

- » Zero crossing AC solid state relay.
- » 2 input ranges: 3-32 VDC and 90-280 VAC.
- » Maximum load current (AC1 at 25° C): 25, 60, 80, 100A.
- » Operational ratings: 40 - 480 VAC.
- » Frequency range: 47- 63 Hz.
- » Maximum non-repetitive peak voltage: 1,200 Vp.
- » LED indicator.
- » Clip on protective cover for greater safety (IP 20).

Models and references

Zero crossing	Control voltage	Rated operational voltage	Rated operational current	Reference
Yes	3 - 32 VDC	40 - 440 VAC	25 A	RS1A0P032DC440025Z
			60 A	RS1A0P032DC440060Z
			80 A	RS1A0P032DC440080Z
			100 A	RS1A0P032DC480100Z
	90 - 250 VAC	40 - 440 VAC	25 A	RS1A0P250AC440025Z
			60 A	RS1A0P250AC440060Z
			80 A	RS1A0P250AC440080Z
	90 - 280 VAC	40 - 480 VAC	100 A	RS1A0P280AC480100Z

Specifications

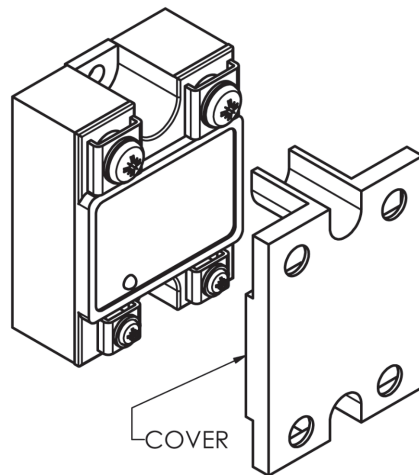
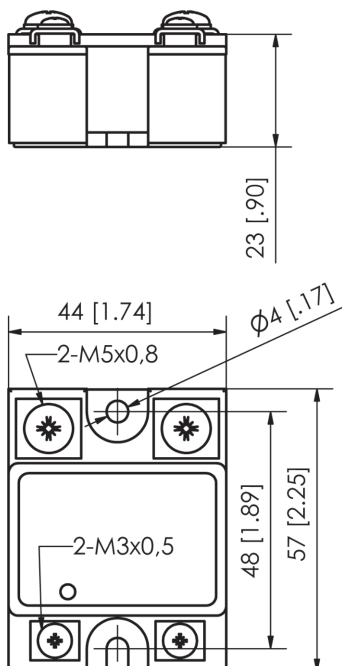
GENERAL SPECIFICATIONS	VDC input		VAC input	
Dielectric insulation (between input & output)	2,500 VAC			
Operating temperature	-25 to 70° C	-30 to 80° C	-25 to 70° C	-30 to 80° C
Storage temperature	-35 to 85° C	-35 to 85° C	-35 to 85° C	-35 to 85° C
Rth junction to case	2.5° C/W (25 A) 0.65° C/W (60 A) 0.5° C/W (80 A)	0.3° C/W	2.5° C/W (25 A) 0.65° C/W (60 A) 0.5° C/W (80 A)	0.3° C/W
Ambient humidity	Operating: up to 85 %			
CE marking	Yes			

INPUT SPECIFICATIONS	VDC input		VAC input	
Control voltage range	3 - 32 VDC		90 - 250 VAC	90 - 280 VAC
Input current (maximum)	10/16 mA @= 5 V/24 V	13/16 mA @= 5 V/24 V	29 mA @= 220 VAC	
Pick-up voltage	1.9 VDC		70 VAC	
Drop-out voltage	1.9 VDC		70 VAC	
Maximum reverse voltage	32 VDC		-	
Max. response time pick-up	½ cycle		1 cycle	
Max. response time drop-out	½ cycle		2 cycles	

