



Read this document carefully before using this device. The guarantee will be expired by device damages 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 EPDA1, ESDA1, EPGA1, EPAA1, ESAA1 Panel Mounted Solid State Relays

Thank you for choosing ENDA EPDA1 / ESDA1 / EPGA1 / EPAA1 / ESAA1 Series Solid State Relays

- 12-25-40-50-70-100-120A AC Load current.
(Varies by model type. Please check the order code).
- 320-460 AC Load voltage.
- 3-30V DC (for only EPxx), 8-30V AC/DC or 90-240V AC input voltage.
- LED status indicator for input voltage.
- Zero-cross or Random-cross at AC voltage.
- Applicable for three phase loads.
- Built-in varistor protection.
- Panel or Narrow Panel mounted.
- CE Marked according to European Norms.

ORDER CODE

Product Basic Code	EPDA1
Panel Type	EP
Narrow Panel Type	ES

Input Voltage	
3-30V DC	G
8-30V AC/DC	D
90-240V AC	A

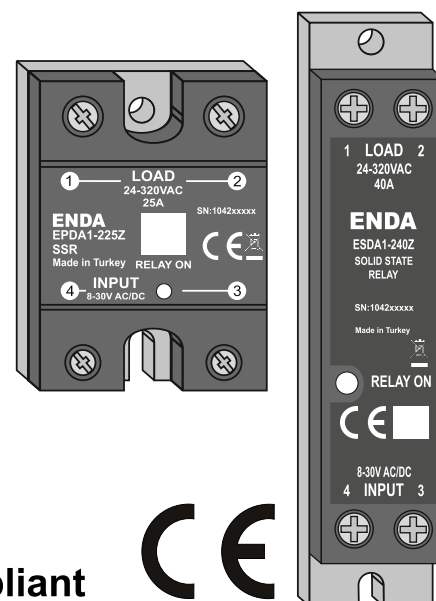
Load Voltage	
AC	A

Pole Number	
Single-pole	1

Switching	
Zero-cross	Z
Random-cross	R

Load Current	EPAA	EPDA	EPGA	ESAA	ESDA
12A AC	12	12	12	12	12
25A AC	25	25	25	25	25
40A AC	40	40	40	40	40
50A AC	50	50	50	—	—
70A AC	70	70	70	—	—
100A AC	100	100	—	—	—
120A AC	120	120	—	—	—

Load Voltage	
24-320V AC	2
50-460V AC	4



RoHS
Compliant



ENVIRONMENTAL CONDITIONS

Ambient-storage temperature	-25... +60°C/-30 ... +100°C (without icing and condensation)
Relative humidity	Relative humidity 90% for temperatures up to 20°C decreasing linearly to 50% relative humidity at 40°C.
Pollution degree	2
Overvoltage category	II
Altitude	Max. 1000m
Protection	IP20 According to EN60529
⚠ KEEP AWAY device from exposed to corrosive, volatile and flammable gases or liquids and DO NOT USE the device in similar hazardous locations.	

OUTPUT

Load voltage/ current	212	225	240	425	440	450	470	4100	4120
Load current, AC51/25°C (Arms)	12	25	40	25	40	50	70	100	120
Load voltage (Vrms)	24-320			50 - 460					
Overload current t=1s/25°C (Arms)	50	85	150	85	150	200	300	540	720
Non rep.surge current/25°C (Arms)	120	240	400	240	400	500	800	1350	1800
On-state voltage drop (Vrms)	1,6			1,6			1,8		
Leakage current (mArms)	5			5	5	10	10	20	20
I ² t For fusing t=10ms (A ² s)	78	200	800	200	800	400	1600	9100	16200
Frequency (Hz)	50-60			50 - 60					
Minimum operating current (mArms)	160			160	160	200	320	500	500

THERMAL SPECIFICATIONS

T _J Junction temperature (°C)	≤125	≤125	≤125	≤125	≤125	≤125	≤125	≤125	≤125
R _{th(j-c)} Junction-case thermal resistance (°C/W)	≤2,3	≤1,2	≤0,7	≤1,2	≤1,0	≤0,6	≤0,4	≤0,3	≤0,25
R _{th(j-a)} Junction-ambient thermal resistance (°C/W)	≤20	≤20	≤20	≤20	≤20	≤20	≤20	≤20	≤20

