	Iron, zinc plating	2	E3S-C (25.4)	
E39-L86	Stainless steel (SUS304)	1	Hexagonal bolts M4 × 12 (with spring and plain washers)	Iron, zinc plating	2	E3S-C (25.4)	
E39-L87	Stainless steel (SUS304)	1	Hexagonal bolts M4 × 12 (with spring and plain washers)	Iron, zinc plating	2	E3S-C (25.4) E3S-CR62/67 (25.4)	

Note: Applicable models that appear shaded come with the Mounting Brackets at left as accessories.

Model	Fitting materials	Count	Accessories			Applicable sensor (mounting pitch on sensor side)	Page
			Description	Material	Count		Dimensions
E39-L93FH	Stainless steel (SUS304)	1	Holder (upper) Holder (lower) Pipe	Heat-resistant ABS resin 66 nylon Stainless steel (SUS304)	1 1 1	E3Z (25.4) E3S-R1□/R3□ /R6□/R8□ (20) E39-R1/E39-R3	8
E39-L93FV	Stainless steel (SUS304)	1	Bolts M4 × 12 with Hexagonal holes Bolts M4 × 30 with hexagonal holes	Iron, nickel plating	2 1		
E39-L93H	Stainless steel (SUS304)	1	Phillips screws M3 × 12 (with spring and plain washers)	Stainless steel (SUS304)	2		
E39-L93V	Stainless steel (SUS304)	1	Spring washer M4 Plain washer M4 Nuts M4	Iron, nickel plating Iron, nickel plating Iron, nickel plating	1 1 3		
E39-L93XY	---	---	Holder Pipe Bolts M5 × 16 with hexagonal holes Nuts M5	66 nylon Stainless steel (SUS304) Stainless steel (SUS304) Stainless steel (SUS304)	1 1 2 2		
E39-L94	Iron, zinc plating	2	Phillips screws M3 × 10 Nuts M3	Iron, zinc plating Iron, zinc plating	4 4		
E39-L96 * For installation of Sensor Adjuster E39-L93	Stainless steel (SUS304)	1	Phillips screws M3 × 6 (with spring and plain washers)	Iron, nickel plating	2	E39-R1	
E39-L97	Stainless steel (SUS304)	1	Slotted/Phillips screws M3 × 12 (with spring and plain washers)	Stainless steel (SUS304)	2	E3S-R1□/R3□ (20)	
E39-L98	Stainless steel (SUS304)	1	Slotted/Phillips screws M3 × 12 (with spring and plain washers)	Stainless steel (SUS304)	2	E3Z pre-wired model (25.4) E3S-R6□/R8□ (20)	
E39-L102	Stainless steel (SUS304)	1	Hexagonal bolts M4 × 12 (with spring and plain washers)	Iron, zinc plating	2	E3S-C (horizontal type) (25.4)	10
E39-L103	Stainless steel (SUS304)	1	Hexagonal bolts M4 × 12 (with spring and plain washers)	Iron, zinc plating	2	E3S-C (vertical type) (25.4) E3S-CR62/67 (25.4)	
E39-L104	Stainless steel (SUS304)	1	Slotted/Phillips screws M3 × 8 (with spring and plain washers)	Stainless steel (SUS304)	2	E3Z pre-wired model (25.4) E32-R21 (for installation of E39-R3) (25.4)	
E39-L109	Stainless steel (SUS430)	1	---	---	---	E32-S15-□ (13.2)	
E39-L114	Stainless steel (SUS430)	2	Phillips screws M5 × 10	Iron, zinc plating	4	E3MC (28)	
E39-L115	Stainless steel (SUS304)	1	Phillips screws M5 × 8 Slotted/Phillips screws M3 × 8	Iron, zinc plating Iron, nickel plating	4 2	E3MC	
E39-L116	Stainless steel (SUS304)	1	---	---	---	E3T-S (9/15)	
E39-L117	Stainless steel (SUS304)	1	---	---	---	E3T-S (9/15)	
E39-L118	Stainless steel (SUS304)	1	---	---	---	E3T-S (9/15)	
E39-L119	Stainless steel (SUS304)	1	---	---	---	E3T-F (8)	
E39-L120	Stainless steel (SUS304)	1	---	---	---	E3T-F (8)	
E39-L127-T1	Iron, zinc plating	1	Phillips screws M2.3 × 8 Spring washer M2.3	Iron, zinc plating Iron, zinc plating	4 4	E3C-S10 (7.5)	
E39-L127-T2	Iron, zinc plating	1	Phillips screws M2.3 × 8 Spring washer M2.3	Iron, zinc plating Iron, zinc plating	4 4		
E39-L127-T3	Iron, zinc plating	1	Phillips screws M2.3 × 8 Spring washer M2.3	Iron, zinc plating Iron, zinc plating	4 4		

Note: Applicable models that appear shaded come with the Mounting Brackets at left as accessories.

Model	Fitting materials	Count	Accessories			Applicable sensor (mounting pitch on sensor side)	Page
			Description	Material	Count		Dimensions
E39-L131	Stainless steel (SUS304)	1	Slotted/Phillips screws M4 × 25	Stainless steel (SUS304)	2	E3G-R1□ (25) E3G-L7□ (25)	12
			Spring washer M4	Stainless steel (SUS304)	2		
			Plain washer M4	Stainless steel (SUS304)	2		
			Nuts M4	Stainless steel (SUS304)	2		
E39-L132	Stainless steel (SUS304)	1	Slotted/Phillips screws M4 × 25	Stainless steel (SUS304)	2	E3G-R1□ (25) E3G-L7□ (25)	
			Spring washer M4	Stainless steel (SUS304)	2		
			Plain washer M4	Stainless steel (SUS304)	2		
			Nuts M4	Stainless steel (SUS304)	2		
E39-L135	Stainless steel (SUS304)	1	Slotted/Phillips screws M4 × 35	Stainless steel (SUS304)	2	E3G-MR19 (T) E3G-ML79 (T)	
			Spring washer M4	Stainless steel (SUS304)	2		
			Plain washer M4	Stainless steel (SUS304)	2		
			Nuts M4	Stainless steel (SUS304)	2		
E39-L136	Stainless steel (SUS304)	1	Slotted/Phillips screws M4 × 35	Stainless steel (SUS304)	2	E3G-MR19 (T) E3G-ML79 (T)	
			Spring washer M4	Stainless steel (SUS304)	2		
			Plain washer M4	Stainless steel (SUS304)	2		
			Nuts M4	Stainless steel (SUS304)	2		
E39-L142	Stainless steel (SUS304)	1	Slotted/Phillips screws M3 × 8 (with spring and plain washers)	Stainless steel (SUS304)	2	E3Z pre-wired model (25.4)	
E39-L143	Stainless steel (SUS304)	1	None	---	---	E3X-DA-S/MDA E3X-NA E3C-LDA E2C-EDA E4C-UDA	
E39-L144	Stainless steel (SUS304)	1	Slotted/Phillips screws M3 × 12 (with spring and plain washers)	Stainless steel (SUS304)	2	E3Z pre-wired model (25.4)	
E39-L148	Stainless steel (SUS304)	1	None	---	---	E3X-NA	
E39-L149	Iron, black coating	1	None	---		E3Z-G	
E39-L150	Stainless steel (SUS304)	1	Holder/bracket	PBT (polybutylene terephthalate)	1	E3Z (25.4) E3S-R6□/R8□ (20) E39-R3	
			Shaft (brace)	Stainless steel (SUS304)	1		
			Bolt with hexagonal hole	Stainless steel (SUSXM7)	1		
			Nut	Stainless steel (SUS304)	1		
			Phillips screw	Stainless steel (SUSXM7)	1		
			Slotted/Phillips screws	Stainless steel (SUS304)	2		
E39-L151	Stainless steel (SUS304)	1	Holder/bracket	PBT (polybutylene terephthalate)	1	E3Z (25.4) E3S-R6□/R8□ (20) E39-R3	
			Shaft (brace)	Stainless steel (SUS304)	1		
			Bolt with hexagonal hole	Stainless steel (SUSXM7)	1		
			Nut	Stainless steel (SUS304)	1		
			Phillips screw	Stainless steel (SUSXM7)	1		
			Slotted/Phillips screws	Stainless steel (SUS304)	2		
E39-L153	Stainless steel (SUS304)	1	Slotted/Phillips screws M3 × 8 (with spring and plain washers)	Stainless steel (SUSXM7) Stainless steel (SUS304)	2	E3Z pre-wired model (25.4)	

Note: Applicable models that appear shaded come with the Mounting Brackets at left as accessories.

Contact Mounting Plates [Refer to Dimensions on page 13.]

Model	Material	Count	Applicable type	Page
				Dimensions
E39-L60	PBT (polybutylene terephthalate)	1	E3S-R□6	13

Note: Applicable models that appear shaded come with the Mounting Brackets at left as accessories.

