



Read this document carefully before using this device. The guarantee will be expired by damaging of the device if you don't attend to the directions in the user manual. Also we don't accept any compensations for personal injury, material damage or capital disadvantages.

## ENDA ERVA1 Rail Mountable, Proportional Solid State Relays With Integrated Heat Sinks

Thank you for choosing ENDA ERVA1 Solid State Relays.

- \* 40-50-70A AC load current.
- \* 280-480-500V AC load voltage.
- \* 0-10 V DC input signal.
- \* LED status indicators for input voltages.
- \* AC voltage can be controlled with the phase angle.
- \* For peak voltage with varistor protection.
- \* Rail mountable.
- \* CE marked according to European Norms.

ORDER CODE ERVA1-550PA-F

<b>Product Basic Code</b> Rail mountable ER	<b>Option</b> Fan F
<b>Input signal</b> 0-10V DC V	<b>Switching</b> Phase angle PA
<b>Load voltage</b> AC A	<b>Load Current</b> 40A AC 40 50A AC 50 70A AC 70
<b>Number of pole</b> Single pole 1	<b>Load voltage</b> 180-280V AC 2 180-480V AC 4 180-500V AC 5



R<sup>o</sup>HS  
Compliant

### ENVIRONMENTAL CONDITIONS

Ambient/storage temperature	-25... +60 °C / -30... +100 °C (Shouldn't be icing and condensation in ambient.)
Relative humidity	50% Relative humidity for +40°C temperature increases up to 90% at +20°C. (Shouldn't be condensation)
Pollution degree	2
Overtoltage category	II
Altitude	Max. 1000m
Protection	IP20 According to EN60529



Do not use the device in locations subject to corrosive and flammable gases.

### OUTPUT

Order code	ERVA1-240PA	ERVA1-440PA	ERVA1-550PA-F	ERVA1-570PA-F
Load Current, AC51/25°C (Arms)	40	40	50	70
Load voltage (Vrms)	180 - 280	180 - 480	180 - 500	
Overload current t=1s/25°C (Arms)	150	110	180	400
Non rep. surge current/25°C (Arms)	400	290	270	600
On-state voltage drop (Vrms)	1,6	1,8	1,8	
Leakage current (mArms)	5	8	10	15
I <sup>2</sup> t for fusing t=10ms (A <sup>2</sup> s)	880	610	720	4000
Frequency (Hz)	50 - 60	50 - 60	50 - 60	
Power factor (CosΦ)	>0,75	>0,75	>0,75	
Minimum operating current (mArms)	160	200	300	400

### INPUT

Input signal	0-10 V DC (Device may be damaged at ±12V DC and above voltages)
Transmission signal	≥0,06 V DC
Drop-out signal	≤0,04 V DC
Turn-on time	15ms
LED indicator	Lights up in proportional with input signal
Dynamic input impedance	≥10 kΩ
Protection	Protection against the inverse of the input signal is connected.

### GENERAL

Dimensions	G46xY100xD117mm (For ERVA1-x40PA) G46xY110xD117mm (For ERVA1-x40PA-F and ERVA1-550PA-F) G79xY120xD132mm (For ERVA1-570PA-F)
Weight	Approx. 450 g (For ERVA1-x40PA and ERVA1-550PA-F) Approx. 550 g (For ERVA1-570PA-F) (After packaging)
Isolation Voltage	2500 Vrms between I/O terminals for 1 min.
Connection	For power line 16mm <sup>2</sup> cable (with 25mm <sup>2</sup> cable terminal) cable, for signal line can be connected 4mm <sup>2</sup> cable.
Terminal screw torque	Max. 1,2Nm
Product standard	EN 60947-4-3
Mounting	Rail mountable (EN60715, TH35 or G-32)
Enclosure material	Self extinguishing plastics (According to EN 60695-11-10 V-O)
Fan	Fans are standard for ERVA1-550PA-F and ERVA1-570PA-F models. Fans are optional for ERVA1-x40PA models. The fan is controlled with thermostat and works at temperatures over 50°C.

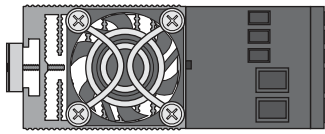
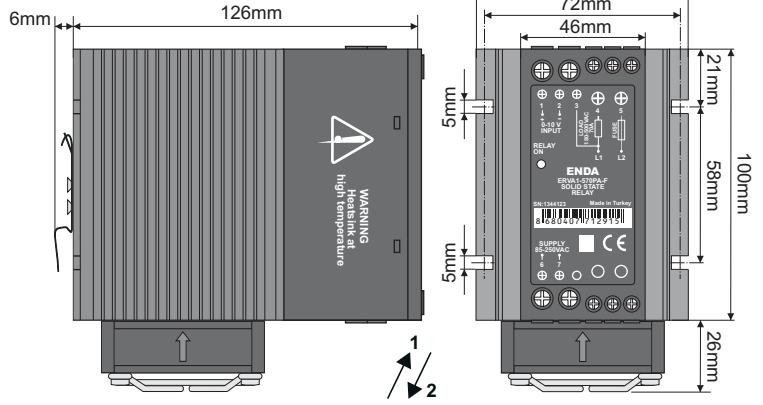
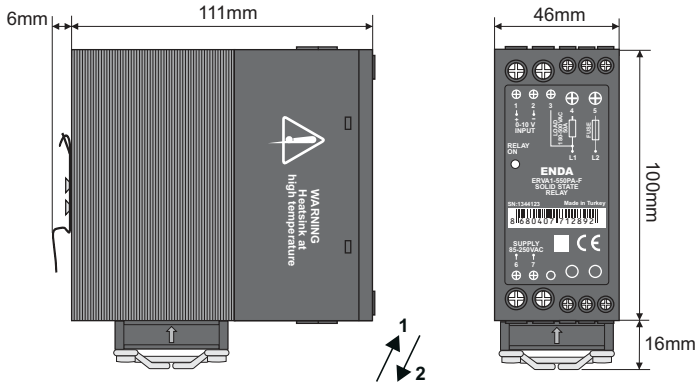


While cleaning the device, solvents (thinner, benzene, acid etc.) or corrosive materials must not be used.

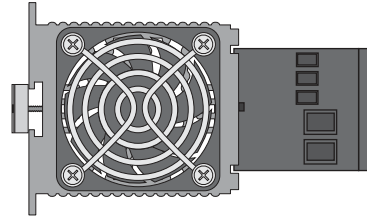
# DIMENSIONS

For ERVA1-x40PA , ERVA1-x40PA-F ve ERPA1-550PA-F

For ERVA1-570PA-F



- For removing the relay from the rail; Pull up the relay in direction 1
- For mounting the relay to the rail; Push down the relay in direction 2



- For removing the relay from the rail; Pull up the relay in direction 1
- For mounting the relay to the rail; Push down the relay in direction 2

# APPLICATIONS

