Page 16-2

MODULAR TIME RELAYS

- Suitable for consumer switchboards
- Selectable time ranges on front: 0.1 second - 100 days
- LED indication
- Mounting on 35mm DIN rail
- Screw terminals.

Page 16-5

PLUG-IN AND FLUSH-MOUNT TIME RELAYS, 48X48MM

- Flush and internal panel mounting
- Time ranges: 0.05 seconds - 10 hours
- LED indication
- 8 and 11-pin sockets for panel mounting.

- Modular version for consumer switchboards
- DIN mount version
- Plug-in or flush-mount version
- Vast range of functions and time scales
- Reliable time and repeat accuracy.

SEC. - PAGE

Modular version

On delay. Mutiscale. Multivoltage ..... 16 - 2
Multifunction. Multiscale. Multivoltage. 1 changeover contact ..... 16 - 2
Multifunction. Multiscale. Multivoltage. 1 changeover contact and 1 normally open contact ..... 16 - 2
Recycle, independent timings. Multiscale. Multivoltage ..... 16 - 3
Off delay. Multiscale. Multivoltage ..... 16 - 3
For starting. Multiscale. Multivoltage ..... 16 - 4
For staircase ..... 16 - 4

Plug-in and flush-mount version, 48x48mm

On delay. Single scale. Single voltage ..... 16 - 5
On delay. Multiscale. Multivoltage ..... 16 - 5
On delay. Multiscale. Single voltage ..... 16 - 5
Multifunction. Multiscale. Multivoltage ..... 16 - 5
Accessories ..... 16 - 5

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Wiring diagrams ..... 16 - 7
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On delay time relay. Multiscale. Multivoltage

TM P

Order code	Time of scale range	Rated auxiliary supply voltage	Qty per pkg	Wt
		[V]	n°	[kg]
TM P	0.1-1s 1-10s 6-60s 1-10min 6min-1h 1-10h 0.1-1 day 1-10 days ON only OFF only	24-48VDC 24-240VAC	1	0.048

General characteristics
- Electronic time relay, multiscale, multivoltage. On delay, delay on make, with start at relay energising
- 1 relay output with 1 changeover contact (SPDT)
- Delay time adjustable on front by rotary switch: 10-100%
- Green LED indicator for power on
- Red LED indicator for relay state; flashing for delay and steady when relay energised
- Modular DIN 43880 housing, 1 module
- IEC degree of protection: IP40 on front (only when mounted in housing or electric board with IP40); IP20 on terminals.

Certifications and compliance
Certifications obtained: GOST; UL Listed, for USA and Canada (File E93601) as Auxiliary Devices - Tmers. Compliant with standards: IEC/EN 61812-1, UL508, CSA C22.2 n° 14.

Operational diagram
See page 16-7.

Multifunction time relay. Multiscale. Multivoltage. 1 relay output

TM M1

Order code	Time of scale range	Rated auxiliary supply voltage	Qty per pkg	Wt
		[V]	n°	[kg]
TM M1	0.1-1s 1-10s 6-60s 1-10min 6min-1h 1-10h 0.1-1 day 1-10 days ON only OFF only	12-240V AC/DC	1	0.086

General characteristics
- Electronic time relay, multifunction, multiscale, multivoltage
- Enabling input
- 1 relay output with 1 changeover contact (SPDT)
- Selectable functions: (a) On delay; delay on make with start at relay energising. (b) Pulse on relay energising with start when energised. (c) Flasher starting with OFF interval. Equal timing recycle. (d) Flasher starting with ON interval. Equal timing recycle. (e) Off delay; relay energising at external contact closing with start on break. (f) Pulse on relay energising with start on external contact closing. (g) Pulse on relay energising with start on external contact opening. (h) On-off delay. Delay on make, with start at external contact closing, and delay at break, with start at external contact opening. (i) Internal ON/OFF trigger with relay contact closing or operating at each closing of an external contact. (j) Pulse generator, unequal timing recycle; starting with OFF pulse time and 0.5s ON pulse.
- Delay time adjustable on front by rotary switch: 10-100%
- Green LED indicator for power on
- Red LED indicator for relay state; flashing for delay and steady when relay energised
- Modular DIN 43880 housing, 1 module suitable for fixing on 35mm DIN rail (IEC/EN 60715)
- IEC degree of protection: IP40 on front (only when mounted in housing or electric board with IP40); IP20 on terminals.

Certifications and compliance
Certifications obtained: GOST; UL Listed, for USA and Canada (File E93601) as Auxiliary Devices - Tmers. Compliant with standards: IEC/EN 61812-1, UL508, CSA C22.2 n° 14.

Operational diagram
See page 16-7.

Multifunction time relay. Multiscale. Multivoltage. 2 relay outputs.