Slits

Model	Slit width	Installation procedure	Applicable type
E39-S39	Width 1 × 20 mm	Seal type	E3JM-10□4 (T)-N E3JK-5□□-N
E39-S60	Width 0.5, 1 × 15 mm	Seal type	E32-T16
E39-S61	Width 0.5, 1, 2, 4 × 11 mm	Plug-in type	E3S-CT□1
E39-S63	0.5-mm dia., 1 mm		E3T-ST1□
E39-S64	0.5-mm dia., 1 mm		E3T-FT1□
E39-S65A	0.5 mm dia.		E3Z-T□□
E39-S65B	1-mm dia.		
E39-S65C	2-mm dia.		
E39-S65D	Width 0.5 × 10 mm		
E39-S65E	Width 1 × 10 mm		
E39-S65F	Width 2 × 10 mm		
E39-S68	Width 0.5, 1 × 13.4 mm	Seal type	E32-T16P E3Z-T16PR

Note: Applicable models that appear shaded come with the Slits at left as accessories

Reflectors (Refer to Dimensions on page 14.)

Name	Reflectors		Non-fogging reflective plate	Reflectors			Special Reflector for E3ZM-B	
Item	Model	E39-R1	E39-R1S	E39-R1K	E39-R2	E39-R6	E39-R10	E39-RP1
Directional angle	30° min. *1			30° min. *2	30° min.			
Ambient operating temperature range	-25 to 55°C							-40 to 60°C
Ambient storage temperature range	-40 to 70°C			-40 to 55°C	-40 to 70°C			
Ambient operating humidity range	35% to 85%					35% to 95%	35% to 85%	
Ambient storage humidity range	35% to 95%							
Degree of protection	IEC IP67							
Accessories	---							

*1. 40° or higher for E3JM-R and E3JK-R.

*2. 40° or higher for E3G-R.

Item	Name	Small reflector				Tape reflector *		
	Model	E39-R9	E39-R3	E39-R4	E39-R37-CA *	E39-RS1 E39-RS1-CA	E39-RS2 E39-RS2-CA	E39-RS3 E39-RS3-CA
Directional angle	30° min.							
Ambient operating temperature range	−25 to 55°C							
Ambient storage temperature range	−40 to 70°C				0 to 40°C			
Ambient operating humidity range	35% to 95%	35% to 85%						
Ambient storage humidity range	35% to 95%				35% to 85%			
Degree of protection	IEC IP67							
Accessories	---	Mounting Brackets E39-L104 (with screws)	---	Phillips screws M3 × 3, spring washers M3, nuts M3	---			

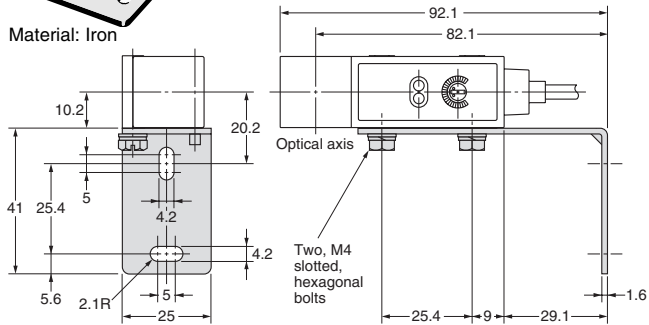
* Models ending in the suffix "-CA" are reflectors only for E3T-SR4□.

Item	Name	Laser Reflectors				
		Standard		Short-distance transparent object detection	Sheets	
	Model	E39-R12	E39-R13	E39-R14	E39-RS4	E39-RS5
Ambient operating temperature range		-10 to 55°C (No icing)				
Ambient storage temperature range		-25 to 70°C (No icing)				
Ambient operating humidity range		35 to 85% (No condensation)				
Ambient storage humidity range		35 to 85% (No condensation)				

(Unit: mm)

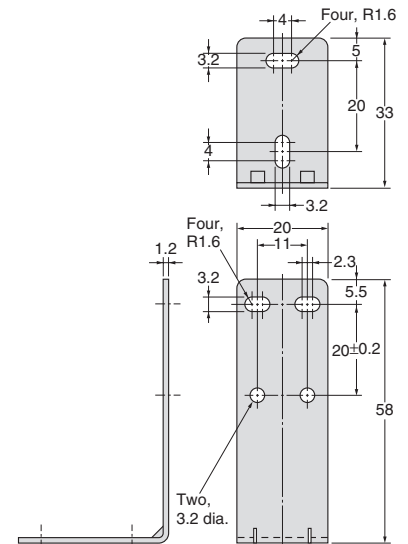
Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

Material: Iron



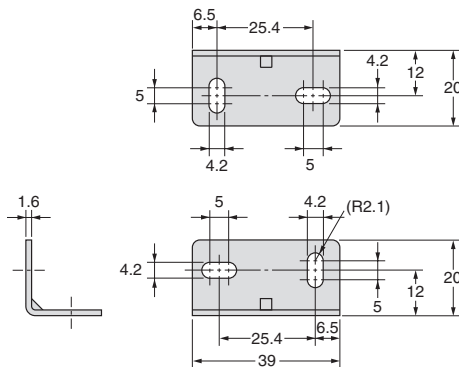
A technical drawing of a 90-degree corner bracket. The bracket consists of two perpendicular rectangular flanges. The vertical flange has four circular mounting holes: two near the top and two near the bottom. The horizontal flange has two elongated slots: one near the left end and one near the right end. The two flanges meet at a 90-degree angle, with rounded outer corners. The drawing is a black and white line illustration.

Material: Iron



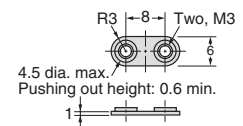
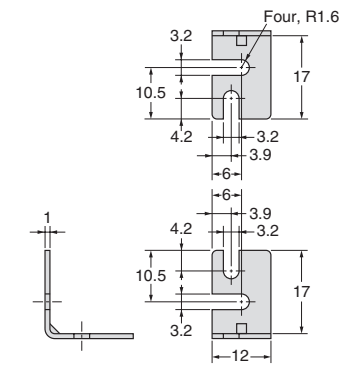
A 3D perspective diagram of a 90-degree corner joint. Two rectangular plates are joined at a right angle. A single V-groove weld is shown along the inner corner where the two plates meet. The weld is represented by a line with a small 'V' shape at the joint.

Material: Iron

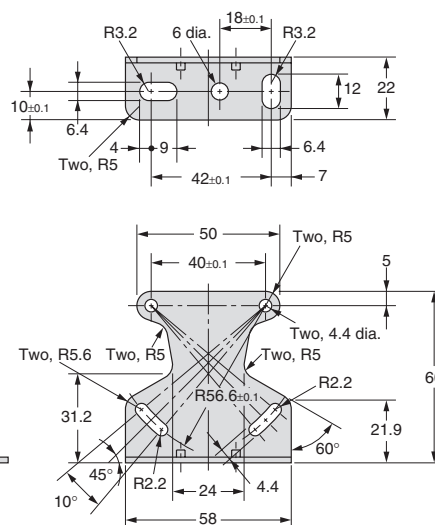


A line drawing showing a bracket with a vertical flange and a horizontal base. A pin is inserted into a hole in the base. To the right, a separate nut is shown with a washer on top of it.