INPUT

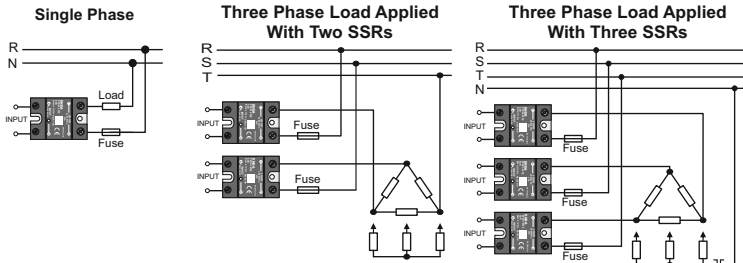
Order code	EPGA1-xxxZ EPGA1-xxxR	ExDA1-xxxZ ExDA1-xxxR	ExAA1-xxxZ ExAA1-xxxR
Input voltage	3 - 30VDC	8 - 30VAC/DC	90 - 240Vac
Pick-up voltage	> 3VDC	> 6VAC/DC	> 75Vac
Drop-out voltage	< 2VDC	< 2VAC/DC	< 6Vac
Input current	< 10mA _{dc}	< 17mA _{ac} /10mA _{dc}	< 8mA _{ac}
Turn-on time	Max. ½ Period	Max. ½ Period	Max.1 Period
Turn-off time	Max. ½ Period	Max. ½ Period	Max. 2 Period
LED indicator	If input voltage is AC/DC >3V, LED lights up.	If input voltage is AC/DC >6V, LED lights up.	If input voltage is AC/DC >75V, LED lights up.

GENERAL

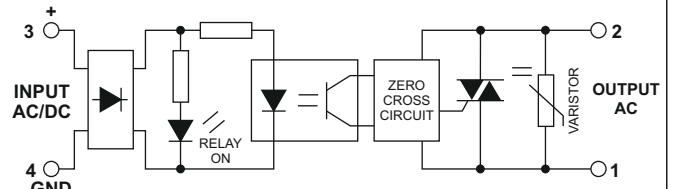
Order code	EPxA1-xxxZ EPxA1-xxxR	ESDA1-xxxZ ESDA1-xxxR	ESAA1-xxxZ ESAA1-xxxR
Dimensions	W45xH62xD31mm	W24xH101xD29mm	W24xH101xD29mm
Weight (After packaging)	EPxA1-2xx/4xxZ/R = 95g EPxA1-550/570Z/R = 110g EPxA1-5100/5120Z/R = 115g	ESDA1-2xx/4xxZ/R = 95g	ESAA1-2xx/4xxZ/R = 95g
Isolation voltage	2500Vrms between I/O terminals for 1 min.		
Connection	For power line 16mm ² (with cable terminal 25mm ²) cable, for signal line 4mm ² cable can be connected.		
Terminal screw torque	For power line max. 2,2Nm, for signal line max. 1,2Nm.		
Product standard	EN 60947-4-3		
Mounting	Mounted to the panel by using M4 screws.		
Enclosure material	Self extinguishing plastics. (According to EN 60695-11-10 V-O)		

⚠ Avoid any liquid contact when the device is switched on.
DO NOT clean the device with solvent (thinner, gasoline, acid etc.) and / or abrasive cleaning agents.