TM M2

Order code	Time of scale range	Rated auxiliary supply voltage	Qty per pkg	Wt
		[V]	n°	[kg]
TM M2	0.1-1s 1-10s 6-60s 1-10min 6min-1h 1-10h 0.1-1 day 1-10 days ON only OFF only	12-240V AC/DC	1	0.094

General characteristics
- Electronic time relay, multifunction, multiscale, multivoltage
- Enabling input
- 2 relay outputs, one with 1 delayed changeover (C/O-SPDT) contact and the other with 1 normally open (N/O-SPST)) contact, programmable as instantaneous or delayed
- Selectable functions: (a) On delay; delay on make with start at relay energising. (b) Pulse on relay energising with start when energised. (c) Flasher starting with OFF interval. Equal timing recycle. (d) Flasher starting with ON interval. Equal timing recycle. (e) Off delay; relay energising at external contact closing with start on break. (f) Pulse on relay energising with start on external contact closing. (g) Pulse on relay energising with start on external contact opening. (h) On-off delay. Delay on make, with start at external contact closing, and delay at break, with start at external contact opening. (i) Internal ON/OFF trigger with relay contact closing or operating at each closing of an external contact. (j) Pulse generator, unequal timing recycle; starting with OFF pulse time and 0.5s ON pulse.
- Delay time adjustable on front by rotary switch: 10-100%
- Green LED indicator for power on
- Red LED indicator for relay state; flashing for delay and steady when relay energised
- Modular DIN 43880 housing, 1 module suitable for fixing on 35mm DIN rail (IEC/EN 60715)
- IEC degree of protection: IP40 on front (only when mounted in housing or electric board with IP40); IP20 on terminals.

Certifications and compliance
Certifications obtained: GOST; UL Listed, for USA and Canada (File E93601) as Auxiliary Devices - Tmers. Compliant with standards: IEC/EN 61812-1, UL508, CSA C22.2 n° 14.

Operational diagram
See page 16-8.

Recycle time relay, independent timings. Multiscale. Multivoltage

TM PL

Order code	Time of scale range	Rated auxiliary supply voltage	Qty per pkg	Wt
		[V]	n°	[kg]
TM PL	0.1-1s 1-10s 6-60s 1-10min 6min-1h 1h-10h 0.1-1 day 1-10 days 3-30 days 10-100 days	12-240V AC/DC	1	0.082

General characteristics
- Programmable asymmetrical recycle time relay, multiscale, multivoltage. Flasher with independent timing for ON and OFF intervals
- Enabling input of ON or OFF interval
- 1 relay output with 1 changeover contact (SPDT)
- Delay time for OFF (pause) interval, adjustable on front by rotary switch: 10-100%
- Delay time for ON (work) interval, adjustable on front by rotary switch: 10-100%
- Green LED indicator for power on
- Red LED indicator for relay state; flashing for delay
- Modular DIN 43880 housing, 1 module; suitable for fixing on 35mm DIN rail (IEC/EN 60715)
- IEC degree of protection: IP40 on front (only when mounted in housing or electric board with IP40); IP20 on terminals.

Certifications and compliance
Certifications obtained: GOST; UL Listed, for USA and Canada (File E93601) as Auxiliary Devices - Tmers.
Compliant with standards: IEC/EN 61812-1, UL508, CSA C22.2 n° 14.

Operational diagram
See page 16-9.

Off delay time relay. Multiscale. Multivoltage

TM D

Order code	Time of scale range	Rated auxiliary supply voltage	Qty per pkg	Wt
		[V]	n°	[kg]
TM D	0.06-0.6s 0.6-6s 6-60s 18-180s	24-240V AC/DC	1	0.080

General characteristics
- Electronic time relay, multiscale, multivoltage. True off delay; delay on break with start at relay de-energising
- 1 relay output with 1 changeover contact
- Delay time adjustable on front by rotary switch: 10-100%
- Green LED indicator for power on
- Modular DIN 43880 housing, 1 module; suitable for fixing on 35mm DIN rail (IEC/EN 60715)
- IEC degree of protection: IP40 on front (only when mounted in housing or electric board with IP40); IP20 on terminals.

Certifications and compliance
Certifications obtained: GOST; UL Listed, for USA and Canada (File E93601) as Auxiliary Devices - Tmers.
Compliant with standards: IEC/EN 61812-1, UL508, CSA C22.2 n° 14.

Operational diagram
See page 16-9.

Time relay for starting. Multiscale. Multivoltage

TM ST

Order code	Time of scale range	Rated auxiliary supply voltage	Qty per pkg	Wt
		[V]	n°	[kg]
TM ST	0.1-1s 1-10s 6-60s 1-10min	24-48VDC 24-240VAC	1	0.090
TM ST A440	0.1-1s 1-10s 6-60s 1-10min	380-440VAC	1	0.090

General characteristics
- Electronic time relay, multiscale, multivoltage for starting (star-delta, impedance, autotransformer, etc) of induction motors (squirrel cage), 2 separate timings
- 1 relay output with 2 normally open (N/O-SPST) contacts with common pole
- Delay time adjustable on front by rotary switch: 10-100% for star connection
- Starting and transition (20-300ms time scale - from star to delta), time adjustable on front by rotary switch
- Green LED indicator for power on
- Red LED indicator for relay state; flashing during delay and steady at delay lapsing
- Modular DIN 43880 housing, 1 module; suitable for fixing on 35mm DIN rail (IEC/EN 60715)
- IEC degree of protection: IP40 on front (only when mounted in housing or electric board with IP40); IP20 on terminals.

Certifications and compliance
Certifications obtained: GOST; UL Listed, for USA and Canada (File E93601) as Auxiliary Devices - Tmers.
Compliant with standards: IEC/EN 61812-1, UL508, CSA C22.2 n° 14.

Operational diagram
See page 16-9.