Material: Iron

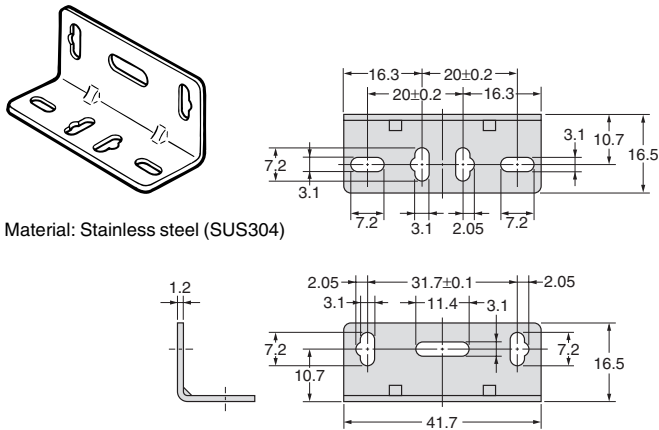


Material: Iron



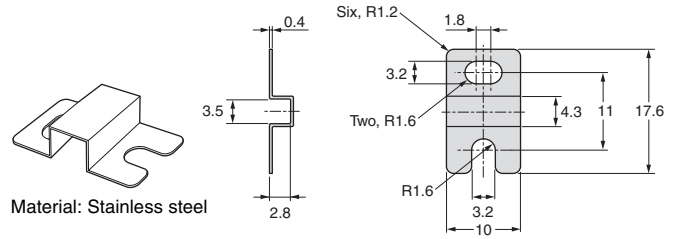
6

E39-L70



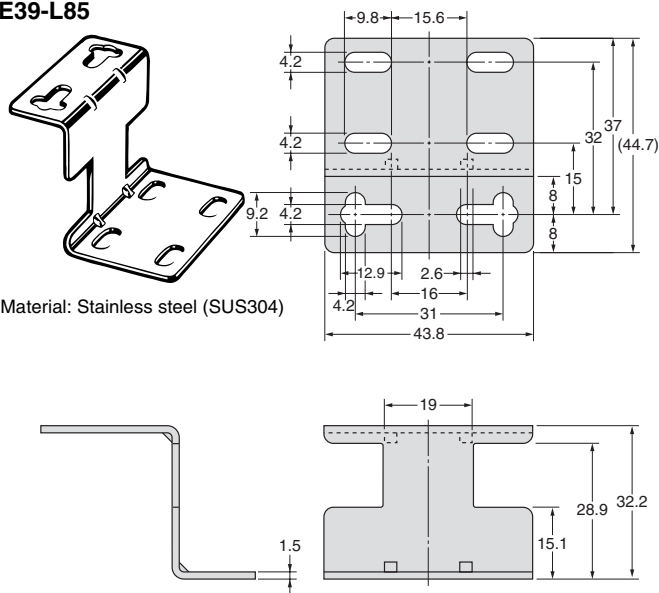
Material: Stainless steel (SUS304)

E39-L83



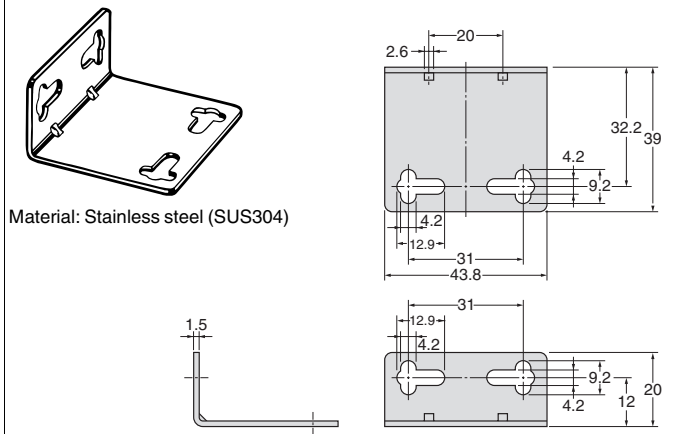
Material: Stainless steel

E39-L85



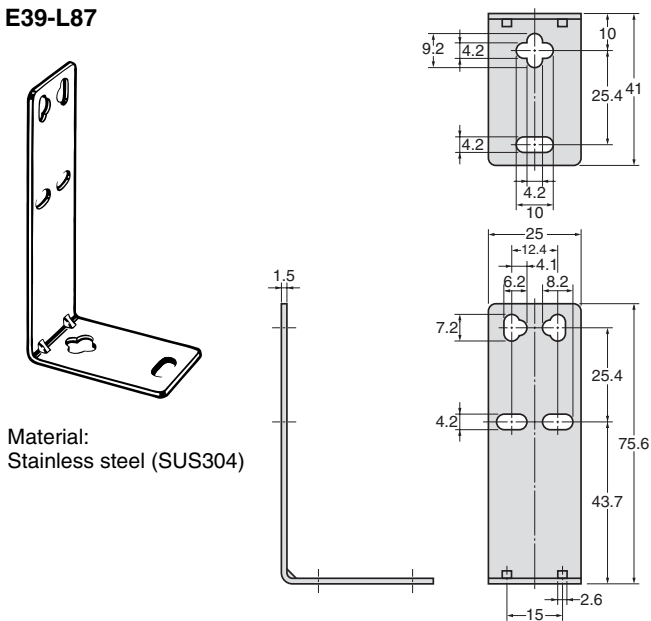
Material: Stainless steel (SUS304)

E39-L86



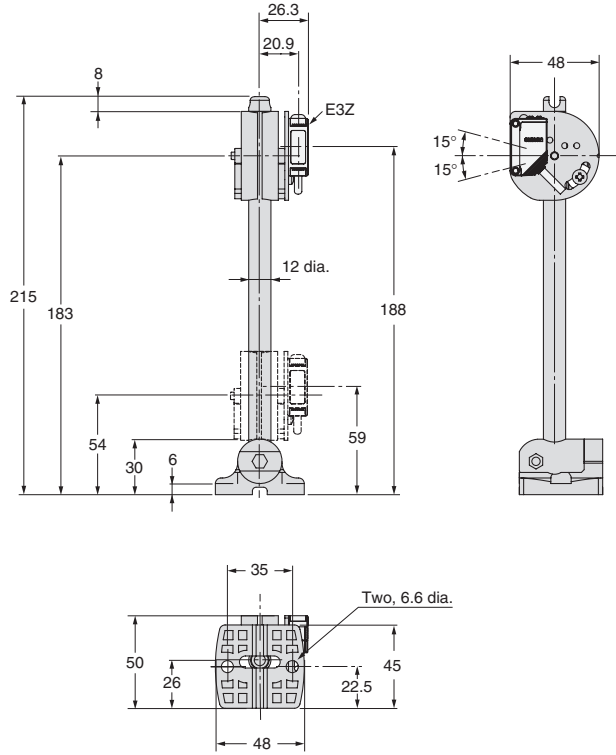
Material: Stainless steel (SUS304)

E39-L87

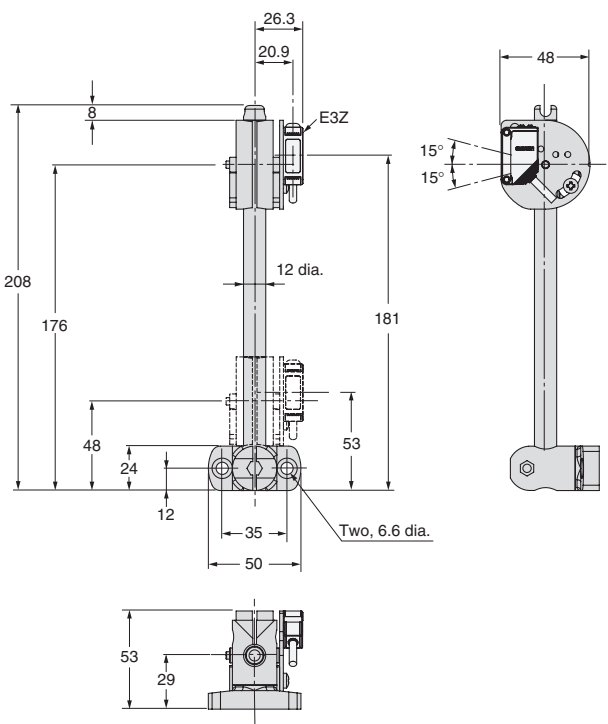


Material:
Stainless steel (SUS304)

