

## ● Features

- 50A loading and 40A 277VAC switching capability
- UL insulation system: Class F
- Environmental friendly product (RoHS compliant)
- Dimensions: 30.4 x 16.0 x 23.3 mm



## ● Application

Variable Frequency Air Conditioning Used for Soft Start / Home Appliances / A/C Control / Refrigerator / Electronic Water Heater, etc.

## ● Contact Data

Contact Arrangement	1A
Contact Material	Ag Alloy
Contact Rating (Resistive Load)	Making 20A, Loading 50A, Breaking 20A Making 10A, Loading 40A, Breaking 10A 40A 277VAC
Max. Switching Power	11080VA
Max. Switching Voltage	277VAC
Max. Switching Current	40A (resistive)
Contact Resistance	$\leq 100\text{m}\Omega$ (at 1A 6VDC)
Electrical Endurance	$5 \times 10^4$ (Making 20A, Loading 50A, Breaking 20A, Resistive load, 85°C, 1s on 9s off) $3 \times 10^4$ (40A 277VAC, Resistive load, 85°C, 1s on 9s off)
Mechanical Endurance	$2 \times 10^6$

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

# Miniature High Power Relay I CEL-W



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## ● Coil Parameter (at 23°C)

Coil Voltage (VDC)		Coil Resistance ( $\Omega \pm 10\%$ )	Pickup Voltage(max) (VDC)	Release Voltage(max) (VDC)	Coil Power Consumption (W)
Rated	Max.				
5	6.0	27.8	3.75	0.5	Approx. 0.9
12	14.4	160	9.00	1.2	
24	28.8	640	18.0	2.4	
48	57.6	2560	36.0	4.8	

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

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

## ● Operation Condition

Insulation Resistance		1000M $\Omega$ (at 500VDC)
Dielectric Strength	Between Contacts	1000VAC 1min
	Between Contact and Coil	4500VAC 1min
Surge Voltage (Between Contact and Coil)		10kV (1.2/50 $\mu$ s)
Temperature Rise (at Rated Voltage)		70K max. (Contact load current 40A, rated voltage excitation, at 85°C)
Shock Resistance	Functional	196m/s <sup>2</sup>
	Endurance	980m/s <sup>2</sup>
Vibration Resistance		10~55Hz double amplitude 1.5mm
Ambient Temperature		-40 ~ +85°C
Operate Time		$\leq 20$ ms
Release Time		$\leq 10$ ms
Relative Humidity		5%~85%
Weight		Approx. 25g

# Miniature High Power Relay I CEL-W



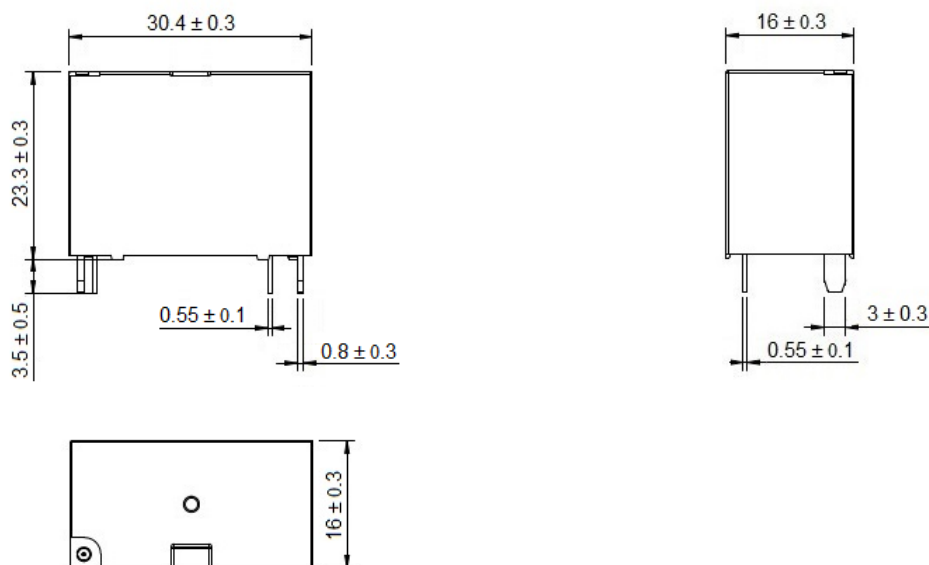
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## ● Ordering Information

	CEL-W	-12D	-A	-S	(XXX)
<b>Model</b>					
<b>Coil Voltage</b>	5, 12, 24, 48VDC				
<b>Contact Arrangement</b>	A: 1 Form A				
<b>Construction</b>	Nil: Flux tight    S: Sealed				
<b>Special Code</b>	Nil: Standard    XXX: Customer special requirement				

## ● Dimensions (UNIT: mm)

### Outline Dimensions



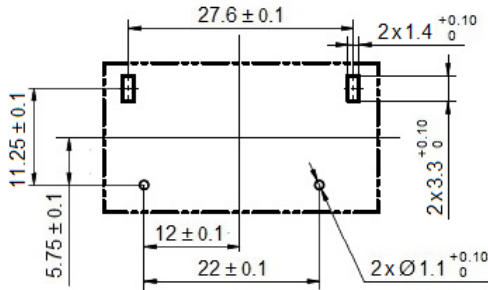
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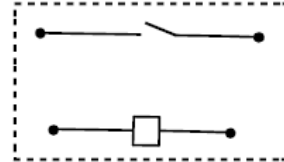
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## ● Dimensions (UNIT: mm)

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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