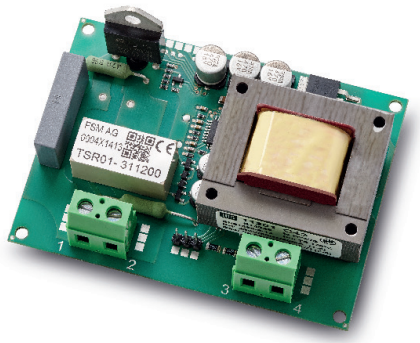
Data sheet

Transformer switching relay | Type TSR01



The TSR01 is an electronic relay for the switching of transformators. It switches one or more single phase transformers, either from an idle state or loaded state without inrush current. By our smooth switching procedure the inrush current is eliminated, not only reduced.

Fields of application

The TSR01 can be used in isolating, control, fi lament and automotive transformers for industrial applications, plant construction and research.

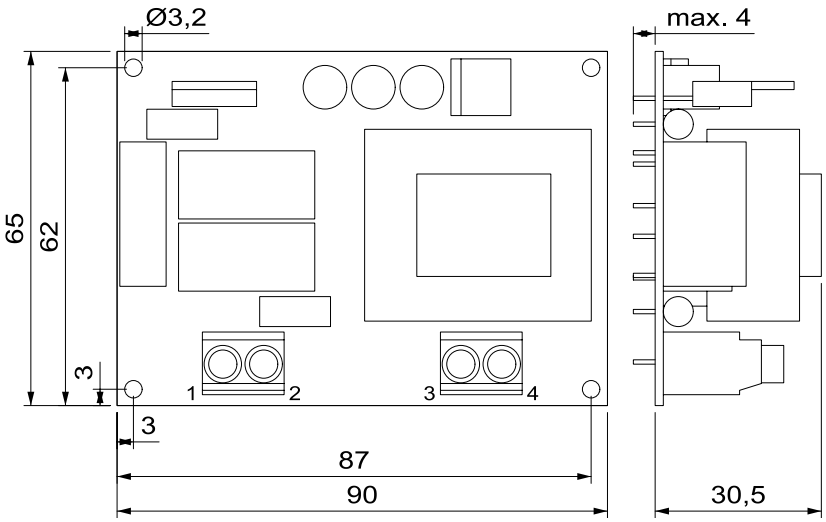
Technical Data

Description							
Rated voltage Option Option	100 - 240 V: 55 VAC – 275 VAC 100 - 127 V: 55 VAC – 146 VAC 200 - 240 V: 110 VAC – 275 VAC Peak voltage: max. 800 V						
Frequency	45-65 Hz						
Overvoltage category	III						
Own consumption	5 W						
Rated current	(1 Relais) 16 A						
	Ambient temperature	30 °C	40 °C	50 °C	60 °C	70 °C	
	Max. load current	16 A	16 A	16 A	14 A	12 A	

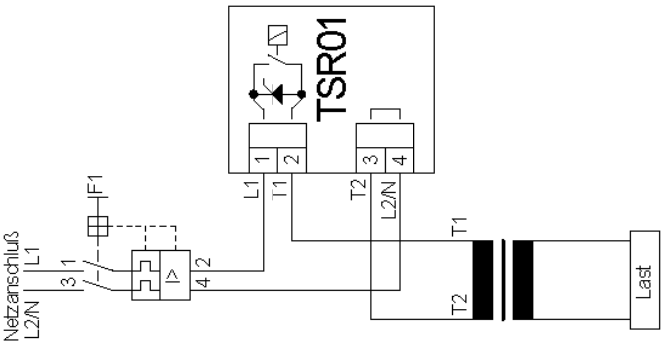
Description							
Option	(2 Relais) 32 A						
	Ambient temperature	30 °C	40 °C	50 °C	60 °C	70 °C	
	Max. load current	32 A	28 A	25 A	22 A	19 A	
	Max. peak current: 500 A (t_{peak}= 10 ms), leakage current 11 mA at 230 VAC Limit load integral: 1250 A^2s (t= 10 ms)						
Mains break	Undervoltage			Is the power voltage for longer than 0.3 s below the under voltage barrier, the TSR01 switches off.			
	Without half-wave failure recognition			For power supply failure > 60 ms smooth switching-on takes place after power recovery.			
	With half-wave failure recognition, slow switching on			For power supply failure > 2 ms smooth switching-on takes place after power recovery.			
	With half-wave failure recognition, fast switching on			For power supply failure > 2 ms the TSR01 performs the half-wave failure recognition and switches on fast with its re-switch on procedure. The breaking gap amounts minimum one mains period.			
Protection	Defined limits have to be adhered, see above „rated current“.						
Power-up delay	Premagnetisation	1. (toroidal transformer)		2. (packet core transformer)			
	Power-up delay	approx. 0.88 s		approx. 0.15 s			
Switching frequency	Depends to the premagnetisation. Packet core transformer: Typically 25 switching cycles in succession, then 60 sec pause required. Toroidal transformer: unlimited switching cycles without a breake.						
Lifetime	Typically 5 millions of switching cycles.						
EMC (CE):	Electromagnetic immunity: IEC 61000-6-2 Electromagnetic interference: IEC 61000-6-3						
Operating connections	16A: Screw clamp, clamping area 0,2–2,5 mm^2, tightening torque 0.5–0.6 Nm 32A: Screw clamp, clamping area 0,2-4,0 mm^2, tightening torque 0.5 – 0.6 Nm						
Mounting	PCB mounting with four mounting holes Ø 3.2 mm						
Construction	Open						
Contamination level	2						
International protection	IP00						
Dimension (LxWxH)	90 x 65 x 34.5 mm						
Assembling	Minimum distance to warmth emittig units: 20 mm. At mounting necessary air and creeping distances must be observed.						
Weight	250 g						

Description	
Impact strength	10 g
Humidity	95 %, non condensing
Operating temperature	-20 °C to 70 °C
Storage temperature	-20 °C to 70 °C

Dimensions



Wiring diagram



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