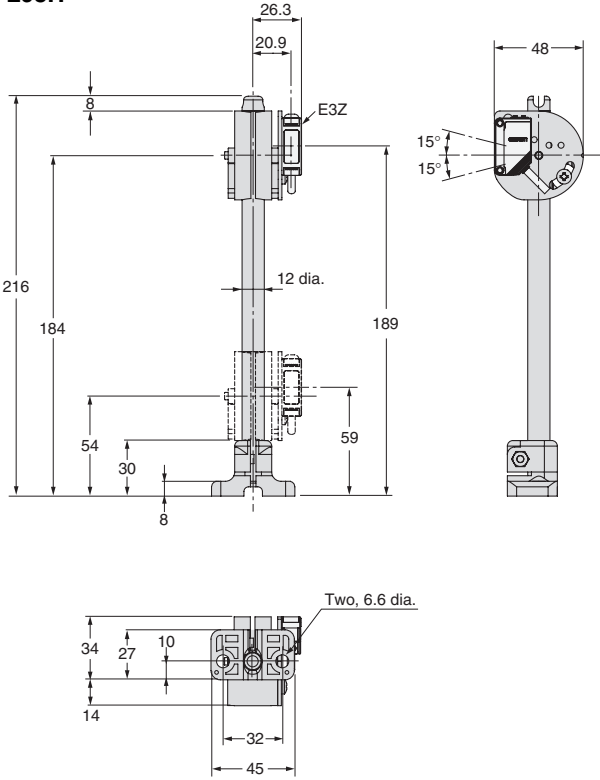
E39-L93FH



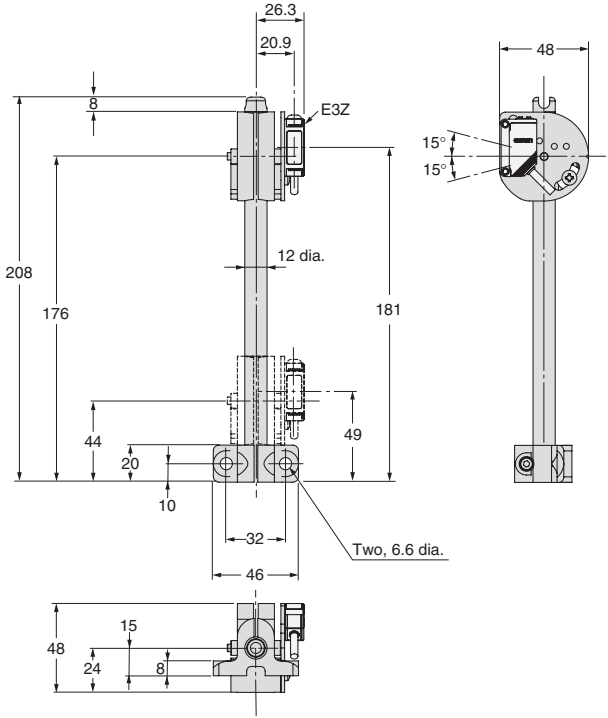
E39-L93FV



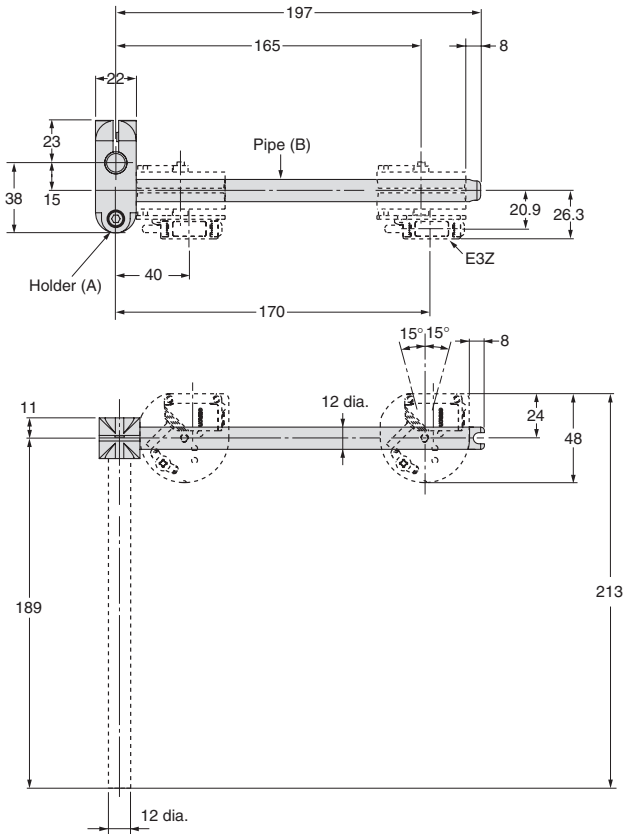
E39-L93H



E39-L93V

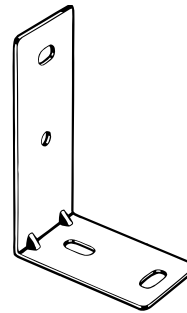


E39-L93XY

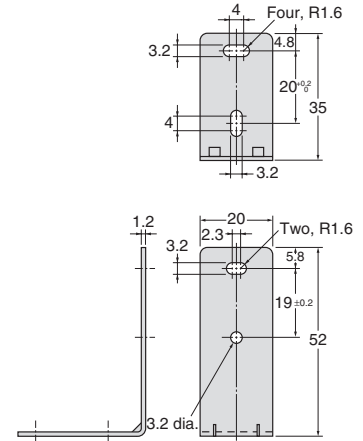


Note: The E39-L93XY consists of only the one joint holder (A) and pipe, and the two hexagonal bolts and nuts. It cannot be mounted to the Sensor alone.

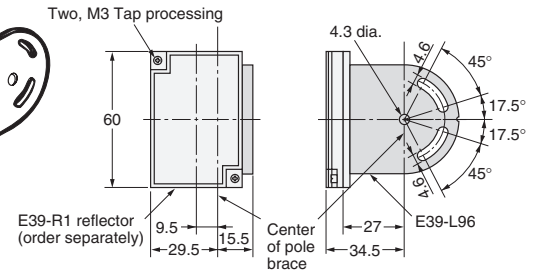
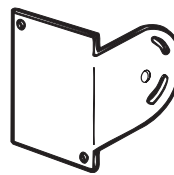
E39-L94



Material: Iron



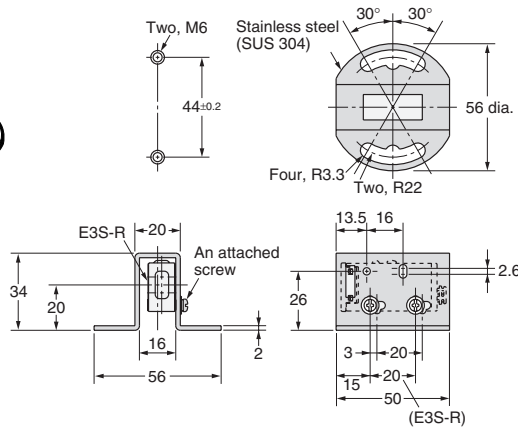
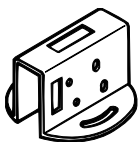
E39-L96



Material:
Stainless steel
(SUS304)
2-mm-thick

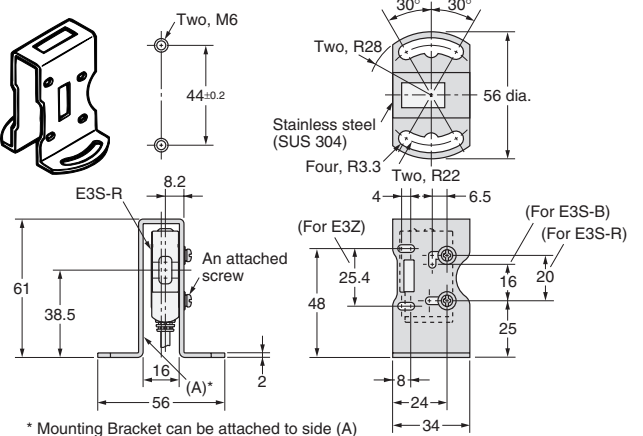
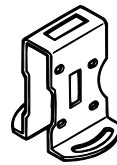
E39-L97

Mounting Holes



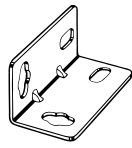
E39-L98

Mounting Holes

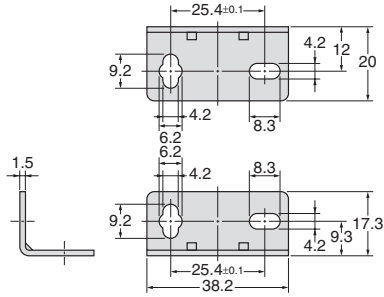


* Mounting Bracket can be attached to side (A)

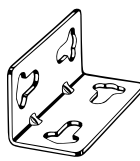
E39-L102



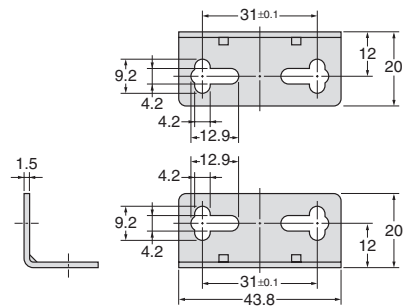
Material:
Stainless steel (SUS304)



E39-L103



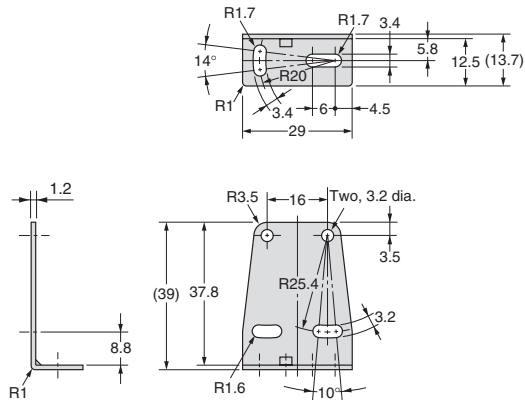
Material:
Stainless steel (SUS304)



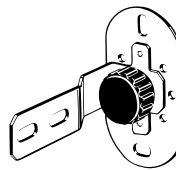
E39-L104



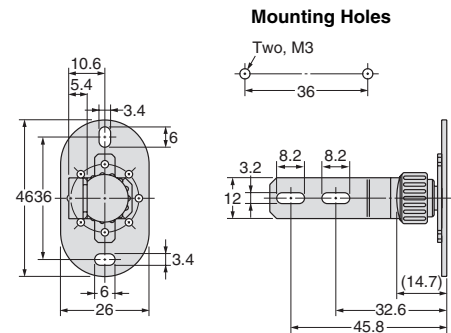
Material:
Stainless steel
(SUS304)