Staircase time relay

TM LS

Order code	Time of scale range	Rated auxiliary supply voltage	Qty per pkg	Wt
		[V]	n°	[kg]
TM LS	0.5-20min	220-240VAC	1	0.080

General characteristics
- Electronic time relay single scale and voltage for staircase illumination
- 1 relay output with 1 powered normally open (N/O-SPST) contact
- Delay time adjustable on front by rotary switch
- Suitable for 3 or 4-wire systems
- 1 slide switch for timed or constant lighting operation
- Function for one hour lighting and fast switch off
- Green LED indicator for power on
- Connection with up to 50 light-up switches maximum; ≤ 1mA each
- Modular DIN 43880 housing, 1 module suitable for fixing on 35mm DIN rail (IEC/EN 60715)
- IEC degree of protection: IP40 on front (only when mounted in housing or electric board with IP40); IP20 on terminals.

Certifications and compliance
Certifications obtained: GOST; UL Listed, for USA and Canada (File E93601) as Auxiliary Devices - Tmers.
Compliant with standards: IEC/EN 61812-1, UL508, CSA C22.2 n° 14.

Operational diagram
See page 16-9.

48x48mm/1.9x1.9in time relay

31 L48T...

31 L48TP...

31 L48TPB...

31 L48M...

Order code	Time scale range	Rated auxiliary supply voltage	Qty per pkg	Wt
		[V]	n°	[kg]
Time relay on delay. Single scale and single voltage.				
31 L48T 3S 24	0.1-3s	24VAC/DC	1	0.115
31 L48T 6S 24	0.1-6s		1	0.115
31 L48T 30S 24	0.5-30s		1	0.115
31 L48T 60S 24	0.5-60s		1	0.115
31 L48T 3M 24	1s-3min		1	0.115
31 L48T 6M 24	3s-6min		1	0.115
31 L48T 30M 24	30s-30min		1	0.115
31 L48T 60M 24	30s-60min		1	0.115
31 L48T 3H 24	3min-3h		1	0.115
31 L48T 3S 240	0.1-3s	220-240VAC	1	0.120
31 L48T 6S 240	0.1-6s		1	0.120
31 L48T 30S 240	0.5-30s		1	0.120
31 L48T 60S 240	0.5-60s		1	0.120
31 L48T 3M 240	1s-3min		1	0.120
31 L48T 6M 240	3s-6min		1	0.120
31 L48T 30M 240	30s-30min		1	0.120
31 L48T 60M 240	30s-60min		1	0.120
31 L48T 3H 240	3min-3h		1	0.120
Time relay on delay. Multiscale and multivoltage.				
31 L48TP S 240	0.3-780s	24VAC/DC 110VAC 220-240VAC	1	0.124
31 L48TP M 240	18s-780min		1	0.124
Time relay on delay. Multiscale and single voltage.				
31 L48TPB M24	0.05s-10min	24VAC/DC	1	0.124
31 L48TPB M240		220-240VAC	1	0.124
Time relay, multifunction, multivoltage and multiscale.				
31 L48M M 240	0.05s-10min	24-240V AC/DC	1	0.135
31 L48M H 240	0.05min-10h		1	0.135

Accessories for 48x48mm time relay

31 S8

31 S11

Order code	Description	Qty per pkg	Wt
		n°	[kg]
31 S8	8-pin socket for screw fixing or on 35mm DIN rail (IEC/EN 60715). Screw terminals	10	0.061
31 L48 P8	8-pin loose socket. Screw terminals	10	0.040
31 S11	11-pin socket for screw fixing or on 35mm DIN rail (IEC/EN 60715). Screw terminals	10	0.064
31 L48 P11	11-pin loose socket. Screw terminals	10	0.048
31 L48AP	Flush mount bracket	10	0.012

N.B. Max. conductor section for sockets: 2x2.5mm²/2x14AWG.
Tightening torque: 0.8Nm/7.1lbin.

General characteristics

TIME RELAY L48T
- Electronic time relay, single scale, single voltage. On delay, delay on make with start at relay energising
- 1 relay output with 1 changeover contact (SPDT)
- Delay time adjustable on front by rotary knob
- LED indicators for power on and relay state
- Plug-in housing with 8-pin socket, 31 S8 or 31 L48 P8
- Flush mount bracket 31 L48AP available
- IEC protection degree: IP40 on front and IP20 at terminals.

TIME RELAY L48TP
- Electronic time relay, multiscale, multivoltage. On delay, delay on make with start at relay energising
- 1 relay output with 1 changeover contact (SPDT)
- Delay time adjustable on front by rotary knob
- Time range selected by dip switches:
  L48TP S: 0.3-3s; 1.2-12s; 10-100s; 7.8-780s
  L48 TP M: 18s-3min; 72s-12min; 10-100min; 78-780min
- LED indicators for power on and relay state
- Plug-in housing with 8-pin socket, 31 S8 or 31 L48 P8
- Flush mount bracket 31 L48AP available
- IEC protection degree: IP40 on front and IP20 at terminals.

Time range setting

	A B 1 0	A B 1 0	A B 1 0	A B 1 0
L48TP S	**0.3-3s**	**1.2-12s**	**10-100s**	**7.8-780s**
L48TP M	**18s-3min**	**72s-12min**	**10-100min**	**78-780min**

TIME RELAY T48TPB
- Electronic time relay, multiscale, single voltage, multifunction
- 2 relay outputs, each with 1 changeover contact (SPDT), configurable either delay on make or instantaneous
- Delay time adjustable on front by rotary knob
- Time range selected by dip switches: 0.05-1s; 0.1-10s; 0.6s-1min; 6s-10min
- LED indicators for power on and relay state
- Plug-in housing with 8-pin socket, 31 S8 or 31 L48 P8
- Flush mount bracket 31 L48AP available
- IEC protection degree: IP40 on front and IP20 at terminals.

