

- » Motor reversing solid state relay, AC.
- » 2 input ranges: 10 - 30 VDC and 90 - 115 VAC.
- » Maximum load power: 1 KW and 5 KW.
- » Operational ratings: 24 - 530 VAC.
- » Frequency range: 47- 63 Hz.
- » Maximum non-repetitive peak voltage: 1,200 Vp.
- » LED indicator (green: forward; yellow: reverse).

Overview

This relay is used to invert the turn direction of an engine, which will depend on the input circuit. If the system is fed between the terminals F and GND, the triphase network will work in a direct way; if it is fed between R and GND, the direction of the engine will be inverted.

Input control	Output connection
GND - F	R → U S → V T → W
GND - R	R → V S → U T → W

Models and references

Control voltage	Rated operational voltage	Maximum load power	Reference
10 - 30 VDC	24 - 530 VAC	1 KW	RS1ARP030DC5301K3Z
90 - 115 VAC		5 KW	RS1ARP030DC5305K3Z
			RS1ARP115AC5305K3Z

Specifications

GENERAL SPECIFICATIONS	VDC input	VAC input
Dielectric insulation (between input and output)	2,500 VAC	
Operating temperature	-30 to 80° C	
Storage temperature	-35 to 85° C	
Rth junction to case	0.25° C/W	0.22° C/W
Ambient humidity	Up to 85 %	
CE marking	Yes	

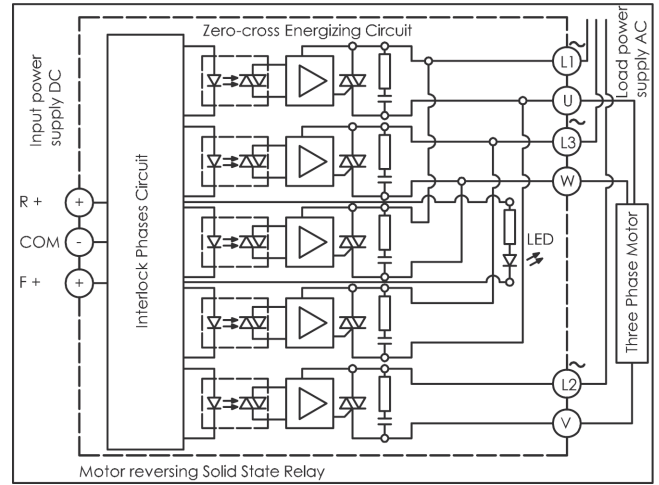
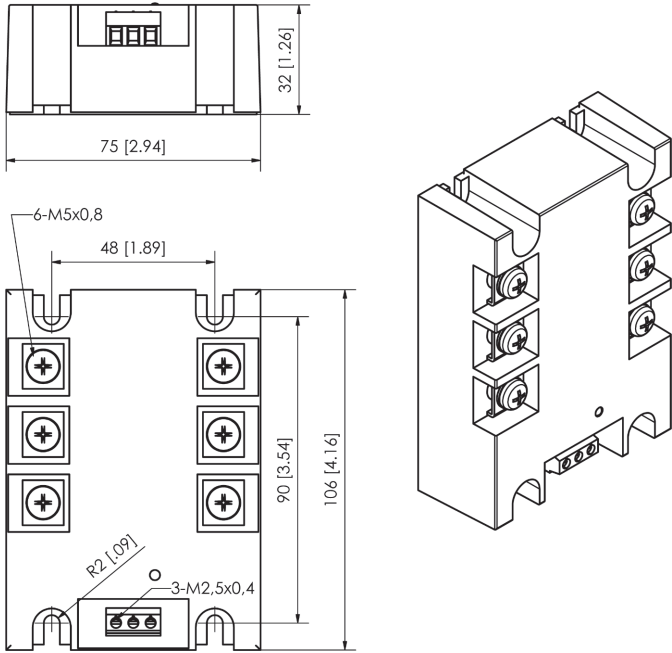
INPUT SPECIFICATIONS	VDC input	VAC input
Control voltage range	10 - 30 VDC	90 - 115 VAC
Maximum input current	30 mA	35 mA
Pick-up voltage	8 VDC	85 VAC
Drop-out voltage	4 VDC	30 VAC
Maximum reverse voltage	30 VDC	-
Max. response time pick-up	½ cycle	
Max. response time drop-out	½ cycle	