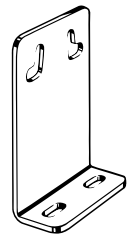
E39-L109



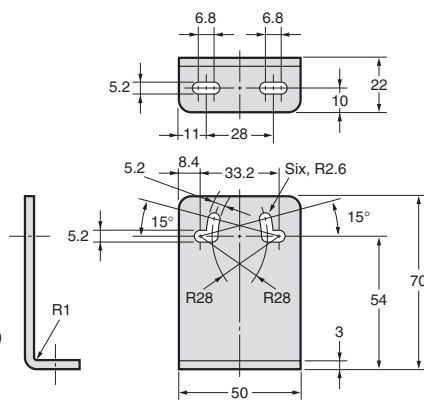
Material:
Stainless steel
(SUS430)



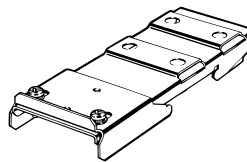
E39-L114



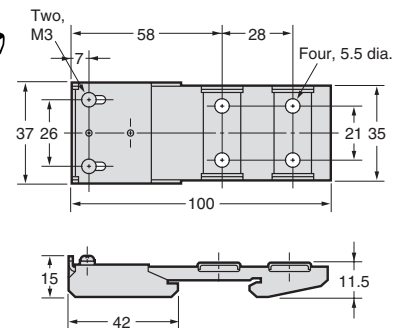
Material:
Stainless steel (SUS430)



E39-L115

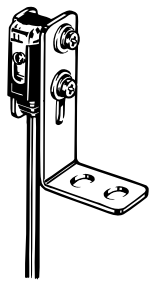


Material: Stainless steel (SUS304)

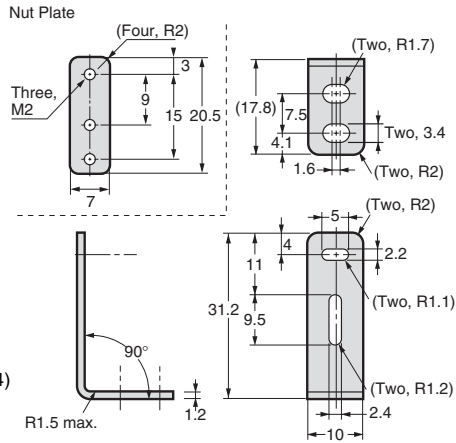


E39-L/F39-L/E39-S/E39-R

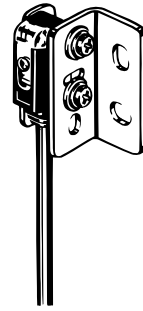
E39-L116



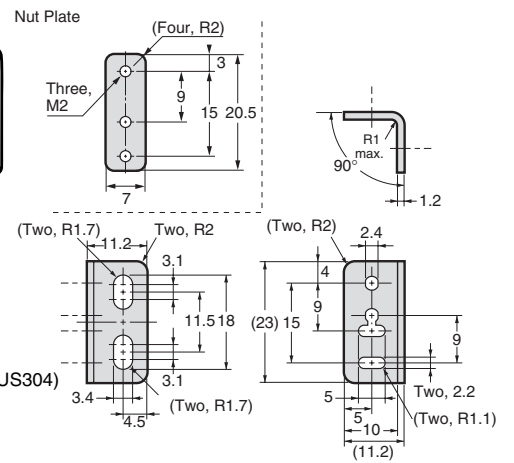
Material:
Stainless steel (SUS304)
1.2-mm-thick



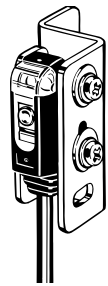
E39-L117



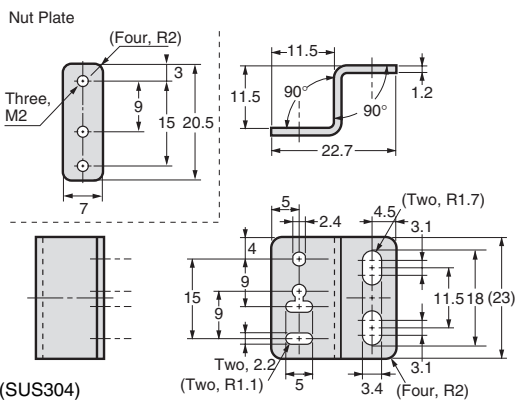
Material:
Stainless steel (SUS304)
1.2-mm-thick



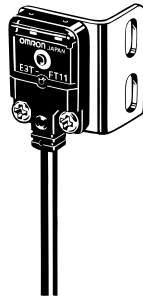
E39-L118



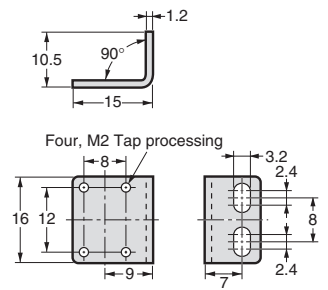
Material:
Stainless steel (SUS304)
1.2-mm-thick



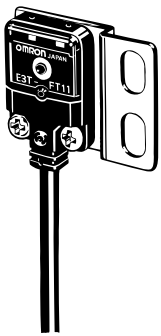
E39-L119



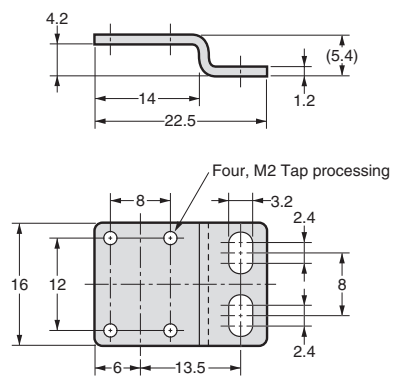
Material:
Stainless steel (SUS304)
1.2-mm-thick



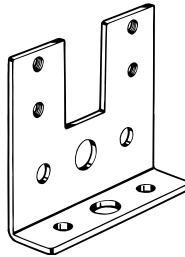
E39-L120



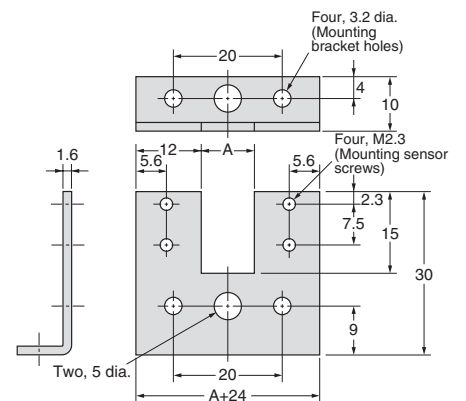
Material: Stainless steel (SUS304)
1.2-mm-thick



E39-L127-T1
E39-L127-T2
E39-L127-T3

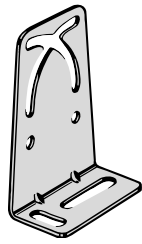


Material: Iron

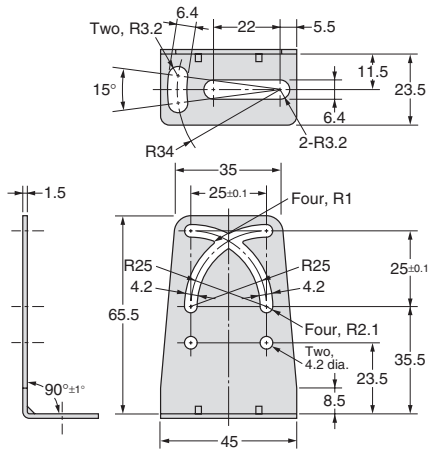


Model	Dimension A (mm)
E39-L127-T1	10
E39-L127-T2	20
E39-L127-T3	30

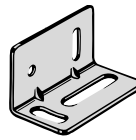
E39-L131



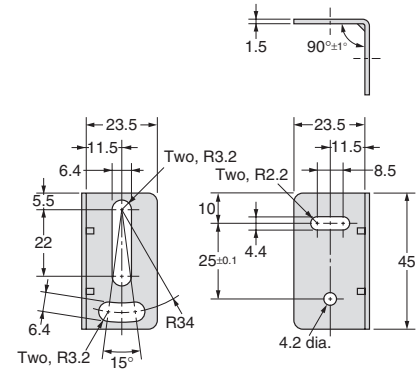
Material:
Stainless steel (SUS304)