Time range setting

	A B 1 0	A B 1 0	A B 1 0	A B 1 0
L48TPB	**0.05-1s**	**0.1-10s**	**0.6s-1min**	**6s-10min**

TIME RELAY L48M
- Electronic time relay, multiscale, multivoltage, multifunction
- Selectable functions: On delay, delay on make with start at relay energising. On delay, delay on break with start at relay de-energising. Flasher, starting with OFF interval. Flasher, starting with ON interval. Time relay resetting is possible on closing of external contact (R) connected to terminals 7-6. Possible time relay stopping storing elapsed time on closing of external contact (M) connected to terminals 7-5 and then restarting time on its opening. See diagrams on page 16-11
- 2 relay outputs, each with 1 changeover contact; both delayed
- Delay time adjustable on front by rotary knob SPDT,
- Time range selected by dip switches:
  L48M M: 0.05-1s; 0.1-10s; 0.6s-1min; 6s-10min
  L48M H: 0.05-1min; 0.1-10min; 0.6min-1h; 1min-10h
- LED indicators for power on and relay state
- Plug-in housing with 11-pin socket, 31 S11 or 31 L48 P11
- Flush mount bracket 31 L48AP available
- IEC protection degree: IP40 on front and IP20 at terminals.

Time range setting

	A B 1 0	A B 1 0	A B 1 0	A B 1 0
L48M M	**0.05-1s**	**0.1-10s**	**0.6s-1min**	**6s-10min**
L48M H	**0.05-1min**	**0.1-10min**	**0.6min-1h**	**1min-10h**

Certifications and compliance

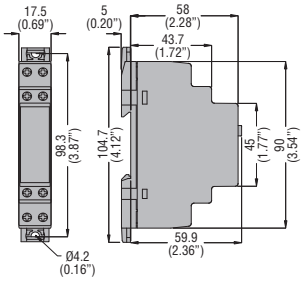
Certifications obtained: GOST; UL Recognized, for USA and Canada (File E172189) as Industrial Switches - Timer.
Compliant with standards: IEC/EN 61812-1, UL508, CSA C22.2 n° 14.

Operational diagram

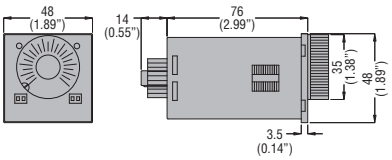
See page 16-10 and 16-11.

TIME RELAYS

TM...



L48...



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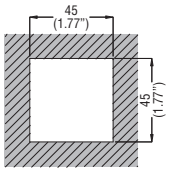
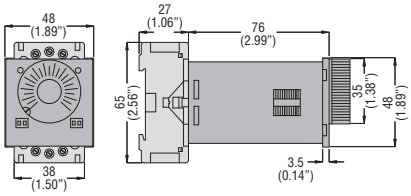


L48... with S8 - S11 sockets



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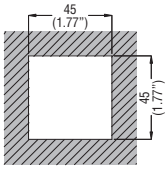
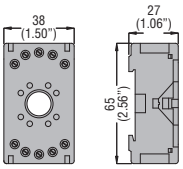
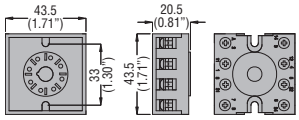


Accessories - Plug-in sockets

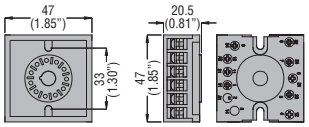
S8 - S11



L48 P8

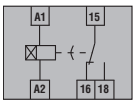


L48 P11

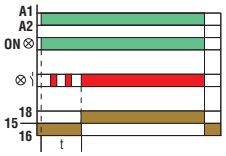


16

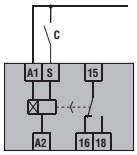
TM P



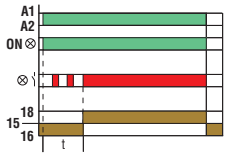
On delay. Delay on make, with start at relay energising.



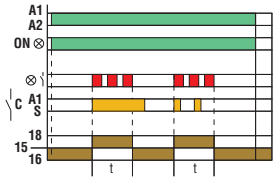
TM M1



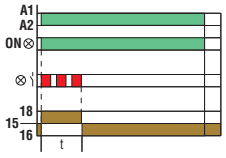
On delay. Delay on make, with start at relay energising



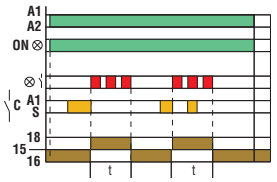
Pulse on relay energising with start at external contact closing



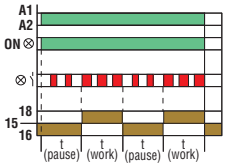
Pulse on relay energising with start on energising



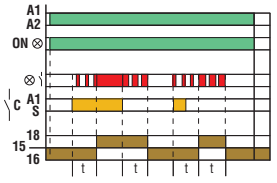
Pulse on relay energising with start at external contact opening



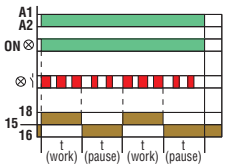
Flasher, starting with OFF (pause) interval. Equal timing recycle.



