

TSR19

Motor protection | PTC | Clixon | 24 ... 48 V UC | 230 V AC



Power supply

Nominal voltage	24 ... 48 V UC	230 V AC
Operating voltage range	0.85 ... 1.15 U _N	
Power consumption AC/DC	5 VA / 5 W	
Rated frequency	50 ... 60 Hz	

Measuring circuit

Measured parameters	Ω
Monitoring functions	over, sensor ground fault, sensor break
Resistance, OK range	100 ... 1800 Ω
Clixon, OK range	0 ... 1800 Ω
Failure threshold	≤ 50 Ω, ≥ 2250 Ω, ≤ 1 kΩ (to ground)
Alarm delay	2.5 s

Main circuit

Number of contacts	1 + 1 C0
Contact Material	⚡ AgNi
Rated voltage	250 V
Rated current	6 A
Minimum load	10 mA, 12 V
Rated load DC	fig. 2
Rated load AC-1	1250 VA
Mechanical endurance (cycles)	3 x 10 ⁷
Electrical endurance at rated load AC-1 (cycles)	fig. 3

Insulation

Rated test voltage measuring circuit / power supply	2 kV rms / 1 min
Rated test voltage measuring circuit / main circuit	2 kV rms / 1 min
Rated test voltage main circuit / power supply	2 kV rms / 1 min
Rated test voltage main / main circuit	2 kV rms / 1 min
Rated test voltage open contact	1 kV rms / 1 min
Pollution degree	2
Overvoltage category	III

General data

Ambient temperature storage	-40 ... 85 °C
Ambient temperature operation	-25 ... 60 °C
Module width	fig. 4
Weight	125 g
Protection degree	IP 20
Housing material	PC

Product references

Types	Product reference	230	24-48
Motor protection, AC supply	TSR19/AC...V	✓	
Motor protection, UC supply	TSR19/UC...V		✓

"..." list control circuit voltage to complete product references.
Other voltages on request. Please contact support@comatreleco.com.

Accessories

Socket	S3-M
Retaining clip	HF-24
Transparent front cover	FS-23
Front panel mounting set	FZ-23



fig. 1. Wiring diagram

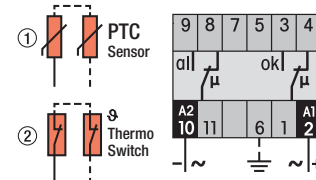


fig. 2. DC load limit curve

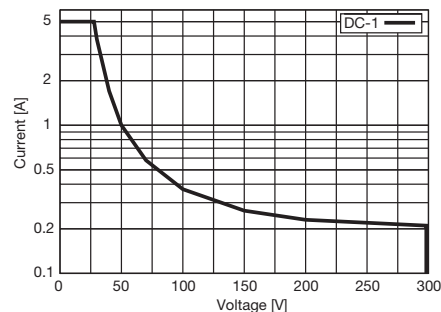


fig. 3. AC voltage endurance

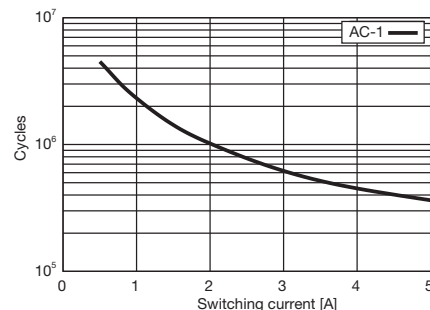
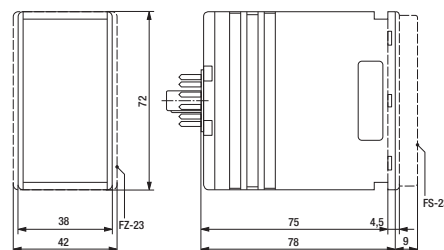


fig. 4. Dimensions (mm)



Standards and approvals

Standards IEC/EN 60947

Approvals

	Description	MRE-44S	MRM11	MRM11R	MRM32	MRM32R	MRU11	MRU32	MV53	SSU34	SSU31	SSU33L	MRI11	MRI32	TSR19	ESU-D2R	CT515R	CT524R	
Monitoring	One phase voltage monitoring		●	●			●		●										
	Three phase voltage monitoring				●	●		●		●		●							
	Four channel voltage measuring	●																	
	DC Voltage monitoring		●	●	●	●	●	●			●								●
	One phase current monitoring		●	●									●						
	Three phase current monitoring				●	●								●					
	Four channel current measuring	●																	
	DC current monitoring		●	●	●	●							●	●				●	
	Phase failure				●	●		●		●	●	●							
	Phase sequence monitoring	●			●	●		●		●	●	●							
	Phase angle monitoring / measuring*	●			●	●		●		●		●							
	Differential voltage monitoring / measuring*	●									●	●							
	Neutral failure monitoring	●									●	●							
	Frequency monitoring / measuring*	●	●	●	●	●	●	●		●		●	●	●					
	Apparent power monitoring / measuring*	●	●	●	●	●													
	Active power monitoring / measuring*	●	●	●	●	●													
	Power factor monitoring / measuring*	●	●	●	●	●													
	Active energy measuring	●																	
	THDI / THDU measuring	●																	
	PTC monitoring															●			
Earth failure monitoring																●			
Functions	Threshold exceeded "over" fig. 3.	●	●	●	●	●	●	●	●	●		●	●	●	●		●	●	
	Threshold undershot "under" fig. 4.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Window function "inside" fig. 2.	●	●	●	●	●	●	●					●	●				●	●
	Window function "outside" fig.1.	●	●	●	●	●	●	●					●	●				●	●
	Alarm on-delay	●	●	●	●	●	●	●	●	●		●	●	●			●	●	●
	Alarm off-delay	●	●	●	●	●	●	●	●				●	●					
	Error storage function	●	●	●	●	●	●	●					●	●	●				
	Threshold selectable	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●
	Threshold fixed										●	●			●				
	Power supply	Supply isolated from measuring circuit	●	●	●	●	●	●	●					●	●	●	●		
Supply from measure circuit									●	●	●	●					●	●	
Mounting	DIN rail mounting	●	●	●	●	●	●	●	●				●	●		●			
	Housing according IEC/EN 43880 (electrical distribution mounting)	●	●	●	●	●	●	●						●	●				
	Plug-in (socket mounting)											●	●		●		●	●	

*Measuring: MRE-44S only

