

Impulse Relays

Multi 9 Merlin Gerin



TL + ETL

Modular **impulse relays** are bistable switches designed to control load power mainly for lighting applications. The control orders are sent by impulses from one or more manual control points. Built-in or add-on auxiliary functions allow operation of latched orders or centralised and local controls. The scope of application covers the entire building sector, from domestic uses to industry, mainly for lighting management.

Operation

n The range is built up around the 16 A TL impulse relays (single-pole, two-pole, single-pole changeover relay) and the 32 A TL impulse relay (single-pole) which can be fitted with extensions to increase the number of poles:

o for example:

- a single-pole 16 A impulse relay + an extension becomes three-pole,
- a two-pole 16 A impulse relay + an extension becomes four-pole.

An impulse order on the coil closes the impulse relay pole or poles. Originally designed with two stable mechanical positions, the pole or poles are then opened by the next impulse order. Each time an impulse order is received on the coil, the impulse relay reverses the position of the pole(s).

TLc impulse relay

The TLc incorporates centralised control while conserving the possibility of initiating local impulse orders.

TLm impulse relay

The TLm incorporates control via a latched order from a two-way switch (changeover switch, time switch, thermostat). Manual control is inoperative.

TLs impulse relay

The TLs allows remote indication of its operating status.



TLc



TLm

Advantages

A range of efficient modular impulse relays to cover the majority of remote control needs:

- n With 16 A and 32 A ratings in a 18 mm width.
- n With built-in auxiliary functions in the same space (control and indication functions).
- n With adaptable common auxiliaries.
- n Compatible with all lighting types.
- n Consistent with the entire Multi 9 offer: matching design, same profile, identical connections, clip-on markers, insert.



TLs

Range



M9 FP 49/A .en auxiliary product sheet

Merlin Gerin

Modicon

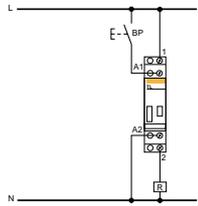
Square D

Telemecanique

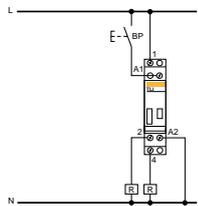
Implementation

- n Designed for installation in all modular electrical switchboards and enclosures.
- n Easy to mount on symmetrical rail with bistable clip.
- n Easy to connect via serrated tunnel terminals with flap.
- n Captive screws with mixed +/- cavity.
- n Simplified clip-on addition of auxiliaries.

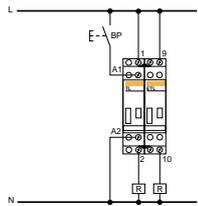
Schematic diagrams



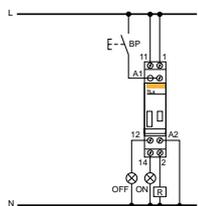
TL



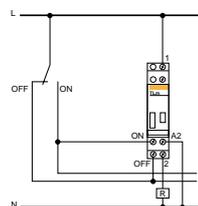
TLI



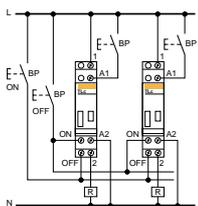
TL + ETL



TLs



TLm



TLc

Schneider Electric

Choice table

type	width in mod. of 9 mm	rating	voltage		coil	cat. no.
			V AC	V DC		
TL 16 A	2	16	230/240	110	15510	
			130	48	15511	
			48	24	15512	
			24	12	15513	
2P	2	16	230/240	110	15520	
			130	48	15521	
			48	24	15522	
			24	12	15523	
3P	4	16	230/240	110	15510+15530	
			130	48	15511+15531	
			48	24	15512+15532	
			24	12	15513+15533	
4P	4	16	230/240	110	15520+15530	
			130	48	15521+15531	
			48	24	15522+15532	
			24	12	15523+15533	
TLI 16 A	2	16	230/240	110	15500	
			48	24	15502	
			24	12	15503	
			ON/OFF			
ETL 16 A	2	16	230/240	110	15530	
			130	48	15531	
			48	24	15532	
			24	12	15533	
2P			12	6	15534	
			230/240	110	15515	
					15515+15505	
					15515+2x15505	
3P					15515+3x15505	
			230/240	110	15505	
					15518	
			48		15526	
ETL 32 A 1P 2	2	32	230/240	110	15505	
					15518	
			48		15526	
			24		15525	
TLc	2	16	230/240	110	15516	
					15517	

Official approvals



UTE



CEBEC



KEMA KEUR



ÖVE



NEMKO



SEMKO



SETI



VDE

ASE

Technical data

Electrical data

Specific to 16 A TL, TLI, ETL

- o Power circuit:
- o rating: I_n 16 A ($\cos \varphi = 0.6$),
- o voltage:
 - single-pole and two-pole: 250 V - 50/60 Hz,
 - three-pole, four-pole (TL+ETL): 415 V - 50/60 Hz.
- n Control circuit:
 - o supply voltage:
 - 12 to 240 V AC - 50 Hz (+6%, -15%)/60 Hz ($\pm 6\%$)
 - 6 to 110 V DC (+6%, -10%),
 - o inrush power:
 - single-pole and two-pole: 19 VA
 - three-pole and four-pole: 38 VA.
- n Electrical endurance:
 - o 200 000 AC22 cycles ($\cos \varphi = 0.6$),
 - o 400 000 AC21 cycles ($\cos \varphi = 1$).

Specific to TLc, TLm, TLs

- n Power circuit:
 - o rating: I_n 16 A,
 - o voltage: 250 V - 50/60 Hz.
- n Control circuit:
 - o TLc: 24/48/230 to 240 V DC - 110 V AC,
 - o TLm, TLs: 230 to 240 V DC - 110 V AC.
- o Electrical endurance: 200 000 cycles.

Mechanical data

- n Connection: 0.5 to 6 mm² cables.
- n Mechanical indication on front panel via operating lever position.
- n Direct control on front face:
 - o power: by ON-OFF lever,
 - o coil isolation via switch.
- o Overall dimensions: $h = 81$; $d = 64$; $l = 18$ mm.

Electrical data for the 32 A TL

- n Power circuit:
 - o rating: I_n 32 A ($\cos \varphi = 0.6$),
 - o voltage:
 - single-pole: 250 V - 50/60 Hz
 - two-pole, three-pole, four-pole: 415 V - 50/60 Hz.
- o Control circuit:
 - o supply voltage:
 - 230/240 V AC - 50 Hz (+6%, -15%)/60 Hz ($\pm 6\%$),
 - o inrush power:
 - single-pole: 19 VA, two-pole: 38 VA
 - three-pole: 57 VA, four-pole: 76 VA.
- n Electrical endurance:
 - o single-pole: 200 000 cycles,
 - o two, three and four-pole: 100 000 cycles.
- Mechanical data for the 32 A TL**
 - n Connection:
 - o power circuit: cables up to 10 mm²,
 - o control circuit: 0.5 to 6 mm² cables.
 - n Same overall dimensions as the 16 A TL.

Environment

- n Compliance with standards: NFC 61.110 / NFC 61.112 / IEC 669.1 / IEC 669.2.
- n Tropicalisation:
 - treatment 2 (95% relative humidity at 55°C).
- n Class of protection:
 - o case: IP40,
 - o terminals: IP20.
- n Operating temperature:
 - 20°C to +50°C.
- n Storage temperature:
 - 40°C to +80°C.
- n Switching noise level:
 - ≤ 60 dBA (at 1 metre).

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As standards, specifications and designs develop from time to time, always ask for confirmation of the information given in this publication.
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