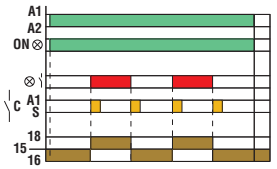
On-Off delay. Delay on make, with start at external contact closing, and delay at break, with start at external contact opening.



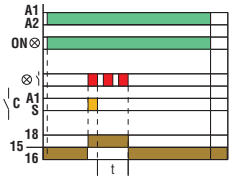
Flasher, starting with ON (work) interval. Equal timing recycle.



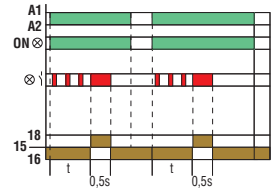
Internal ON/OFF trigger. Relay contact either closes or opens at each external contact closing.



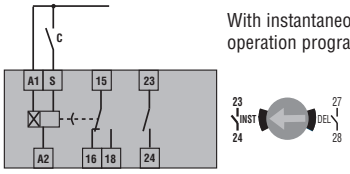
Off delay. Relay energising at external contact closing with start on break



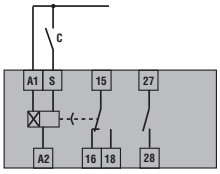
Pulse generator. Unequal timing recycle, starting with OFF pulse time and 0.5sec ON time.



TM M2

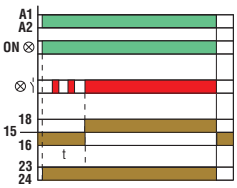


With instantaneous operation programmed

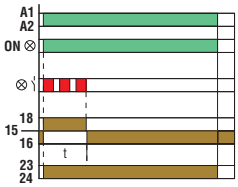


With delayed operation programmed

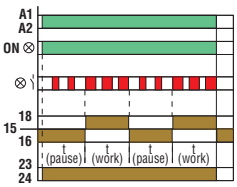
On delay. Delay on make, with start at relay energising



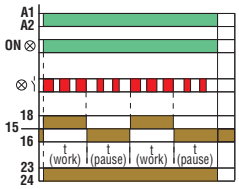
Pulse on relay energising with start on energising



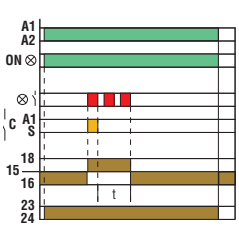
Flasher, starting with OFF (pause) interval. Equal timing recycle



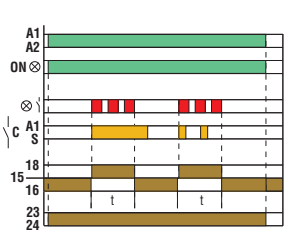
Flasher, starting with ON (work) interval. Equal timing recycle



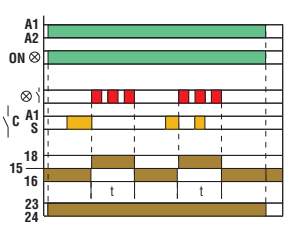
Off delay. Relay energising at external contact closing with start on break



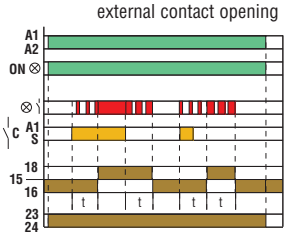
Pulse on relay energising with start on external contact closing



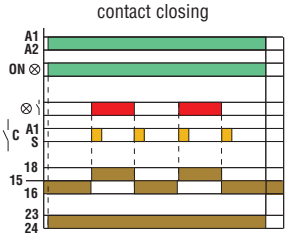
Pulse on relay energising with start on external contact opening



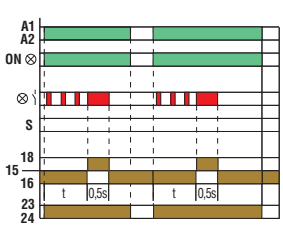
On-off delay. Delay make, with start at external contact closing and delay at break, with start at external contact opening



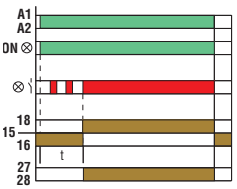
Internal trigger ON/OFF. Relay contact either closes or opens at each external contact closing



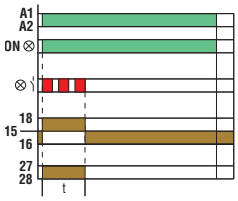
Pulse generator. Unequal timing recycle, starting with ON pulse time



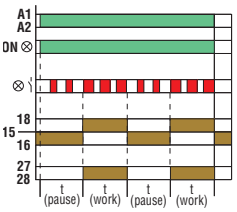
On delay. Delay on make, with start at relay energising



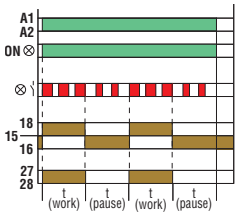
Pulse on relay energising with start on energising



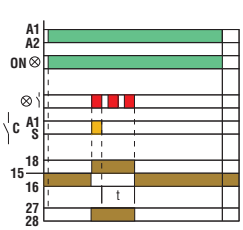
Flasher, starting with OFF (pause) interval. Equal timing recycle



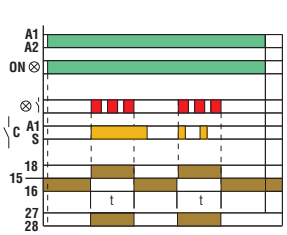
Flasher, starting with ON (work) interval. Equal timing recycle



