

C8EA

Two Wheeler Brake Lamp Switch

High reliable seal switch exclusive for two-wheeled vehicle

- <High Sealability> Seal structure is based on D2HW seal technology.
- <Wide Electrical Ratings> One model can satisfy both LED load and Lamp (21W*3) load.

RoHS Compliant




Model Number Legend

C8EA-□□□□-□

- Case Shape**
 - CR : C type case with right pitch
 - CL : C type case with left pitch
- Ratings**
- Contact Form**
 - 1b
- Terminals**
 - 1 : #187, pitch 9.2, with terminal cover
 - 2 : #187, pitch 5.0
- Option Code**
 - Customize Code

List of Models

Due to the idiosyncrasies of the automotive parts industry, a business decision is required on individual items to determine when to start supply. Contact your OMRON representative for information on individual models.

Actuator	Terminals	Model Contact Form	Right pitch	Left pitch
Pin plunger 	5 mm pitch	1b	C8EA-CR222	C8EA-CL222
	9.2 mm pitch	1b	C8EA-CR221	C8EA-CL221

Contact Specifications

Contact	Specification	Rivet
	Material	Silver alloy
	Gap	1 mm
Minimum applicable load (see note)		12 VDC 100 mA

Note: For more information on the minimum applicable load, refer to *Using Micro Loads*.

Ratings

Rating voltage	Lamp load
12 VDC	4.5 A

Note: The rating values apply under the following test conditions.

1. Ambient temperature: 20 ± 2°C
2. Ambient humidity: 65 ± 5%
3. Operating frequency: 4 operations/min

Characteristics

Permissible operating speed		1 mm to 500 mm/s (pin plunger models)
Permissible operating frequency	Mechanical	30 operations/min max.
	Electrical	4 operations/min max
Insulation resistance		100 MΩ min. (at 500 VDC)
Contact resistance (initial value)		200 mΩ max.
Dielectric strength *1	Between terminals of the same polarity	600 VAC 50/60 Hz 1min
	Between current-carrying metal parts and ground	1,500 VAC 50/60 Hz 1min
	Between terminals and non-current-carrying metal parts	1,500 VAC 50/60 Hz 1min
Vibration resistance	Malfunction	10 to 500 Hz, 20 G double amplitude
Durability *2	Mechanical	300,000 operations min. (30 operations/min)
	Electrical	300,000 operations min. (4 operations/min)
Degree of protection		IEC IP67 (excluding the terminals on terminal models)
Ambient operating temperature		-30 to 70°C (at 60%RH max.) (with no icing or condensation)
Ambient operation humidity		95%RH max. (for +5 to +35°C)
Weight		Approx. 7.5 g

Note: The data given above are initial values.

*1. The values for dielectric strength shown are for models with a Separator.
Refer to your OMRON website.

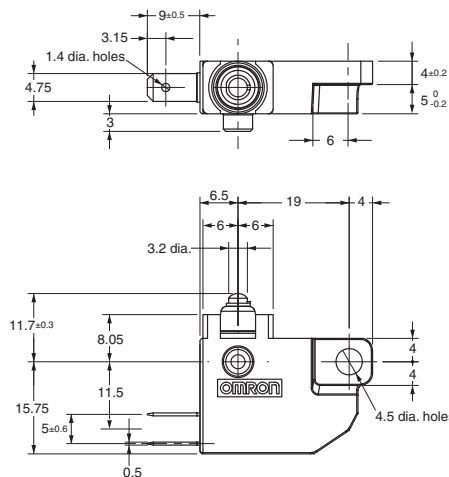
*2. For testing conditions, consult your OMRON sales representative.

Dimensions (Unit: mm) / Operating Characteristics

● 5 mm pitch

C8EA-CR222

C8EA-CL222

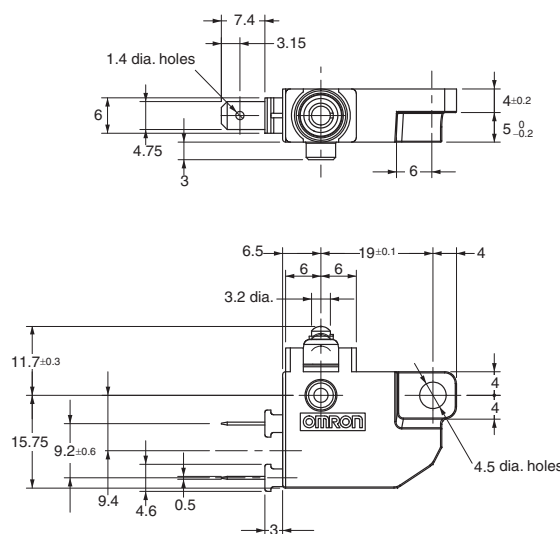


Operating Force	OF Max.	3.14 N {320 gf}
Releasing Force	RF Min.	1.47 N {150 gf}
Overtravel	OT	2.0 mm (reference value)
Free Position	FP Max.	11.7 ± 0.3 mm
Operating Position	OP	10.2 ± 0.5 mm
Total Travel Position	TTP Max.	8.05 mm

● 9.2 mm pitch

C8EA-CR221

C8EA-CL221



Operating Force	OF Max.	3.14 N {320 gf}
Releasing Force	RF Min.	1.47 N {150 gf}
Overtravel	OT	2.0 mm (reference value)
Free Position	FP Max.	11.7 ± 0.3 mm
Operating Position	OP	10.2 ± 0.5 mm
Total Travel Position	TTP Max.	8.05 mm

Note: Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.

Precautions

Please refer to "Safety Precautions for All Detection Switches" on page 15 for correct use.

Cautions

●Degree of Protection

- Do not use this product underwater.
- Do not operate the Switch when it is exposed to water spray, or when water drops adhere to the Switch surface, or during sudden temperature changes, otherwise water may intrude into the interior of the Switch due to a suction effect.
- Prevent the Switch from coming into contact with oil and chemicals.
Otherwise, damage to or deterioration of Switch materials may result.
- Do not use the Switch in areas where it is exposed to silicon adhesives, oil, or grease. Otherwise faulty contact may result due to the generation of silicon oxide.

●Side-actuated (Cam/Dog) Operation

- When using a cam or dog to operate the Switch, factors such as the operating speed, operating frequency, push-button indentation, and material and shape of the cam or dog will affect the durability of the Switch. Confirm performance specifications under actual operating conditions before using the Switch in applications.

Correct Use

●Mounting

- Turn OFF the power supply before mounting or removing the Switch, wiring, or performing maintenance or inspection. Failure to do so may result in electric shock or burning.
- For M4-screw mounting models, use M4 mounting screws with plane washers or spring washers to securely mount the Switch.
Tighten the screws to a torque of 1.5 to 2.5 N·m. Exceeding the specified torque may result in deterioration of the sealing or damage.

●Operating Body

- Use an operating body with low frictional resistance and of a shape that will not interfere with the sealing rubber, otherwise the plunger may be damaged or the sealing may deteriorate.