AC DOUBLE SOLID STATE RELAYS

Type	Load current	Load Voltage	Input Voltage	Reciprocal Latch	Zero Crossing	Temperature Range - C°
SSR2N10A	2x10A	250 VAC	18...32 VDC	Yes	Yes	0°...+50°
SSR2P10A	2x10A	250 VAC	18...32 VDC	Yes	Yes	0°...+50°
SSR2N10AN	2x10A	250 VAC	18...32 VDC	Yes	No	0°...+50°
SSR2P10AN	2x10A	250 VAC	18...32 VDC	Yes	No	0°...+50°
SSR2N10C	2x10A	250 VAC	18...32 VDC	No	Yes	0°...+50°
SSR2P10C	2x10A	250 VAC	18...32 VDC	No	Yes	0°...+50°
SSR2N10CN	2x10A	250 VAC	18...32 VDC	No	No	0°...+50°
SSR2P10CN	2x10A	250 VAC	18...32 VDC	No	No	0°...+50°

Function

Solid-state relays SSR2X10Y,YN are electronic power a.c. switches. They are designed to commutate huge electrical loads (up to 2x2.2kW), powered by mains voltage 220V/50Hz.

They are double switches and the input and output circuits are galvanically isolated, thus ensuring electrical safety both of maintenance personnel and of control devices.

The operation of the two channels of types SSR2X10C,CN is independent of one another, i. e. the solid-state relay can be used as two independent switches. In the case of types SSR2X10A, AN turning on one channel disables turning on of the other channel, which makes them suitable for control of single-phase reversible asynchronous motors.

The load switching for types SSR2X10A, C occurs at zero crossing of the mains voltage, i. e. the possibilities for electrical interference in the network and electromagnetic radiation are reduced to minimum. In the case of types SSR2X10AN, CN the zero crossing function is disabled, which makes them suitable for phase control.

SSR can be used together with suitable controllers for precision control of electrical loads.

Low (safe) d.c. voltage control allows direct connection to controllers or other devices without the need of additional relays and contactors.

If the electric load is greater, solid-state relays SSRXX can be used to drive power thyristors and triacs.

There are LEDs on the front side, which indicate that input voltage is applied.

The solid-state relays SSR2X10Y,YN are filled in with epoxy rosin to protect them from athmospheric influence.

Specifications

Output circuit:

- Load voltage alternating, sinusoidal, having a frequency from 40 to 100Hz and an instantaneous value:
  - nominal - 380V
  - maximum - 450V
  - minimum - 24V
- Instantaneous load voltage at turn-on - U 10V
- Load current with an additional heatsink 10A/2x10A for SSR2X10A,AN/SSR2X10C,CN correspondingly without a heatsink 5A/2x2.5A
- Load voltage frequency from 40Hz to 100Hz
- $\cos\varphi \geq 0{,}8$
- Critical rate of rice of off-state voltage- $dU/dt \leq 250V/mS$
- Critical rate of removal of the current - $dI/dt \leq 10A/mS$

Input (control) circuit:

- Input voltage constant, filtered
  Minimum value: 18 Vdc
  Maximum value: 32 Vdc
- Input current
  - 6mA @ Uy = 18 V
  -14mA @ Uy = 32 V

Isolation 2500 V

- - between the output circuit and the metal part of the case
  - between the input circuit and the metal part of the case
  - between the input and output circuits

Cooling surface of the heatsink:

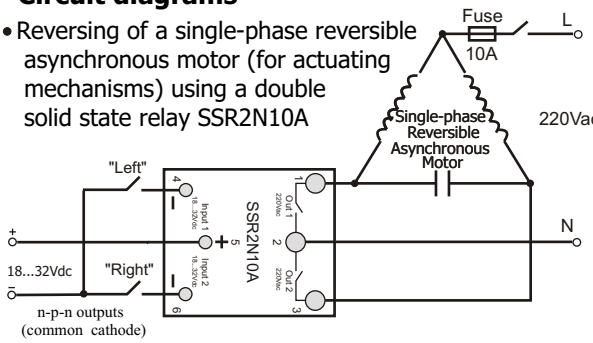
= $5dm^2$ for SSR2X10A,AN
= $7.5dm^2$ for SSR2X10C,CN