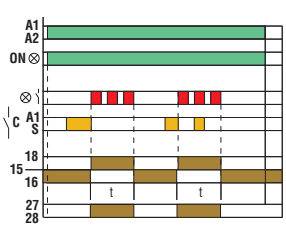
Off delay. Relay energising at external contact closing with start on break



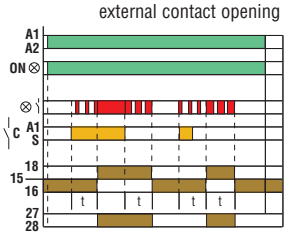
Pulse on relay energising with start on external contact closing



Pulse on relay energising with start on external contact opening

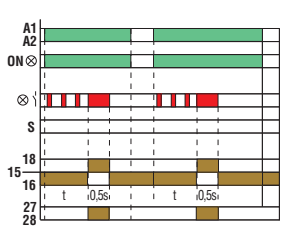


On-off delay. Delay make, with start at external contact closing and delay at break, with start at external contact opening

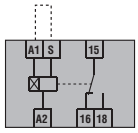


Internal trigger ON/OFF. Relay contact either closes or opens at each external contact closing

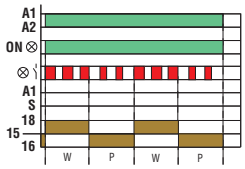
Pulse generator. Unequal timing recycle, starting with ON pulse time



TM PL

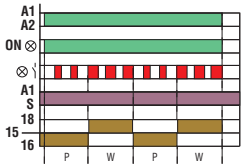


Flasher, starting with ON interval.
Equal timing recycle, ON first



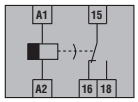
W = Work (ON)
P = Pause (OFF)

Flasher, starting with OFF interval.
Equal timing recycle, OFF first

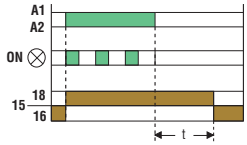


W = Work (ON)
P = Pause (OFF)

TM D

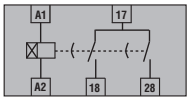


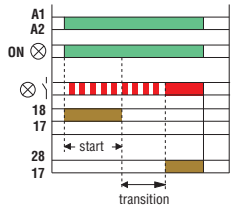
True off delay. Delay on break, starting at relay de-energising

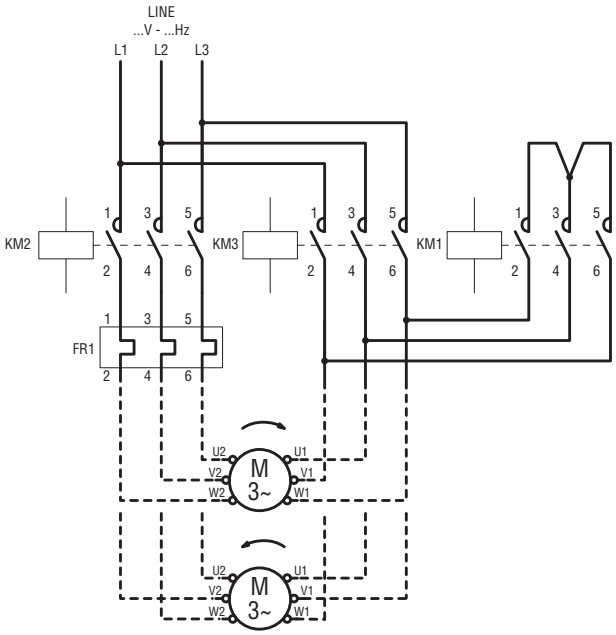


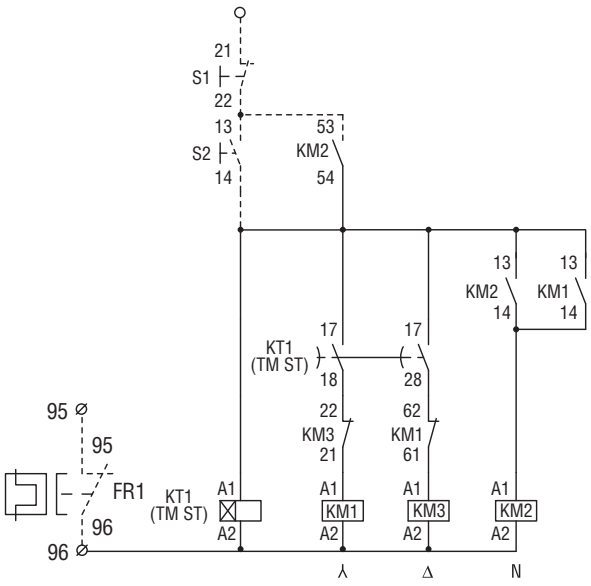
TM ST

For starting





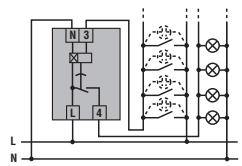




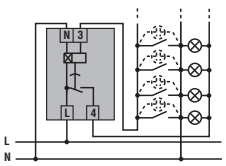
TM LS

Staircase lighting

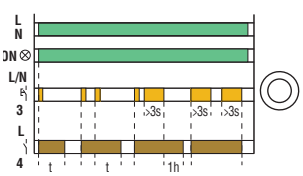
4-wire connection



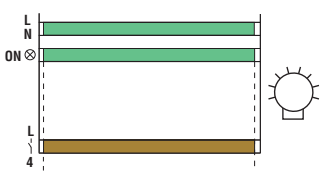
3-wire connection



Timed lighting

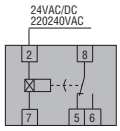


Constant lighting

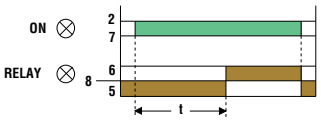


16

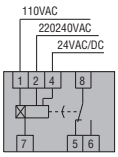
L48T...