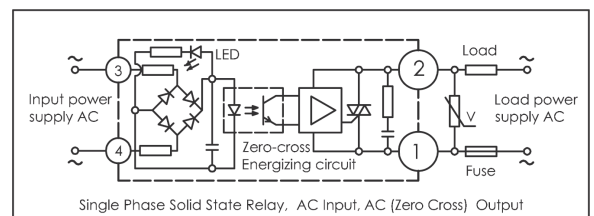
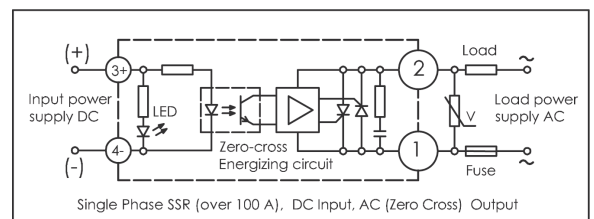
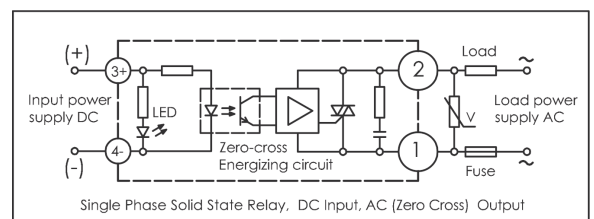
OUTPUT SPECIFICATIONS	VDC input		VAC input	
	25, 60, 80 A	100 A	25, 60, 80 A	100 A
Maximum load current (AC51 @ Ta = 25° C) (AC53a @ Ta = 25° C)	25, 60, 80 A 5, 15, 18 A	100 A 20 A	25, 60, 80 A 5, 15, 18 A	100 A 20 A
Load voltage range	40 - 440 VAC	40 - 480 VAC	40 - 440 VAC	40 - 480 VAC
Frequency range	50 - 60 Hz	47 - 63 Hz	50 - 60 Hz	47 - 63 Hz
Max. non-repetitive peak voltage	930 Vp	1,200 Vp	930 Vp	1,200 Vp
Max. non-repetitive peak current (t=10ms)	350 Ap / 25 A 630 Ap / 60 A 910 Ap / 80 A	1,100 Ap	350 Ap / 25 A 630 Ap / 60 A 910 Ap / 80 A	1,100 Ap
Maximum off state leakage current	10 mA	8 mArms	10 mA	8 mArms
Minimum off state dv / dt	200 V / µseg			
Maximum on state voltage	1.6 VAC			
Minimum load current	0.1 A			
I²t (10 ms) (orientative data)	625 A²s (25 A) 2,025 A²s (60 A) 4,225 A²s (80 A) 6,050 A²s (100 A)			

HOUSING SPECIFICATIONS	VDC input		VAC input	
	60 x 45 x 22	58 x 44 x 23	60 x 45 x 22	58 x 44 x 23
Dimensions (L x W x H mm)	60 x 45 x 22	58 x 44 x 23	60 x 45 x 22	58 x 44 x 23
Weight	150 g maximum			
Baseplate	Aluminum, nickel-plated			
Control terminal (M3x6) torque	1.2 Nm			
Power terminal (M5x9) torque	2.4 Nm			