CONNECTION SAMPLES



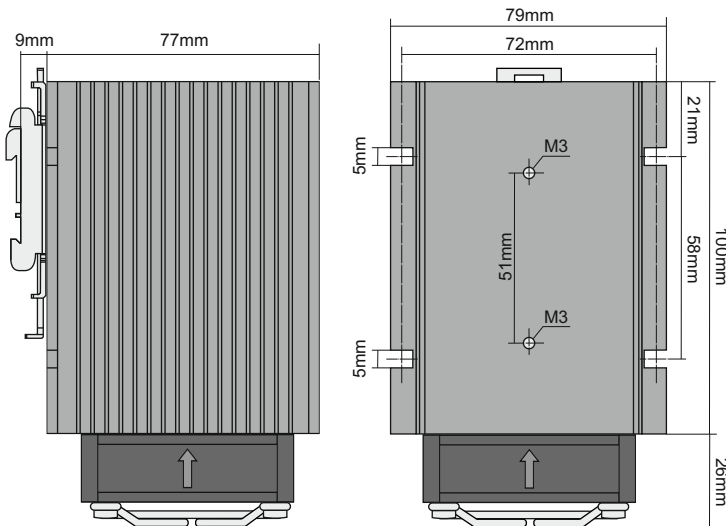
CONNECTION DIAGRAM



ENDA ETS SERIES RAIL AND PANEL MOUNTED HEATSINKS

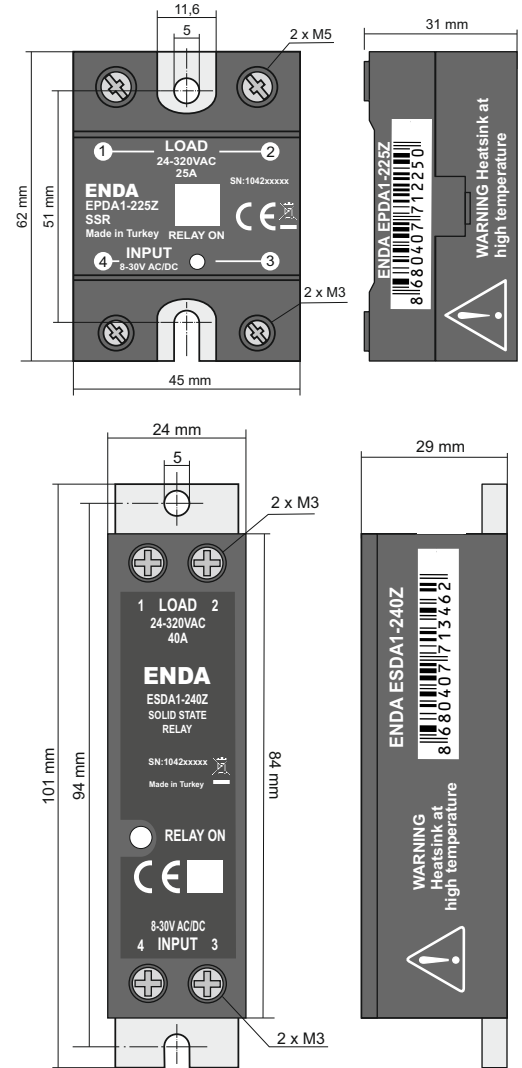
Heatsink	SSR Current (A)	Dimensions WxHxD (mm)	Thermal Resistance (°C/W)
ETS-46-62	12-25	46x61x62	2,0
ETS-46-80	20-25	46x61x80	1,7
ETS-46-100	25-40	46x61x100	1,5
ETS-62-100	40-50	62x77x100	1,0
ETS-46-100F	50-70	46x61x116	0,7
ETS-62-100F	70-120	62x77x126	0,4

Please refer to "ENDA ETS Series Rail and Panel Mounted Heatsinks" manual for details. Contact your local dealer(s) or download the latest manual from <http://enda.com/en/automation/ssr/ heatsink/> ENDA website.

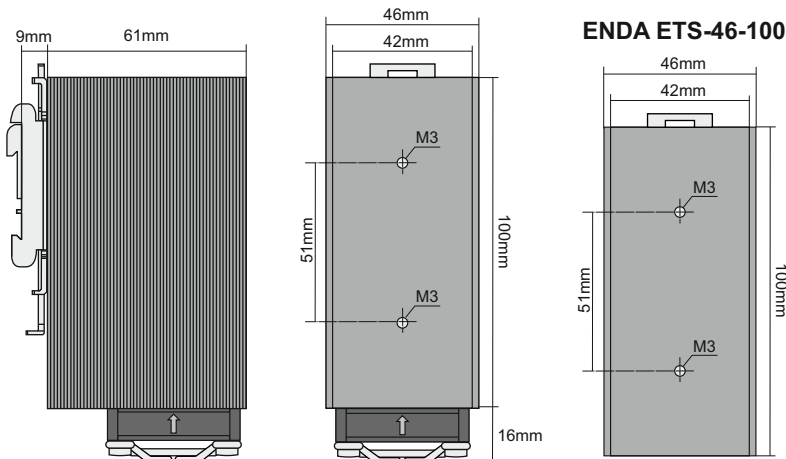


Fan Supply : 24VDC, 220mA.
The fan side of the device must be located at the bottom.

DIMENSIONS

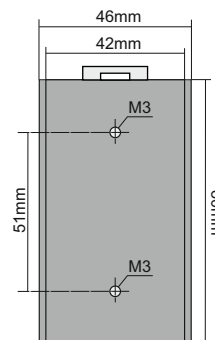


ENDA ETS-46-100F ENDA ETS SERIES RAIL AND PANEL MOUNTED HEATSINK



Fan Supply : 24VDC, 100mA.
The fan side of the device must be located at the bottom.

ENDA ETS-46-80



ENDA ETS-46-62

