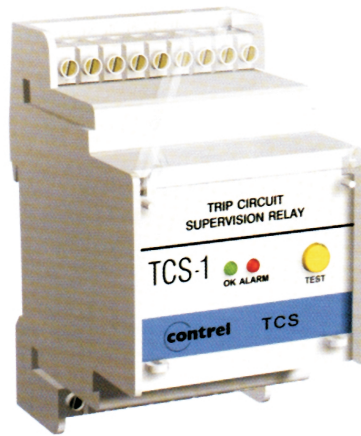


Monitor for permanent control of the MCCB's opening circuit or safety circuits

TCS



GENERAL

The **TCS** is devoted to control the MCCB's disconnection circuits (trip) or the safety circuits.

In fact, whenever there is an interruption in a circuit (Output relay of any given protection → MCCB's shunt trip coil → and the connection between the relay and the coil), and it is required that the MCCB trips due to any anomaly in the line, such MCCB will be unable to trip.

Provided that the system has been installed with other protections, some other Circuit Breaker will trip and the result will be the loss of service of other sections of the system, which might be most important.

Should the MCCB be the sole protection, the use of the **TCS** is most important, because the working guarantee of the tripping circuit becomes critical, in this particular case.

Important application is with the safety or emergency circuits, according with the CEI 64-8/537.4.3 Standard, when using shunt trip coils for emergency reactions, as the starting of a fire fighting system, for example.

The relay has an auxiliary supply electrically separated from the Control Voltage.

In normal conditions, with auxiliary supply to the TCS relay, the OK green LED will glow. If there is any anomaly on the disconnection or safety circuit, the "ALARM" red LED will glow and the OK green LED will be switched off. The double changeover end relay will be de-energized enabling a possible acoustic signal and a remote repetition. Same signal is shown with tripped breaker.

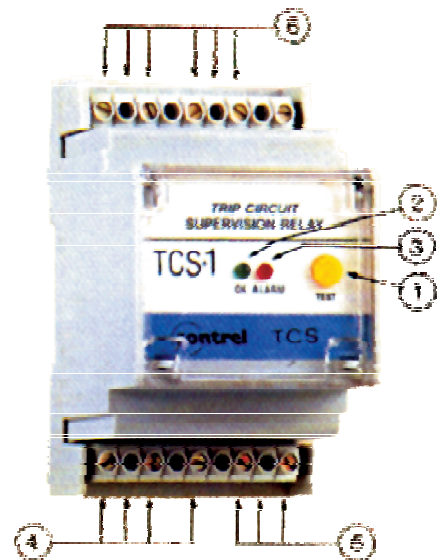
On top of the above it is possible to detect the loss of supply on the auxiliary circuits, by supplying the TCS with same auxiliary voltage.

If the end relay is normally energized (fail safe), when there is a lack of supply, the end relay will be de-energized, as per anomaly situations, but in this case the LED's at the front will be switched off.

MODELS

TCS1 : 24-48Vac/dc

TCS2 : 110-230Vac/dc - 400Vac



DESCRIPTION

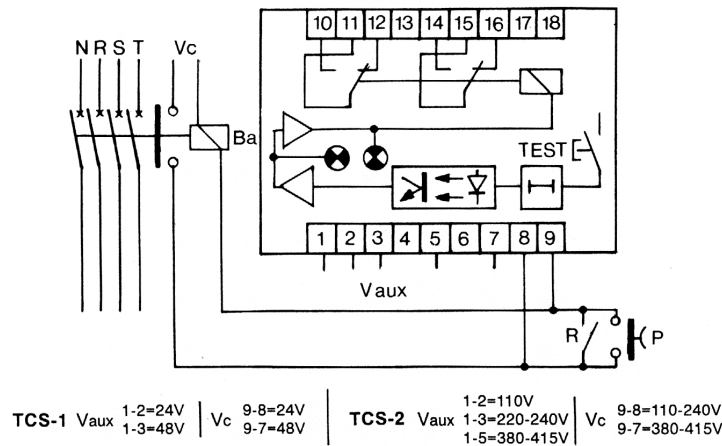
- 1) Test push button
- 2) Signalling lamp of OK circuit (green LED)
- 3) Signalling lamp of anomaly in the circuit (red LED)
- 4) Terminals for auxiliary supply
- 5) Connecting terminals to the circuit under control
- 6) Output terminals of the end relay with double changeover

TCS – Relay for permanent control of the MCCB's opening circuit or safety circuits

ELECTRICAL CHARACTERISTICS

TYPE	TCS-1	TCS-2
Auxiliary Voltage supply	24+48V ± 20% ac/dc	110-220V ± 20% ac/dc 400V ± 20%
Frequency	50-60 Hz	
Maximum consumption	1,5+3,5VA depending on Vaux	1,5+5VA depending on Vaux
Current of circuit under control	6 mA	2 mA 110-380V 4mA 220V
Voltage of circuit under control	13+30V ac/dc 8-9 terminals 24+60V ac/dc 7-9 terminals	50+260V ac/dc 8-9 terminals 250+440V ac/dc 7-9 terminals
Tripping Time delay	0,4+1sec. Depending on input Voltage	0,2+0,5 sec. Depending on input Voltage
Tiempo de rearme	0,6+1seg. Dependiente de la tensión de entrada	1,5+2 seg. Dependiente de la tensión de entrada
Output: 2 change-over contacts	5A 250V	
Working Temperature	-10 ÷ + 60°C	
Storing Temperature	-20 ÷ + 80°C	
Relative humidity	<90%	
Insulation Test	2,5 kV 60 sec.	
Pulse Test	5 kV 1,2/50 microsec.	
Standards	CEI 41-1 - IEC 255-801	
Wiring method	Drawing out screw terminals for cross section wires 2,5 mm ²	
Protection degree according DIN 40050	Ip20	
Mounting according DIN 50022	Snap on DIN rail 35 mm	

WIRING DIAGRAM



DIMENSIONS