Dimensions

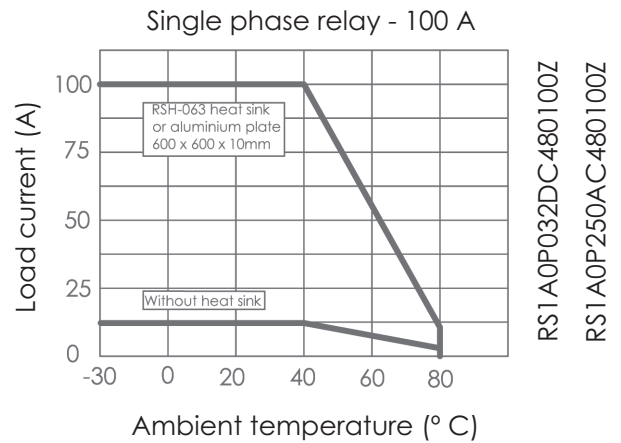
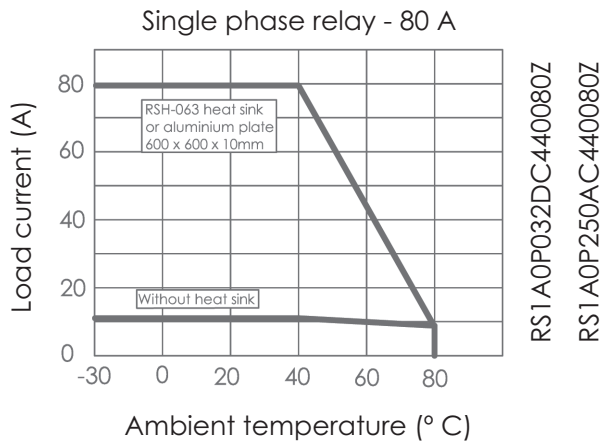
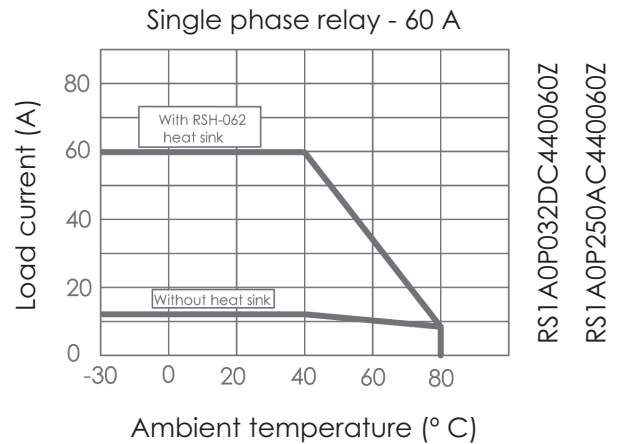
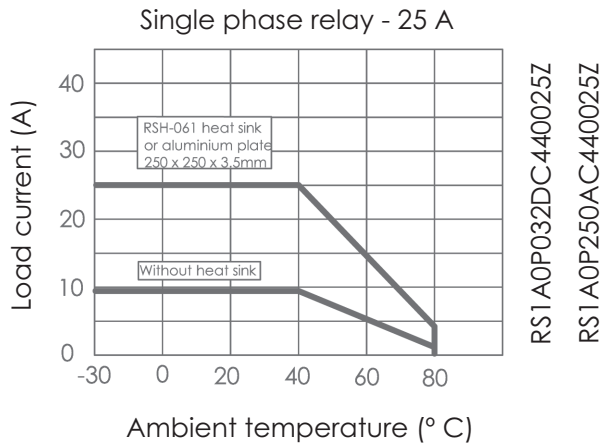


Diagrams



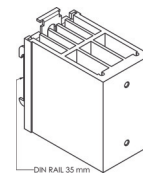


Load current vs. ambient temperature

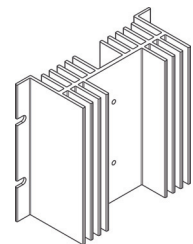


Heat sinks

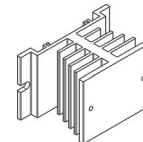
Reference	Output current	Dimensions	Relays to be used with
RSH-059 (DIN-rail)	≤ 20 A	44 x 75 x 70	RS1A0P032DC440025Z RS1A0P250AC440025Z
RSH-060	≤ 20 A	80 x 50 x 50	RS1A0P032DC440025Z RS1A0P250AC440025Z
RSH-061	≤ 40 A	125 x 70 x 50	RS1A0P032DC440025Z RS1A0P250AC440025Z
RSH-062	≤ 60 A	125 x 115 x 50	RS1A0P032DC440060Z RS1A0P250AC440060Z
RSH-063	≤ 100 A	120 x 80 x 50	RS1A0P032DC440080Z RS1A0P250AC440080Z RS1A0P032DC440100Z RS1A0P280AC480100Z



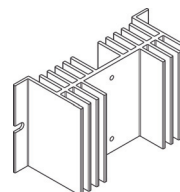
RSH-059



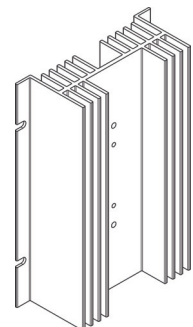
RSH-062



RSH-060



RSH-061



RSH-063

Over 10 A load a heat sink must be used. The use of a heat sink will make the lifetime of the relay up to four times longer, even when using it with load currents lower than 10 A.