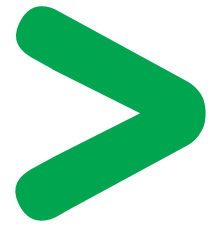


# Multi 9

## Impulse relays



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

- > 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:
  - 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.

### Advantages

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

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



TL +ETL



TLc



TLm



TLs

### The range

Impulse relays



Impulse relays with built-in auxiliary function

Impulse relay auxiliaries



# Choice table

## Switches

Type	Width in mod. of 9 mm	Rating	Voltage		Coil	Cat. no.
			V AC	V DC		
TL 16 A 1P	2	16	230/240	110	15510	
			130	48	15511	
			48	24	15512	
			24	12	15513	
			12	6	15514	
2P	2	16	230/240	110	15520	
			130	48	15521	
			48	24	15522	
			24	12	15523	
			12	6	15524	
3P	4	16	230/240	110	15510+15530	
			130	48	15511+15531	
			48	24	15512+15532	
			24	12	15513+15533	
			12	6	15514+15534	
4P	4	16	230/240	110	15520+15530	
			130	48	15521+15531	
			48	24	15522+15532	
			24	12	15523+15533	
			12	6	15524+15534	
TLI 16 A 1P	2	16	230/240	110	15500	
			48	24	15502	
ON/OFF			24	12	15503	
ETL 16 A 2P	2	16	230/240	110	15530	
			130	48	15531	
			48	24	15532	
			24	12	15533	
			12	6	15534	
TL 32 A1P	2	32	230/240	110	15515	
2P	4				15515+15505	
3P	6				15515+2x15505	
4P	8				15515+3x15505	
ETL 32 A1P	2	32	230/240	110	15505	
TLc	2	16	230/240	110	15518	
			48		15526	
			24		15525	
TLm	2	16	230/240	110	15516	
TLs	2	16	230/240	110	15517	

# Environment

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

Owing to changes in standards and equipment, the characteristics given in the text and images in this document are not binding until they have been confirmed with us.

# Implementation

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

# Technical data

## Electrical data

- > Specific to 16 A TL, TLI, ETL.
- > Power circuit:
  - rating: In 16 A (cos φ = 0.6).
  - voltage:
    - single-pole and two-pole: 250 V - 50/60 Hz,
    - three-pole, four-pole (TL+ETL): 415 V - 50/60 Hz.
- > Control circuit:
  - supply voltage:
    - 12 to 240 V AC - 50 Hz (+6%, -15%)/60 Hz (±6%),
    - 6 to 110 V DC (+6%, -10%).
- > Inrush power:
  - single-pole and two-pole: 19 VA,
  - three-pole and four-pole: 38 VA.
- > Electrical endurance:
  - 200 000 AC22 cycles (cos φ = 0.6),
  - 400 000 AC21 cycles (cos φ = 1).

## Specific to TLc, TLm, TLs

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

## Mechanical data

- > Connection: 0.5 to 6 mm<sup>2</sup> cables.
- > Mechanical indication on front panel via operating lever position.
- > Direct control on front face:
  - power: by ON-OFF lever,
  - coil isolation via switch.
- > Overall dimensions: h = 81; d = 64; l = 18 mm.

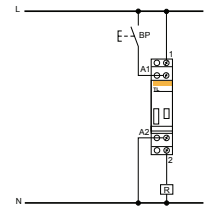
## Electrical data for the 32 A TL

- > Power circuit:
  - rating: In 32 A (cos φ = 0.6),
  - voltage: single-pole: 250 V - 50/60 Hz,
  - two-pole, three-pole, four-pole: 415 V - 50/60 Hz.
- > Control circuit:
  - supply voltage:
    - 230/240 V AC - 50 Hz (+6%, -15%)/60 Hz (± 6%),
  - inrush power:
    - single-pole: 19 VA, two-pole: 38 VA
    - three-pole: 57 VA, four-pole: 76 VA.
- > Electrical endurance:
  - single-pole: 200 000 cycles,
  - two, three and four-pole: 100 000 cycles.

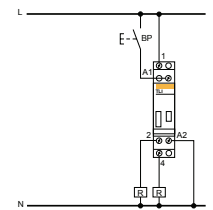
## Mechanical data for the 32 A TL

- > Connection:
  - power circuit: cables up to 10 mm<sup>2</sup>,
  - control circuit: 0.5 to 6 mm<sup>2</sup> cables.
- > Same overall dimensions as the 16 A TL.

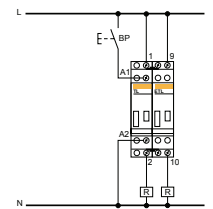
# Schematic diagrams



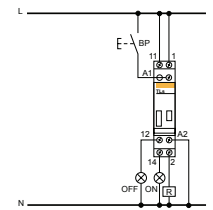
TL



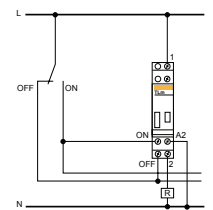
TLI



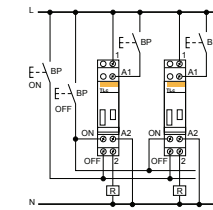
TL + ETL



TLs



TLm



TLc