AC DOUBLE SOLID STATE RELAYS

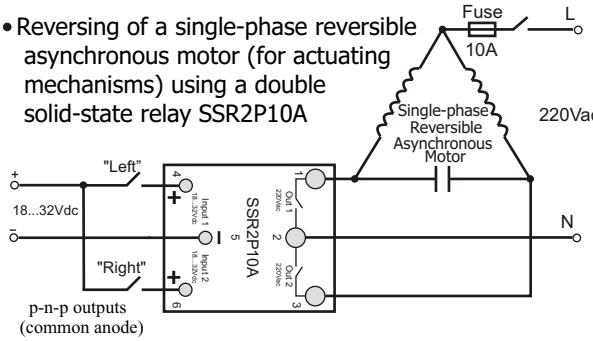
Operating guide

Circuit diagrams

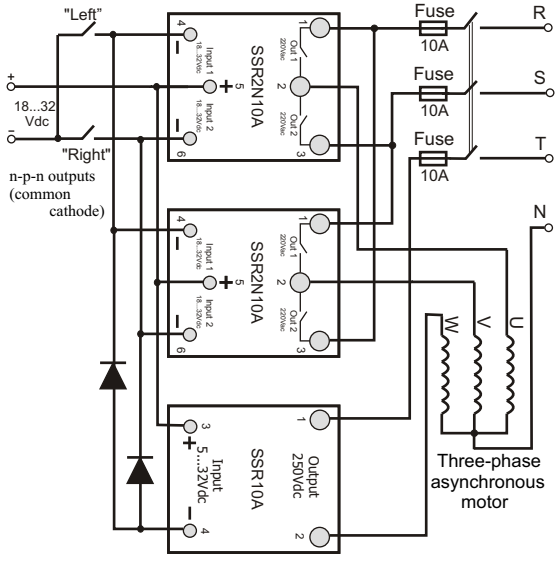
- Reversing of a single-phase reversible asynchronous motor (for actuating mechanisms) using a double solid state relay SSR2N10A



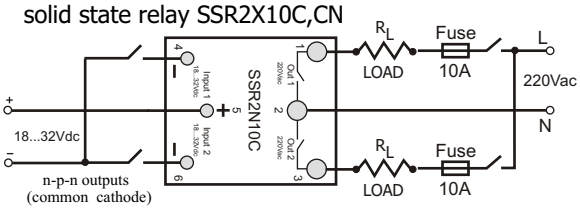
- Reversing of a single-phase reversible asynchronous motor (for actuating mechanisms) using a double solid-state relay SSR2P10A



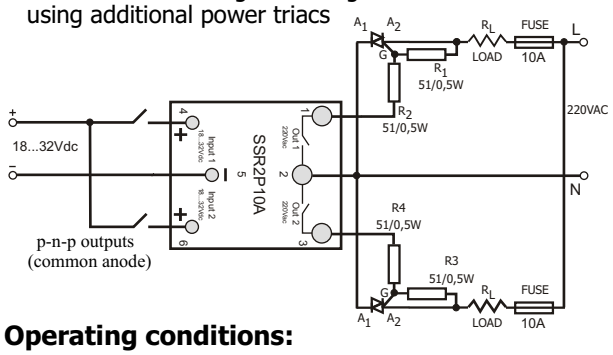
- Reversing of a three-phase asynchronous motor using two double and one single solid-state relays



- Direct connecting of loads using a double solid state relay SSR2X10C,CN



- Indirect connecting of loads greater than 10A using additional power triacs



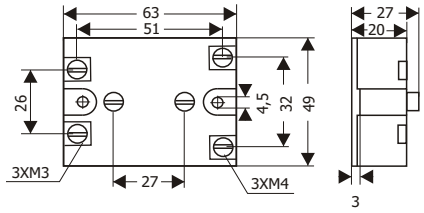
- **Operating conditions:**

Ambient temperature	from 0C to +55C
Relative humidity	from 40 to 80%

- **Storage conditions:**

Ambient temperature	from -40C to +70C
Relative humidity	not more than 85%

- **Overall and mounting dimensions**:

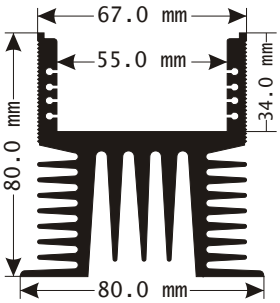


- **Weight** (net) < 0,12 kg

- **Mounting instructions**

The SSR is mounted on a heatsink by two M4x6 screws at a distance of 50mm.

Isomatic Complect offers heatsinks from shaped aluminium, type 500-2182:
- for SSR2X10A,AN 65mm long
- for SSR2X10C,CN 80mm long



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ISOMATIC COMPLECT manufactures also: an eight-chanel regulator Mc3, a universal programmable minicontroler with build-in regulators, and various digital periphery, temperature transmtiters, passive galvanic separators 4-20/4-20mA, etc.