

SSR OCR-D32-A480-50A-ZL

Series-B Solid State Relay 50A, 4 ... 32 VDC Input Voltage, 24 ... 480 VAC Output Load Voltage



DIN-rail single-phase series-B solid state relay, DC input voltage 4 ... 32V, AC load 24 ... 480V, load current 50A.

The SSR OCR-D32-A480-50A-ZL is a high-performance, zero-crossing solid state relay designed for reliable AC switching in demanding industrial environments. Utilizing semiconductor technology instead of mechanical contacts, this relay features optical isolation between input and output for enhanced safety and signal integrity. When a control voltage of 4–32 VDC is applied, the relay switches loads up to 50A within a wide output voltage range of 24–480 VAC. Key features include zero-voltage switching, which minimizes electrical noise and inrush currents, making it ideal for sensitive resistive, inductive, and capacitive loads. The device also offers LED input indication for clear status monitoring, built-in TVS surge protection for enhanced durability, and reinforced insulation between the housing (including the base plate) and high-voltage circuitry for maximum operational safety.

Widely used in electric furnace heating, thermostat systems, CNC machinery, plastics, food, packaging, textile machinery, petrochemical instrumentation, and other automation control fields, the SSR OCR-D32-A480-50A-ZL delivers robust, maintenance-free switching for a broad range of industrial applications.

ORDER DETAILS

Function: Zero-voltage AC switching, optical input-output isolation, LED status indication, built-in TVS surge protection, reinforced insulation for safety, reliable switching for various industrial application

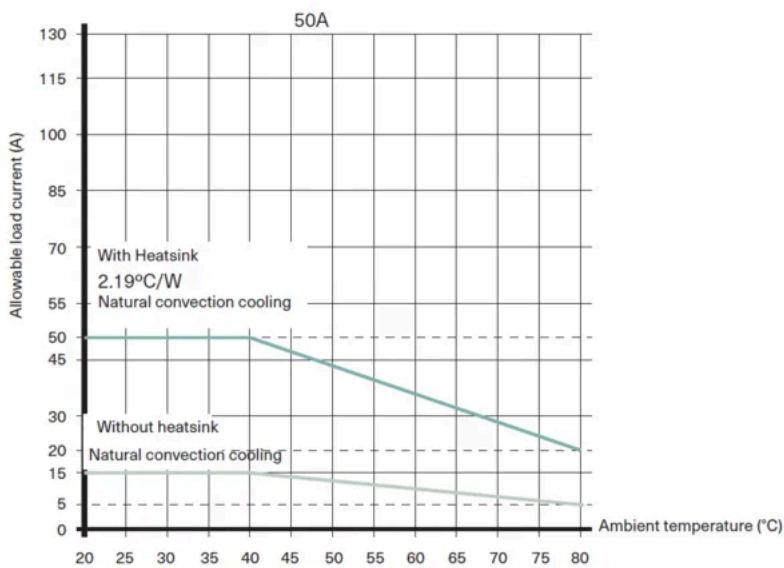
SKU/Order No.: SA-SSRB-D032A480-50



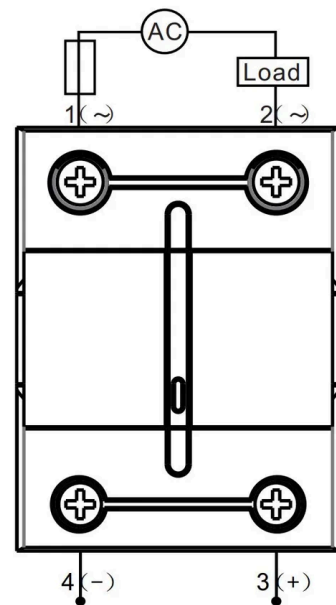
Mechanical Dimensions



Drawings



Derating Curve (Load Current vs. Ambient Temperature)



Wiring Diagram

Model		10A / 25A / E25A / 50A / 75A / 90A / 125A
Strip Length		11 mm
Terminal Type		M4 screw terminal
Solid/Stranded Wire		1×0.5–2.5 mm ² , 2×0.5–2.5 mm ²
		1×20–14 AWG, 2×20–14 AWG
With Ferrule		1×0.5–2.5 mm ² , 2×0.5–2.5 mm ²
		1×20–14 AWG, 2×20–14 AWG
Without Ferrule		1×0.5–2.5 mm ² , 2×0.5–2.5 mm ²
		1×20–14 AWG, 2×20–14 AWG
Tightening Torque		1.5–1.7 Nm (13.3–15.0 lb-in)

Input Terminal Specifications

Input Terminal Specifications

Model		10A / 25A / E25A / 50A / 75A / 90A / 125A
Strip Length		13 mm
Terminal Type		M5 screw terminal
Solid/Stranded Wire		1×2.5–10.0 mm ² , 2×2.5–10.0 mm ²
		1×14–8 AWG, 2×14–8 AWG
With Ferrule		1×2.5–6.0 mm ² , 2×2.5–6.0 mm ²
		1×14–10 AWG, 2×14–10 AWG
Without Ferrule		1×2.5–10.0 mm ² , 2×2.5–10.0 mm ²
		1×14–8 AWG, 2×14–8 AWG
Tightening Torque		2.0–2.2 Nm (17.7–21.2 lb-in)

Output Terminal Specifications

Output Terminal Specifications

Load Type	Derating Factor (times)
Electric Furnace	2x
Electric Wire	2.5x
Incandescent Lamp	4x
Transformer	4x
Electromagnetic Coil	4x
Single-phase Motor	4x

Load Derating Reference

Load Derating References

Technical Data

Input Data

Input Current (typ.)	12mA (max.)
Input Voltage Range DC	4 ... 32 VDC
Must Operate Voltage	≥ 2.5 VDC
Must Release Voltage	≤ 2 VDC
Zero Voltage Current	1 ... 15A (without heat sink)
Surge Current	500A (1/2 cycle)

Output Data

Output Voltage Range	24 ... 480 VAC
Output Current	1 ... 50A (with heat sink)
Rated Impulse Withstand Voltage	6kV

Contact Data

Max. switching current	50A
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Ambient Condition

Ambient Temperature (operating)	-30 °C ... 80 °C
Operating Humidity (non-condensing)	45% ... 85% RH
Ambient Temperature (storage/transport)	-30 °C ... 100 °C
Storage Humidity (non-condensing)	45% ... 85% RH

Certification

Certification	CE, RoHS
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Characteristics

Insulation resistance	500MΩ (500VDC)
Earth Leakage Current	< 1 mA

Switching Type	Zero-Voltage Switching
Dielectric Strength	3 kV
Response Time (On/Off)	≤1/2 AC cycle
On-State Voltage Drop	1.6 V

Dimensions

Height (mm)	59
Width (mm)	45
Depth (mm)	29

Interface

LED indicator	LED indicator (Red: input active, White: input inactive)
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Mechanical Data

Weight (typ.)	Approx. 130g
Wire Strip Length	11 mm (Input) / 13mm (Output)
Tightening Moment (min. / max.)	Input: 1.5–1.7 Nm (13.3–15.0 lb-in) / Output: 2.0–2.2 Nm (17.7–21.2 lb-in)

Standards and Regulations

In Compliance With	IEC/EN 60947-4-3, IEC/EN 62314
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Commercial Data

Customs Tariff Number	8536410000
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Safety Standards

Protection Rating	IP20
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Contact Characteristics

Contact form	Input: M4 screw terminal / Output: M5 screw terminal
Contact Dimensions	11.7 × Ø6.5 × 1×16–35.0 mm ² / 1×6–2 AWG