

● Features

- 50A loading and 43A 277VAC switching capability
- 1.8mm contact gap (compliant to IEC 62109-2-2011)
- Ideal for UPS
- Low coil holding voltage contributes to saving energy of equipment
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Dimensions: 30.4 x 16.0 x 23.3 mm



● Application

To Inverter used for Photovoltaic Power Generation System / Solar Inverter / AC/DC Power Control / Industrial Control, etc.

● Contact Data

Contact Arrangement	1A
Contact Material	Ag Alloy
Contact Rating (Resistive Load)	Making 20A, Loading 50A, Breaking 20A Making 50A, Breaking 20A 43A 277VAC
Max. Switching Power	11911VA
Max. Switching Voltage	277VAC
Max. Switching Current	50A (resistive)
Contact Resistance	$\leq 100\text{m}\Omega$ (at 1A 6VDC)
Electrical Endurance	5×10^4 (Making 20A, Loading 50A, Breaking 20A, Resistive load, 85°C, 1s on 9s off) 3×10^4 (43A 277VAC, Resistive load, 85°C, 1s on 9s off)
Mechanical Endurance	1×10^5

Note: 1) The data shown above are initial values.

Miniature High Power Relay | CEL-WG



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● Coil Parameter (at 23°C)

3.8W Type

Coil Voltage (VDC)		Coil Resistance ($\Omega \pm 10\%$)	Pickup Voltage(max) (VDC)	Release Voltage(max) (VDC)	Coil Power Consumption (W)
Rated	Max.				
6	6.6	9.5	4.50	0.30	Approx. 3.8
9	9.9	21.3	6.75	0.45	
12	13.2	38.0	9.00	0.60	
24	26.4	152.0	18.00	1.20	

Holding voltage: 50% to 70%UN (temperature 23°C), 50% to 55%UN (temperature 85°C)

1.6W Type

Coil Voltage (VDC)		Coil Resistance ($\Omega \pm 10\%$)	Pickup Voltage(max) (VDC)	Release Voltage(max) (VDC)	Coil Power Consumption (W)
Rated	Max.				
6	6.6	22.5	4.50	0.30	Approx. 1.6
9	9.9	50.6	6.75	0.45	
12	13.2	90.0	9.00	0.60	
24	26.4	360.0	18.00	1.20	

Holding voltage: 50% to 100%UN (temperature 23°C), 55% to 80%UN (temperature 85°C)

Note: 1) The coil holding voltage is the voltage applied to coil 100ms after the rated voltage.

2) To avoid overheating and burning, the coil can not be consistently applied to with voltage larger than maximum holding voltage.

3) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

4) The data shown above are initial values.

● Operation Condition

Insulation Resistance		1000M Ω (at 500VDC)
Dielectric Strength	Between Contacts	2500VAC 1min
	Between Contact and Coil	4500VAC 1min
Surge Voltage (Between Contact and Coil)		10kV (1.2/50 μ s)

Miniature High Power Relay I CEL-WG



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● Operation Condition

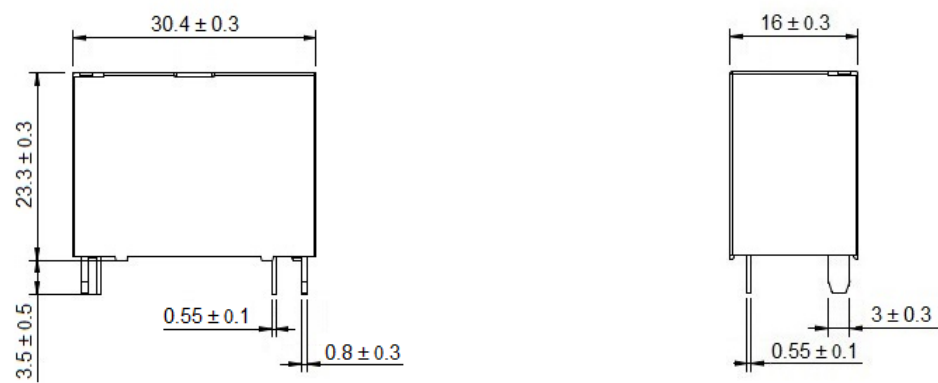
Temperature Rise (at Rated Voltage)		70K max. (Contact load current 43A, applied voltage of coil 100% rated voltage for 100ms holding voltage of coil 55% rated voltage, at 85℃)
Shock Resistance	Functional	196m/s ²
	Endurance	980m/s ²
Vibration Resistance		10~55Hz double amplitude 1.5mm
Ambient Temperature		-40 ~ +85℃ (Apply holding voltage to coil)
Operate Time		≤ 20ms
Release Time		≤ 10ms
Relative Humidity		5%~85%
Weight		Approx. 25g

● Ordering Information

		CEL-WG	-12D	-A	-S	(XXX)
Model	CEL-WG1: 1.6W	CEL-WG2: 3.8W				
Coil Voltage	6, 9, 12, 24VDC					
Contact Arrangement	A: 1 Form A					
Construction	Nil: Flux tight	S: Sealed				
Special Code	Nil: Standard	XXX: Customer special requirement				

● Dimensions (UNIT: mm)

Outline Dimensions



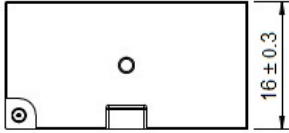
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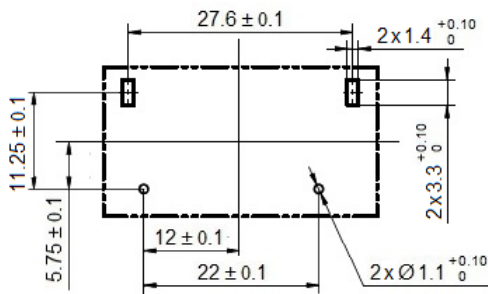
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● Dimensions (UNIT: mm)

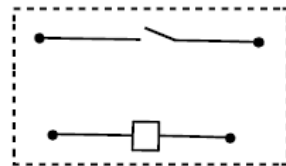
Outline Dimensions



Mounting (Bottom views)



Wiring Diagram (Bottom views)



Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $>1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $>5\text{mm}$, tolerance should be $\pm 0.5\text{mm}$.

2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact IOEC for the technical service. However, it is the user's responsibility to determine which product should be used only.

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