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SSR-5A-D

Modular solid-state
relay



Do not dispose of this device in the trash along with other waste!

According to the Law on Waste, electro coming from households free of charge and can give any amount to up to that end point of collection, as well as to store the occasion of the purchase of new equipment (in accordance with the principle of old-for-new, regardless of brand). Electro thrown in the trash or abandoned in nature, pose a threat to the environment and human health.




Purpose

The SSR-5A-D solid-state modular relay is designed to control loads up to 5 A and supplied with 60÷265 V AC.


Characteristics

- » Load switching at "zero" – reducing current surge when switching a circuit (e.g. LED lighting);
- » Built-in thermal protection and operation indication;
- » Silent operation;
- » Switching on without sparking or contact vibration;
- » Unlimited number of switching operations;
- » DIN rail mounting, width 1S.

Functioning

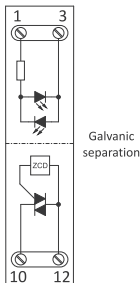
Applying voltage to control terminals 1-3 activates an electronic switch which closes the circuit between terminals 10-12. The circuit is closed when the supply voltage sine wave passes through „zero”, which makes it possible to limit current surges when connecting a capacitive load. Activation of the circuit is signalled by a green indicator light . When the supply voltage decays, the contact between terminals 10-12 is opened.

Thermal protection

SSR-5A-D relay is equipped with a thermal protection system disconnecting the load if the permissible temperature inside the device is exceeded. Activation of the protection is additionally signalled by a red indicator light . The load will be automatically switched on again when the temperature inside the device drops to the safe level.

Mounting

A simplified internal schematic of the relay is shown in the diagram below:



The SSR-5A-D relay is designed for low AC/DC voltage control (max. 32 V DC/27 V AC). **Connecting to control terminals 1-3 of the 230 V mains voltage will lead to destruction of the device!**

The solid-state relay emits a large amount of heat when operating under load (up to approximately 5 W at a rated load of 5 A). Therefore, proper cooling must be taken into account to guarantee correct operation:



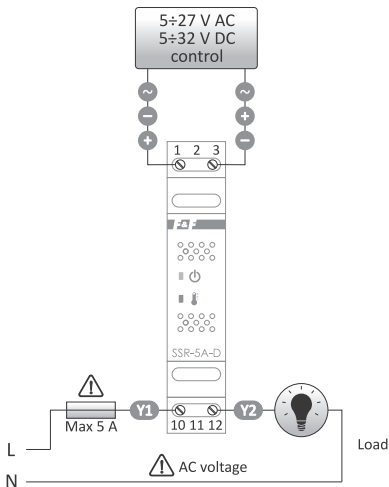
- » do not block the ventilation openings on the front facade;
- » provide free space on both sides of the unit to facilitate heat dissipation through the side walls of the relay.



The relay has no built-in short-circuit or overcurrent protection. It is recommended to protect the current circuit with a delayed fuse with a current adapted to the rated load current, but not more than 5 A.

Wiring diagram

1. Connect the control voltage (switching load) to terminals 1-3, the polarity of the control signal is arbitrary.
2. Connect the controlled load in series via terminals 10-12 of the relay to the AC power source.



Technical data

input

power supply 5÷32 V DC/ 5÷27 V AC

power consumption <0.2 W

output

contact 1×NO

actuator triac

rated voltage 230 V AC

rated current 5 A

maximum activation current 150 A/10 ms

activation delay <20 ms

power loss (for 5 A) 4 W

general parameters

thermal protection 100°C

power indication green LED

over temperature indication
and disconnect the receiver red LED

IN/OUT isolation 3 kV

terminal 2.5 mm² screw terminals

tightening torque 0.4 Nm

working temperature -20÷50°C*

dimensions 1 module (18 mm)

mounting on TH-35 rail

ingress protection IP20

* Limit temperature depends on load current and ventilation conditions

Warranty

F&F products are covered by a 24-month warranty from the date of purchase. The warranty is only valid with proof of purchase. Contact your dealer or contact us directly.

CE declaration

F&F Filipowski L.P. declares that the device is in conformity with the essential requirements of The Low Voltage Directive (LVD) 2014/35/EU and the Electromagnetic Compatibility (EMC) Directive 2014/30/UE.

The CE Declaration of Conformity, along with the references to the standards in relation to which conformity is declared, can be found www.fif.com.pl on the product subpage.

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