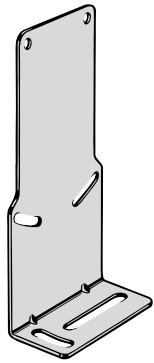
E39-L132



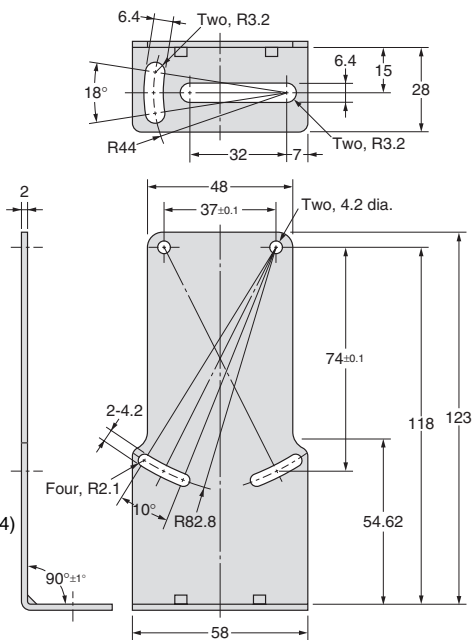
Material: Stainless steel (SUS304)



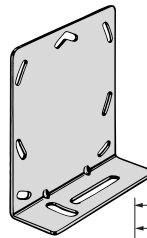
E39-L135



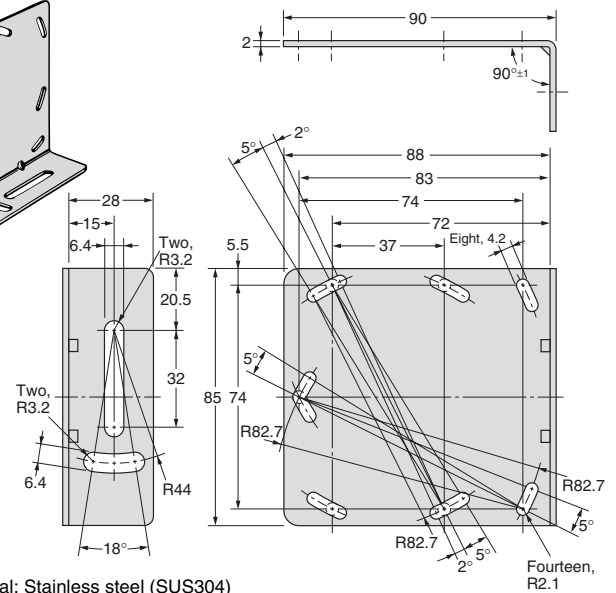
Material:
Stainless steel (SUS304)



E39-L136



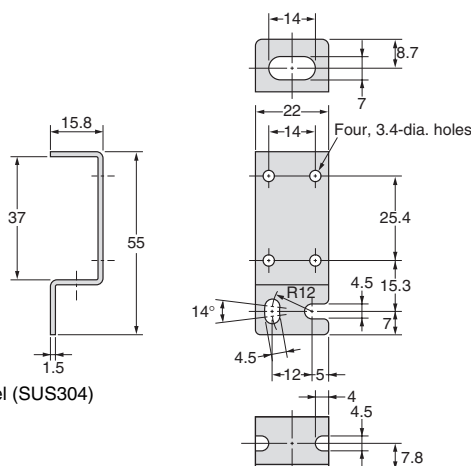
Material: Stainless steel (SUS304)



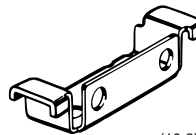
E39-L142



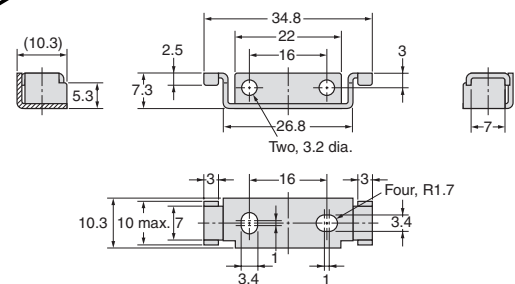
Material: Stainless steel (SUS304)



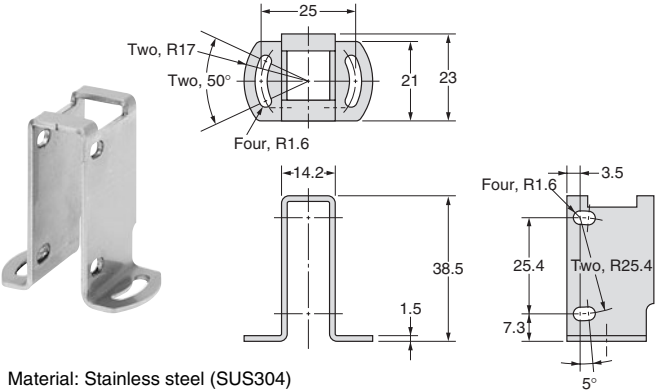
E39-L143



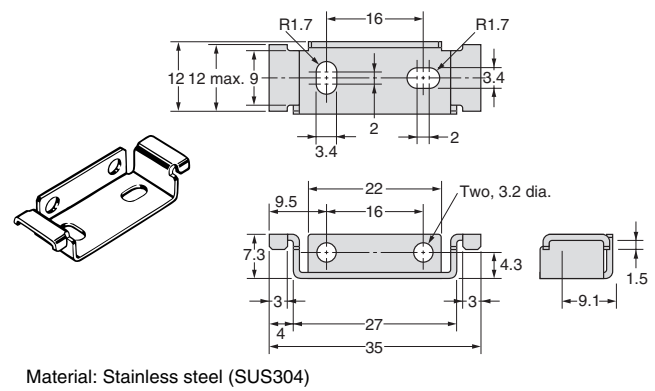
Material: Stainless steel (SUS304)



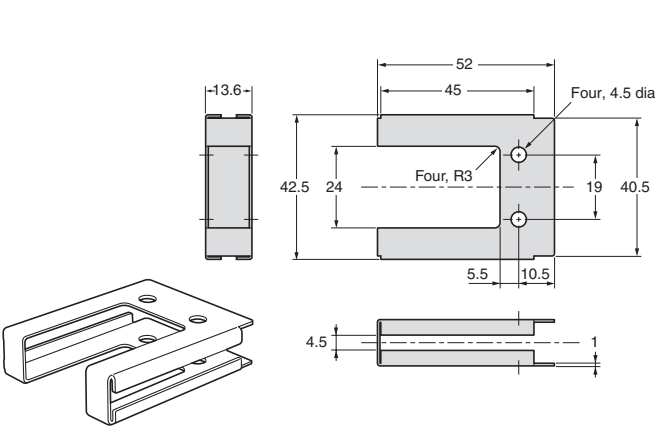
E39-L144



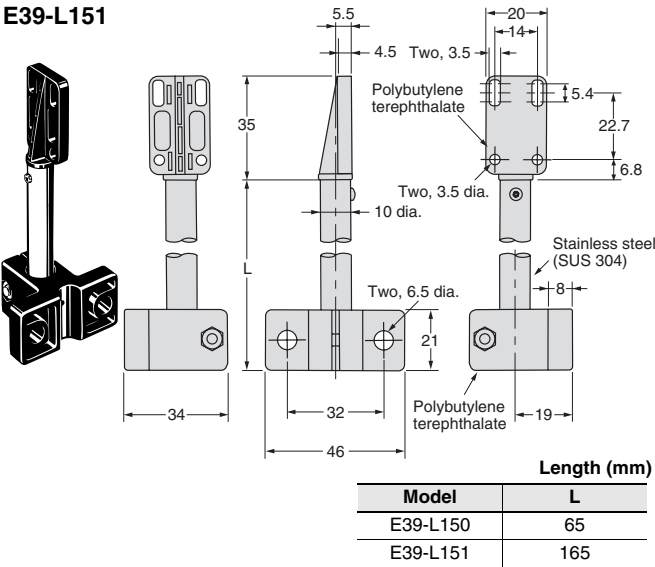
E39-L148



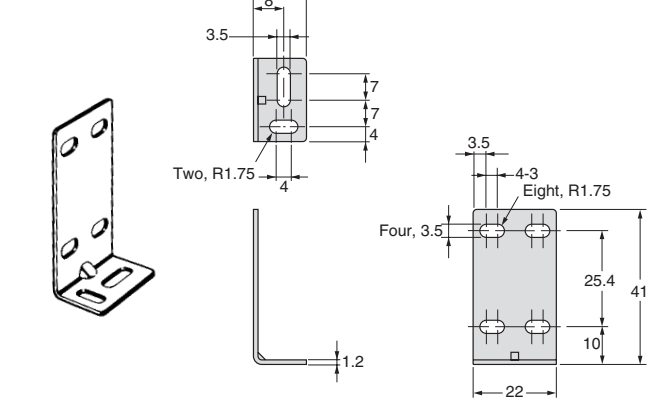
E39-L149



E39-L150

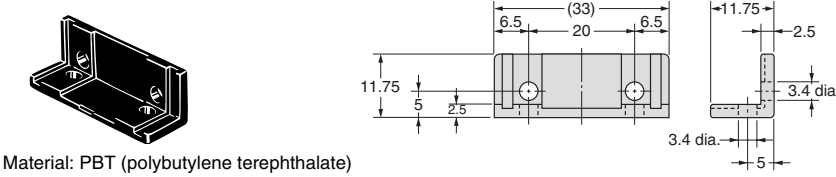


E39-L153



Contact Mounting Plate

E39-L60



(Unit: mm)
Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

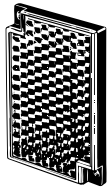
E39-L/F39-L/E39-S/E39-R

Reflector dimensions

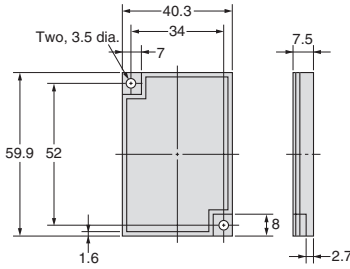
(Unit: mm)

Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

E39-R1 E39-R1S E39-R1K *

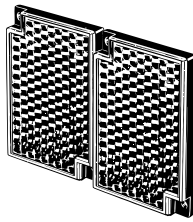


Material,
reflective surface: acrylic
Rear surface: ABS

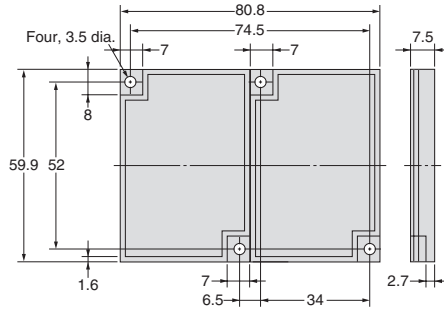


* E39-R1K only
Coating on reflective surface

E39-R2



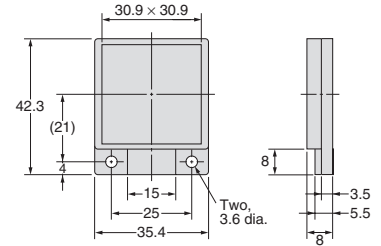
Material,
reflective surface: acrylic
Rear surface: ABS



E39-R9



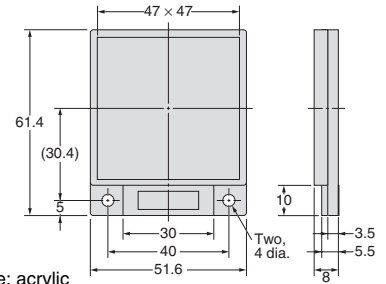
Material,
reflective surface: acrylic
Rear surface: ABS



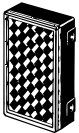
E39-R10



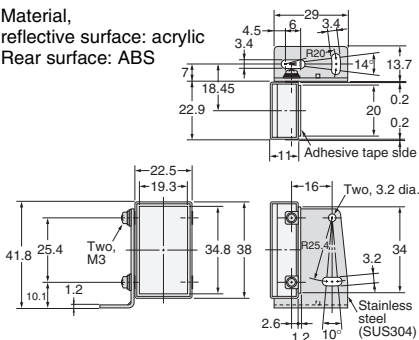
Material,
reflective surface: acrylic
Rear surface: ABS



E39-R3



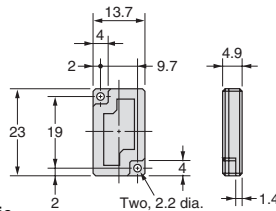
Material,
reflective surface: acrylic
Rear surface: ABS



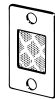
E39-R4



Material,
reflective surface: acrylic
Rear surface: ABS

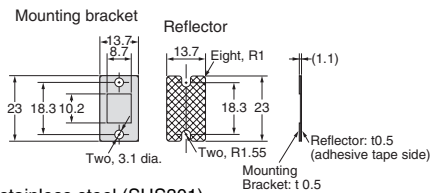


E39-R37-CA

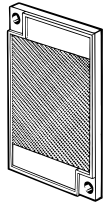


Material:
Mounting plate: stainless steel (SUS301)
Reflective surface: acrylic

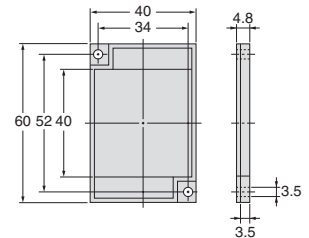
Note: The reflective plate and mounting plate (1) come as a set.
Reflectors only for E3T-SR4□.



E39-R6

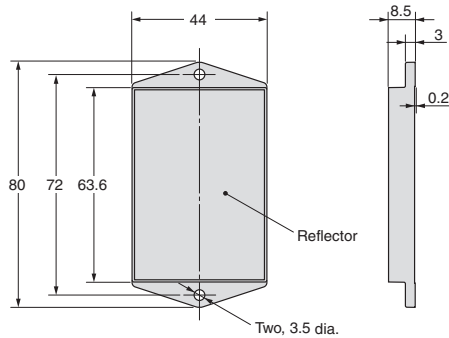


Material,
reflective surface: acrylic
Rear surface: ABS

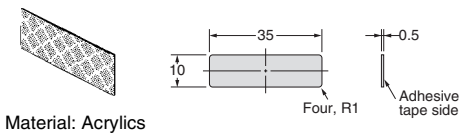


Retroreflector for E3ZM-B

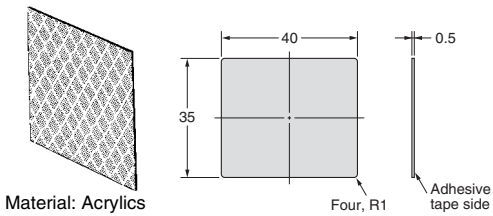
E39-RP1



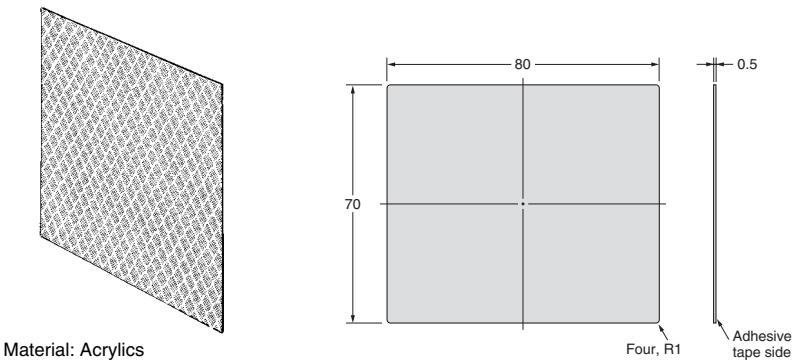
E39-RS1
E39-RS1-CA *



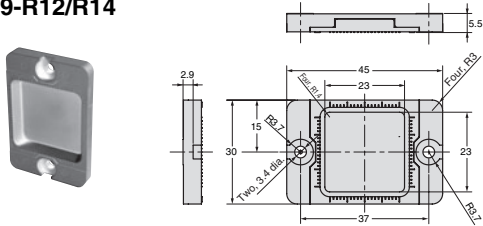
E39-RS2
E39-RS2-CA *



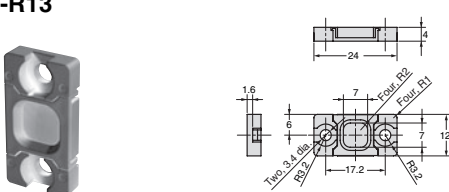
E39-RS3
E39-RS3-CA *



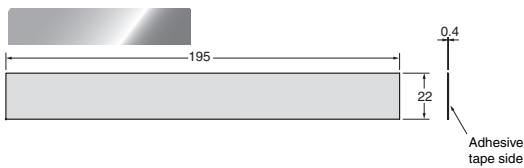
E39-R12/R14



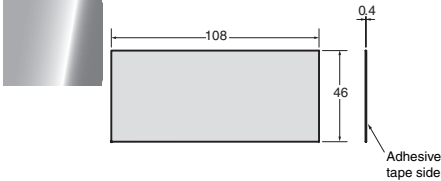
E39-R13



E39-RS4



E39-RS5

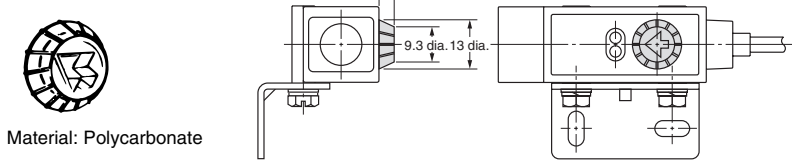


* Models ending in the suffix “-CA” are reflectors only for E3T-SR4□.

