

We are always looking at your need. Discover our solution!

Need

1 compact SSR

For this need the solution is the SSR170H/SSR270H or SSR370H if you want a SSR with integrated heatsink or SSR19/SSR29 or SSR39 if you want an HOCKEY PUCK relay.

Need

1 SSR with control load

For this need the solution is the SSR170H with ELC40. If you want RS485, you can use ELC40-S instead of ELC40.

Need

Read temperature with SSR

For this need the solution is the SSR170H with ELCT40-S. With ELCT40-S you can manage temperature over a SSR with 22,5mm width.

Need

Solid state relay and temperature controller

For this need the cheap solution is SSR with integrated heatsink or HOCKEY PUCK with ELK4C. If you want a more expensive solution that has more features you can change the ELK4C with ELKM4.

Need

Motor control

For this need the solution is the EMS24 series. If you choose EMS243-RC or EMS249-RC you also have load monitoring. You have RS485 modbus on the bus.



ELCO srl

Via Lago di Molveno, 20 - 36015 SCHIO (VI) Italy
Tel. +39 0445 661722 - Fax +39 0445 661792
Vendite Italia: sales@elco-italy.com
International sales: export@elco-italy.com



AUTOMATION UNDER CONTROL



SSR RANGE
2025

EL.CO. Approvals

All our products are manufactured in compliance with the main international standards. This ensures safety, reliability and a high level of electromagnetic interference which gives our products the maximum duration that can be found on the market.



UL, TUV and UKCA certifications are not present on all products

How to choose a heatsink

A heat sink is used to lower the temperature of electronic components that release heat. It is important to know that the biggest difference between an SSR and a mechanical relay is that the SSR has a voltage drop which causes a loss of power and consequently of the heat that needs to be dissipated.

The heatsink comes into play. But which heatsink do we choose?

Let's take an example.

Duty cycle: 100%

We consider some data as established to avoid damaging the product. Let's assume a maximum of 100 °C on the heatsink to avoid ruining the SSR and 40 °C of the environment.

Output Current Relay (CR): 25A (This information we must to have)
Voltage drop (VD): 1.2V (Every SSR has a voltage drop)
Maximum of 100°C on the heatsink (We assume this data to avoid damaging)
Ambient temperature of 40°C (Standard temperature of environment)

I have to dissipate $25A(CR) \cdot 1,2(VD) = 30W$ and we have a delta temperature of 60°C (100°C – 40°C)

Thermal Characteristics (TC) = 60°C / 30W = 2°C/W

We have to choose an heatsink with TC = 2°C/W or lower than 2°C/W

What if we don't use the SSR at 100%?

Duty cycle: 50%

We have to repeat the calculation but we don't have to use CR as is, but we have to use the CR multiplied by the percentage of use. If we use the SSR at 50%, we have $NewCR = CR \cdot (50/100)$. The other calculation are the same as described above.

SLIM

The SSR series SSR01/02/05, SSR20/21 and SSR91 are **100% compatible with electromechanical relays**. They can be soldered on PCB or mounted on the standard sockets. For DIN rail mounting. Up to 8A.

Extreme Force

Each slim product has a «silver leg» which allow an extreme force with the PCB and interfaces.

More than the others

Each slim product has a silver leg» which allow an extreme force with the PCB and interfaces.

Accesories



EZ / ZM-3.5 /
ZM-5 / ZP-3.5 /
ZP-5 / ZM8 /
ZM8P Series



ECLR / EZD / ECLRM /
ELCRP Series

| Summary | 28x5x15(h)mm | 28x5x15(h)mm | 12,7x29x15,7(h)mm | 112,5x29x27(h)mm | Up to 20.6x27.8x44(h) mm | 6,2x100x78(h)mm | 6,2x100x78(h)mm | 6,2x100x78(h)mm |
|------------------------|--|--|--|------------------------------------|--|--|---|---|
| Maximum output current | Up to 2A | Up to 8A | Up to 12A | Up to 2A | Up tp 10A | Up to 15A | Up to 10A | Up to 4A |
| Maximum output voltage | Up to 45V DC or 275V AC | Up to 24V DC | Up to 35V DC or 275V AC | Up to 60V DC | 0 - 35V DC | Up to 0 - 35V DC or 12 - 275V AC | Up to 5 - 35V DC or 12 - 275V AC | Up to 0 - 35V DC or 12 - 275V AC |
| Control voltage | 3 - 12V DC 15 - 30V DC 35 - 72V DC | 3 - 12V DC 15 - 30V DC 35 - 72V DC | 5 - 10V DC 10 - 32V DC | 5 - 10V DC 10 - 30V DC | 4 - 9V DC 3 - 32V DC 9 - 18V DC 18 - 28.8V DC | 5 - 10V DC 10 - 32V DC 10 - 30V AC/DC | 5 - 30V DC 8 - 30V AC/DC | 10 - 30V DC 10 - 24V AC |
| Features | Zero crossing for AC models Random for DC models - | - Random for DC models - | Zero crossing for AC models Random for DC models - | - Random for DC models - | Zero crossing for AC models Random for DC models - | Zero crossing for AC models Random for DC models - | Zero crossing for AC models Random for DC models Short circuit protection, overload protection, over current, over temperature protection | Zero crossing for AC models Random for DC models 4 function on timing |
| Certifications | | | | | | | | |

HOCKEY PUCK

The solid state relays of the SSR19/29/39 has an innovative design with elevate performances and compactness.