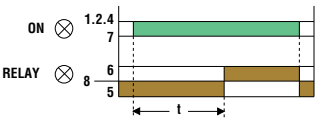
On delay



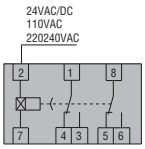
L48TP...



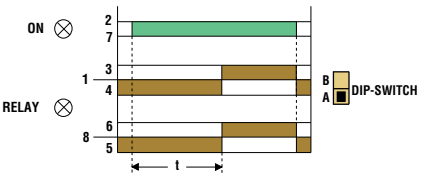
On delay

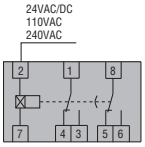


L48TPB...

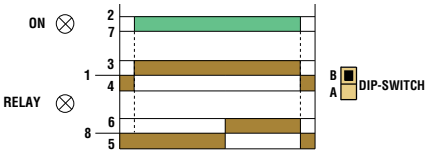


On delay

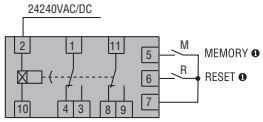




On delay with one instantaneous c/o contact and one late-break c/o contact

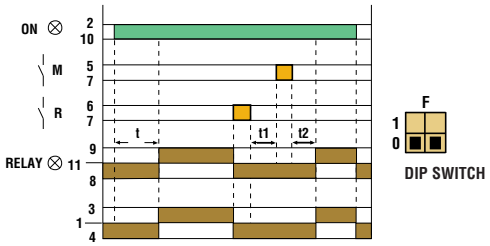


L48M...

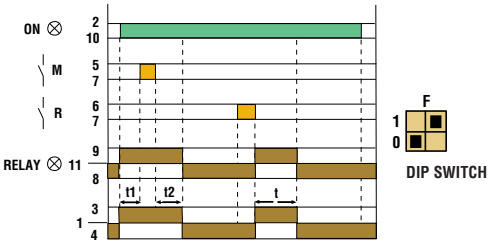


T (preset time) = T1+T2
❶ Contacts "M" and "R" are to be volt free (dry).

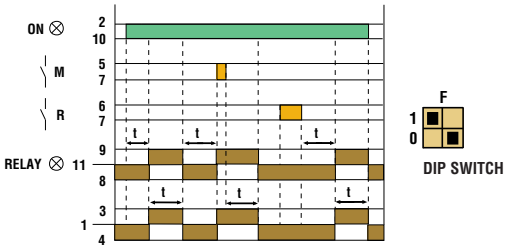
On delay



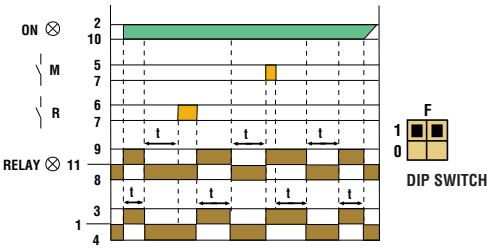
Pulse on relay energising with start on energising