HOUSING SPECIFICATIONS	
Dimensions (L x W x H mm)	104 x 74 x 40
Weight	430 g maximum
Baseplate	Aluminum, nickel-plated
Control terminal (M3x6) torque	1.2 Nm
Power terminal (M5x9) torque	2.4 Nm

OUTPUT SPECIFICATIONS	VDC input		VAC input
Maximum load power	1 KW	5 KW	5 KW
Load voltage range	24 - 530 VAC		
Maximum load current range	25 A	60 A	
Frequency range	47 - 63 Hz		
Max. non-repetitive peak voltage	1,200 Vp		
Max. non-repetitive peak current (t = 20 ms)	350 Ap	850 Ap	
Maximum off state leakage current	8 mArms		
Minimum off state dv / dt	500 V / µseg		
Maximum on state voltage	1.6 VAC	1.8 VAC	
Minimum load current	0.1 A		
I²t (10 ms) (orientative data)	625 A²s	3,600 A²s	

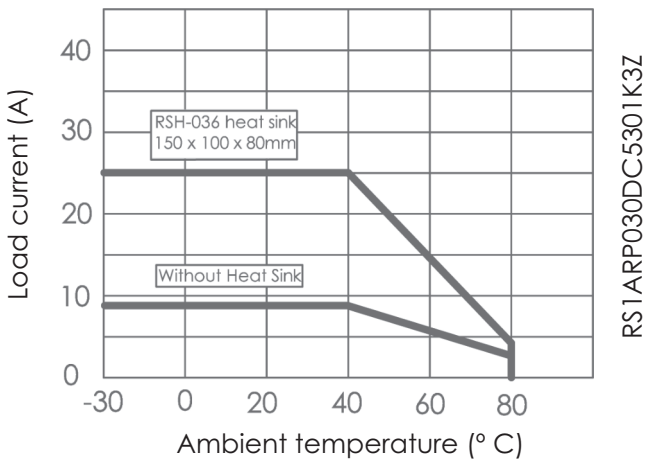
Dimensions

Circuit diagram



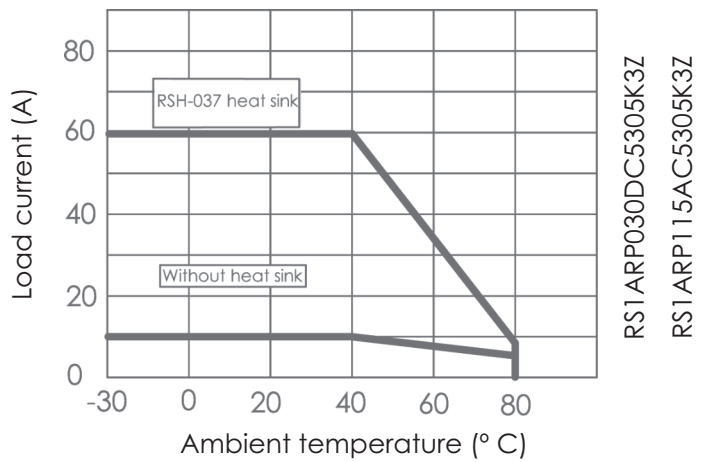
Load current vs. ambient temperature

Motor reversing relay - 1 KW



RS1ARP030DC5301K3Z

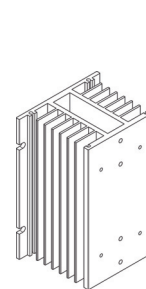
Motor reversing relay - 5 KW



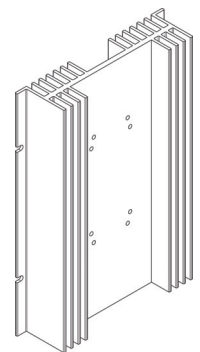
RS1ARP030DC5305K3Z
RS1ARP115AC5305K3Z

Heat sinks

Reference	Output current	Dimensions	Relays to be used with
RSH-036	≤ 40 A	150 x 100 x 80	RS1ARP030DC5301K3Z
RSH-037	≤ 80 A	260 x 180 x 50	RS1ARP030DC5305K3Z RS1ARP115AC5305K3Z



RSH-036



RSH-037