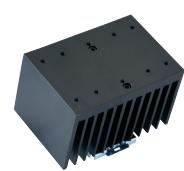
Aluminium Surface

Each products is developed with the new PCB technology.This allows more dissipation, more compactness, more power.

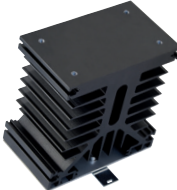
More products

Output current up to 125A

Accesories



Heatsinks



| Summary | 21,5x35,6x22(h)mm | 28,5x38,5x25,5(h)mm | 45,7x58,6x33,5(h)mm | 45,7x58,6x33,5(h)mm | 45,7x58,6x33,5(h)mm | 105x78x38(h)mm | 105x78x38(h)mm |
|------------------------|--|--|--|---|--|--|---|
| Maximum output current | Up to 25A | Up to 25A | Up to 60A | Up to 80A | Up to 2x75A | Up to 3x60A | Up to 3x80A |
| Maximum output voltage | Up to 280V AC | Up to 440V AC | Up to 660V AC | Up to 530V AC | Up to 660V AC | Up to 530V AC | Up to 530V AC |
| Control voltage | 4 - 9V DC 9 - 18V DC 18 - 28,8V DC | 4 - 32V DC | 4 - 32V DC or 90 - 280V AC | 4 - 20mA 0 - 10V DC | 10-32V DC | 4 - 32V DC or 90 - 280V AC | 4 - 20mA 0 - 10V DC |
| Features | - TVS protection Peak voltage up to 600V Compliance with EN 60335-1 | - TVS protection Peak voltage up to 800V Compliance with EN 60335-1 | - - Peak voltage up to 1600V Compliance with EN 60335-1 | Phase angle - Peak voltage up to 1200V - | - - Peak voltage up to 1200V Compliance with EN 60335-1 | - - Peak voltage up to 1200V Compliance with EN 60335-1 | Phase angle - Peak voltage up to 1200V - |
| Certifications | | | | | | | |

70 Series

The SSR solution is smaller than the others. 17,8mm for single phase models. There are SSR's without integrated heatsink, but those with integrated heatsink are unique.

Smart SSR

The better SSR in only 17,8mm.

From 15A to 30A in small space. You can't love it.

H1 Fusion / H1 Fusion Pro

The compact chip integrated with the last generation of TVS. These chip gives ELCO SSRs more performance and more security than the others.

| Summary | Up to 17,8x90x63(h)mm | Up to 54x105x70(h)mm | 17,8x90x108(h)mm | 17,8x90xXXX(h)mm | Up to 65x90x166,5(h)mm | Up to 100x119x193,5(h)mm | Up to 100x119x193,5(h)mm |
|------------------------|--|---|--|--|--|---|---|
| Maximum output current | Up to 50A | Up to 50A | Up to 25A | 30A | Up to 60A | Up to 2x60A | Up to 3x40A |
| Maximum output voltage | Up to 600V AC | Up to 600V AC | Up to 600V ACC | Up to 600V AC | Up to 600V AC | Up to 600V AC | Up to 600V AC |
| Control voltage | 4 - 32V DC or 90 - 280V AC | 4 - 32V DC or 90 - 280V AC | 4 - 32V DC or 90 - 280V AC | 4 - 32V DC or 90 - 280V AC | 4 - 32V DC or 90 - 280V AC | 4 - 32V DC or 90 - 280V AC | 4 - 32V DC or 90 - 280V AC |
| Features | Varistor protection H1 Fusion Pro Peak voltage up to 1200V | Varistor protection 2x (or 3x) H1 Fusion Pro Peak voltage up to 1200V | Varistor protection H1 Fusion (H1 Fusion Pro x 25A) Peak voltage up to 1200V | Varistor protection H1 Fusion Pro Peak voltage up to 1200V | Varistor protection H1 Fusion Pro Peak voltage up to 1200V | Varistor protection 2x H1 Fusion Pro Peak voltage up to 1200V | Varistor protection 3x H1 Fusion Pro Peak voltage up to 1200V |
| Certifications | | | | | | | |

Load Monitoring

Plug-in System

Modules directly plugged into 70 Series.

Add more function to a simple SSR.

E-teach

New system to learn the instant current.

With this system you can capture the error +/- 10% of saved current.

| Summary | 22x80x110(h)mm | 22x80x110(h)mm | 22x80x110(h)mm | 22x80x110(h)mm |
|----------------|---|---|--|---|
| Current range | - | 2 - 40A | 2 - 40A | 2 - 40A |
| Control | - | 8 - 30V DC | 8 - 30V DC | 24V DC |
| Features | Burst firing - - 0...10V, 4...20mA input | Load monitoring E-teach Detect 5 type of errors | Load monitoring E-teach Detect 5 type of errors RS485 | Load monitoring E-teach Detect 5 type of errors RS485 Probes TC/JK, PT100 |
| Certifications | | | | |

Motor Control

Born to be cold

Up to 9A without heatsink.

Hybrid Technology

Start-stop with internal by-pass.

| Summary | 22,5x100x114(h)mm | 22,5x100x114(h)mm | 22,5x100x114(h)mm | 22,5x100x114(h)mm | 22,5x100x114(h)mm |
|-----------------|--------------------------|---|--|---|---|
| Control voltage | 24V DC | 24V DC | 24V DC | 24V DC | 24V DC |
| Features | Clockwise - - - | Clockwise Counterclockwise - - | Clockwise - Load control, phase loss, overcurrent - | Clockwise Counterclockwise Load control, phase loss, overcurrent - | Clockwise Counterclockwise Load control, phase loss, overcurrent Safe stop |
| Certifications | | | | | |