Flasher starting with OFF



Flasher starting with ON



TYPE	TM P	TM M1	TM M2	TM PL	TM D	TM ST	TM LS
DESCRIPTION							
	On delay	Programmable multifunction	Programmable multifunction timing	Asymmetrical recycle	True off delay	For starting	Staircase illumination
	Multiscale	Multiscale	Multiscale	Multiscale	Multiscale	Multiscale	Single scale
	Multivoltage	Multivoltage	Multivoltage	Multivoltage	Multivoltage	Multivoltage	Single voltage
CONTROL CIRCUIT							
Rated auxiliary supply voltage Us	24-48VDC 24-240VAC	12-240VAC/DC			24-240VAC/DC	24-48VDC 24-240VAC / 380-440VAC	220-240VAC
Rated frequency	50/60Hz						
Operating voltage range	0.85-1.1 Us						
Power consumption (maximum)	1.2VA/0.8W max (24...48VAC/DC) 16VA/0.9W max (110...240VAC/DC)	0.6VA/0.3W max (12...48VAC/DC) 1.6VA/1.2W max (110...240VAC/DC)	1.1VA/0.8W max (12...48VAC/DC) 1.8VA/1.2W max (110...240VAC/DC)	0.6VA/0.3W max (12...48VAC/DC) 1.6VA/1.2W max (110...240VAC/DC)	0.1VA/0.1W (24...48VAC/DC) 1.1VA/0.8W (110...240VAC/DC)	1.2VA/0.8W max (24...48VAC/DC) 1.6VA/0.9W max (110...240VAC)	De-energised 5VA/0.5W max Energised 12VA/0.8W max
TIMING CIRCUIT							
Time setting range	Multiscale 0.1-1s 1-10s 6s-60s 1-10min 6min-1h 1-10h 0.1-1day 1-10days ON only OFF only			Multiscale 0.1-1s 1-10s 6s-60s 1-10min 6min-1h 1h-10h 0.1-1day 1-10days 3-30days 10-100days	Multiscale 0.06-0.6s 0.6-6s 6s-60s 18s-180s	Multiscale 0.1-1s 1-10s 6s-60s 1-10min	Multiscale 0.5-20min
Setting accuracy	< ±9%						
Repeat accuracy	< ±0.1%	< ±0.5%	< ±0.2%		< ±0.5%		
Influence of voltage variation	< ±0.01%						< ±0.5%
Average variation of set delays related to +20°C condition at –20°C	< ±0.2%						< ±0.25%
Minimum power time	—	—	—	—	≥ 200ms	—	—
Minimum ON time	—	25ms (no maximum limit)			—	—	≥60ms (no max lim.)
Resetting time during timing	≥ 100ms				—	≥ 100ms	≥ 100ms
Resetting time elapsed time	≥ 50ms				—	≥ 50ms	—
Immunity time for microbreakings	≤ 50ms	≤ 25ms	≤ 15ms	≤ 25ms	—	≤ 40ms❶	≤ 20ms
RELAY OUTPUTS							
Contact arrangement	1 delayed changeover		1 inst./delayed N/O + 1 delayed c/o	1 delayed changeover		2 delayed N/O	1 delayed N/O
Maximum switching voltage	250VAC						
IEC conventional free air thermal current (Ith)	8A				5A	8A	16A
UL/CSA and IEC/EN 60947-5-1 designation	B300						—
Electrical life (with rated load)	10^5 cycles						
Mechanical life	$30x10^6$ cycles						
Tightening torque maximum	0.8Nm (7lbin)						
Conductor section min-max	0.2-4mm² (24-12 AWG)						
INSULATION (input-output)							
IEC rated insulation voltage	250V						
IEC rated impulse withstand voltage	4kV						
IEC power frequency withstand voltage	2kV (50Hz - 60sec)						
AMBIENT CONDITIONS							
Operating temperature	–20...+60°C						
Storage temperature	–30...+80°C						
Housing material	Self-extinguishing polyamide						

Note: N/O = normally open / SPST
c/o = changeover / SPDT; inst. = instantaneous.

❶ Used at 24-48VDC or 24-240VAC; ≤30ms at 380-440VAC.

TYPE		L48T...	L48TP...	L48TPB...	L48M...
DESCRIPTION					
		On delay	On delay	On delay	Programmable multifunction
		Single scale	Multiscale	Multiscale	Multiscale
		Single voltage	Multivoltage	Single voltage	Multivoltage
CONTROL CIRCUIT					
Rated supply voltage Us		24VAC/DC❶	24VAC/DC❶	24VAC/DC❶	24-240VAC/DC❶
		220-240VAC❶	110VAC❶	220-240VAC❶	
			220-240VAC❶		
Rated frequency		50-60Hz			
Operating voltage range		0.85-1.1 Us			
Power consumption (maximum)		6VA			
Power dissipation (maximum)		❷			
TIMING CIRCUIT					
Time setting range		Single scale	Multiscale	Multiscale	Multiscale
		0.1-3s	0.3-3s	0.05-1s	0.05-1s
		0.1-6s	0.12-12s	0.10-10s	0.1-10s
		0.5-30s	10-100s	0.6s-1min	0.6s-1min
		0.5-60s	78-780s	6s-10min	6s-10min
		1s-3min	18s-3min		0.05-1min
		3s-6min	72s-12min		0.1-10min
		30s-30min	10-100min		0.6min-1h
		30s-60min	78-780min		1min-10h
		3min-3h			
Setting accuracy		±9%	±5%		
Repeat accuracy		≤±0.5%	±0.5%		
Influence of voltage variation		±0.3%	±0,.		
Average variation of set delays in related to 20°C condition	at –20°C	+2%	+2%		
	at +60°C	–3%	–3%		
Minimum ON time		—			
Resetting time	during operation	≥ 0.1s	≥ 0.1s	≥ 0.1s	≥ 0.1s
	elasped time	≥ 65ms	≥ 65ms	≥ 65ms	≥ 65ms
Immunity time for microbreakings		≤ 40ms	≤ 40ms	≤ 40ms	≤ 40ms
RELAY OUTPUTS					
Number of relays		1	1	2	2
Contact arrangement		1 delayed c/o	1 delayed c/o	2 del. or 1 inst. + 1 del. c/o	2 delayed c/o
Maximum switching voltage		250V			
IEC conventional free air thermal current (Ith)		5A			
UL/CSA and IEC/EN 60947-5-1 designation		B300			
Electrical life (with rated load)		10^5 cycles			
Mechanical life		$30x10^6$ cycles			
CONNECTIONS					
Tightening torque maximum		—			
Conductor section (min-max)		—			
INSULATION (input-output)					
IEC rated insulation voltage Ui		250V			
IEC power frequency withstand voltage Uimp		—			
IEC power frequency withstand voltage		2kV			
AMBIENT CONDITIONS					
Operating temperature		–10...+60°C			
Storage temperature		–30...+80°C			
Housing material		Self-extinguishing polyamide			

❶ Other voltages on request.
❷ Consult Customer Service for information; see contact details on inside front cover.
NOTE:
del. = delayed inst. = instantaneous c/o = changeover/SPDT