Sensitivity Adjuster

(Unit: mm)
Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

E39-G1



Sensitivity Adjustment Driver

(Unit: mm)
Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

E39-G2

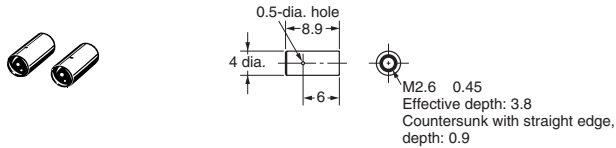


Lens Unit

(Unit: mm)

Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

E39-F1V

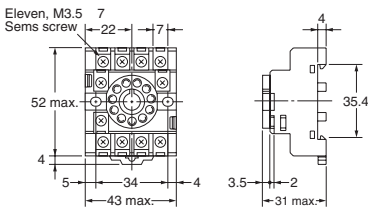
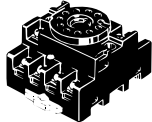


Connection Sockets

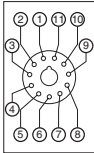
(Unit: mm)

Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

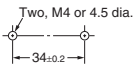
Front Connection Socket PF113A



Terminal arrangement/Internal connections (top view)

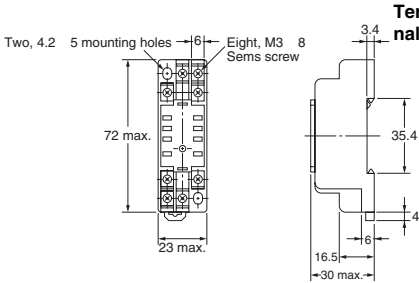
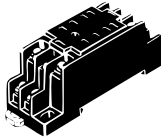


Mounting Holes

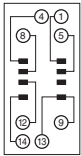


Note: Rail mounting also possible.

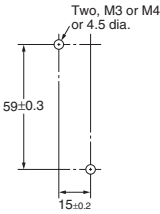
Front Connection Socket PYF08A



Terminal arrangement/Internal connections (top view)

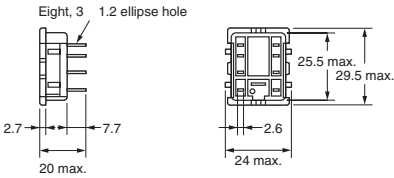
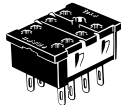


Mounting Holes

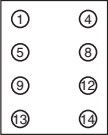


Note: Rail mounting also possible.

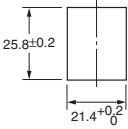
Front Connection Socket PY08



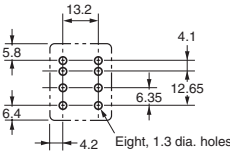
Terminal arrangement/Internal connections (bottom view)



Mounting Holes



PCB Cutout Dimensions



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1. **Offer; Acceptance.** These terms and conditions (these "Terms") are deemed part of all quotes, agreements, purchase orders, acknowledgments, price lists, catalogs, manuals, brochures and other documents, whether electronic or in writing, relating to the sale of products or services (collectively, the "Products") by Omron Electronics LLC and its subsidiary companies ("Omron"). Omron objects to any terms or conditions proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these Terms.
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6. **Governmental Approvals.** Buyer shall be responsible for, and shall bear all costs involved in, obtaining any government approvals required for the importation or sale of the Products.
7. **Taxes.** All taxes, duties and other governmental charges (other than general real property and income taxes), including any interest or penalties thereon, imposed directly or indirectly on Omron or required to be collected directly or indirectly by Omron for the manufacture, production, sale, delivery, importation, consumption or use of the Products sold hereunder (including customs duties and sales, excise, use, turnover and license taxes) shall be charged to and remitted by Buyer to Omron.
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9. **Cancellation; Etc.** Orders are not subject to rescheduling or cancellation unless Buyer indemnifies Omron against all related costs or expenses.
10. **Force Majeure.** Omron shall not be liable for any delay or failure in delivery resulting from causes beyond its control, including earthquakes, fires, floods, strikes or other labor disputes, shortage of labor or materials, accidents to machinery, acts of sabotage, riots, delay in or lack of transportation or the requirements of any government authority.
11. **Shipping; Delivery.** Unless otherwise expressly agreed in writing by Omron:
 - a. Shipments shall be by a carrier selected by Omron; Omron will not drop ship except in "break down" situations.
 - b. Such carrier shall act as the agent of Buyer and delivery to such carrier shall constitute delivery to Buyer;
 - c. All sales and shipments of Products shall be FOB shipping point (unless otherwise stated in writing by Omron), at which point title and risk of loss shall pass from Omron to Buyer; provided that Omron shall retain a security interest in the Products until the full purchase price is paid;
 - d. Delivery and shipping dates are estimates only; and
 - e. Omron will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
12. **Claims.** Any claim by Buyer against Omron for shortage or damage to the Products occurring before delivery to the carrier must be presented in writing to Omron within 30 days of receipt of shipment and include the original transportation bill signed by the carrier noting that the carrier received the Products from Omron in the condition claimed.
13. **Warranties.** (a) **Exclusive Warranty.** Omron's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Omron (or such other period expressed in writing by Omron). Omron disclaims all other warranties, express or implied. (b) **Limitations.** OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. Omron further disclaims all warranties and responsibility of any type for claims or expenses based on infringement by the Products or otherwise of any intellectual property right. (c) **Buyer Remedy.** Omron's sole obligation hereunder shall be, at Omron's election, to (i) replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product, (ii) repair the non-complying Product, or (iii) repay or credit Buyer an amount equal to the purchase price of the non-complying Product; provided that in no event shall Omron be responsible for warranty, repair, indemnity or any other claims or expenses regarding the Products unless Omron's analysis confirms that the Products were properly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Omron before shipment. Omron Companies shall not be liable for the suitability or unsuitability or the results from the use of Products in combination with any electrical or electronic components, circuits, system assemblies or any other materials or substances or environments. Any advice, recommendations or information given orally or in writing, are not to be construed as an amendment or addition to the above warranty. See <http://www.omron247.com> or contact your Omron representative for published information.
14. **Limitation on Liability; Etc.** OMRON COMPANIES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY. Further, in no event shall liability of Omron Companies exceed the individual price of the Product on which liability is asserted.
15. **Indemnities.** Buyer shall indemnify and hold harmless Omron Companies and their employees from and against all liabilities, losses, claims, costs and expenses (including attorney's fees and expenses) related to any claim, investigation, litigation or proceeding (whether or not Omron is a party) which arises or is alleged to arise from Buyer's acts or omissions under these Terms or in any way with respect to the Products. Without limiting the foregoing, Buyer (at its own expense) shall indemnify and hold harmless Omron and defend or settle any action brought against such Companies to the extent based on a claim that any Product made to Buyer specifications infringed intellectual property rights of another party.
16. **Property; Confidentiality.** Any intellectual property in the Products is the exclusive property of Omron Companies and Buyer shall not attempt to duplicate it in any way without the written permission of Omron. Notwithstanding any charges to Buyer for engineering or tooling, all engineering and tooling shall remain the exclusive property of Omron. All information and materials supplied by Omron to Buyer relating to the Products are confidential and proprietary, and Buyer shall limit distribution thereof to its trusted employees and strictly prevent disclosure to any third party.
17. **Export Controls.** Buyer shall comply with all applicable laws, regulations and licenses regarding (i) export of products or information; (ii) sale of products to "forbidden" or other proscribed persons; and (iii) disclosure to non-citizens of regulated technology or information.
18. **Miscellaneous.** (a) **Waiver.** No failure or delay by Omron in exercising any right and no course of dealing between Buyer and Omron shall operate as a waiver of rights by Omron. (b) **Assignment.** Buyer may not assign its rights hereunder without Omron's written consent. (c) **Law.** These Terms are governed by the law of the jurisdiction of the home office of the Omron company from which Buyer is purchasing the Products (without regard to conflict of law principles). (d) **Amendment.** These Terms constitute the entire agreement between Buyer and Omron relating to the Products, and no provision may be changed or waived unless in writing signed by the parties. (e) **Severability.** If any provision hereof is rendered ineffective or invalid, such provision shall not invalidate any other provision. (f) **Setoff.** Buyer shall have no right to set off any amounts against the amount owing in respect of this invoice. (g) **Definitions.** As used herein, "including" means "including without limitation"; and "Omron Companies" (or similar words) mean Omron Corporation and any direct or indirect subsidiary or affiliate thereof.

Certain Precautions on Specifications and Use

1. **Suitability of Use.** Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases but the following is a non-exhaustive list of applications for which particular attention must be given:
 - (i) Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this document.
 - (ii) Use in consumer products or any use in significant quantities.
 - (iii) Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
 - (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this Product.
 NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON'S PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
2. **Programmable Products.** Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.
3. **Performance Data.** Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.
4. **Change in Specifications.** Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.
5. **Errors and Omissions.** Information presented by Omron Companies has been checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.



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