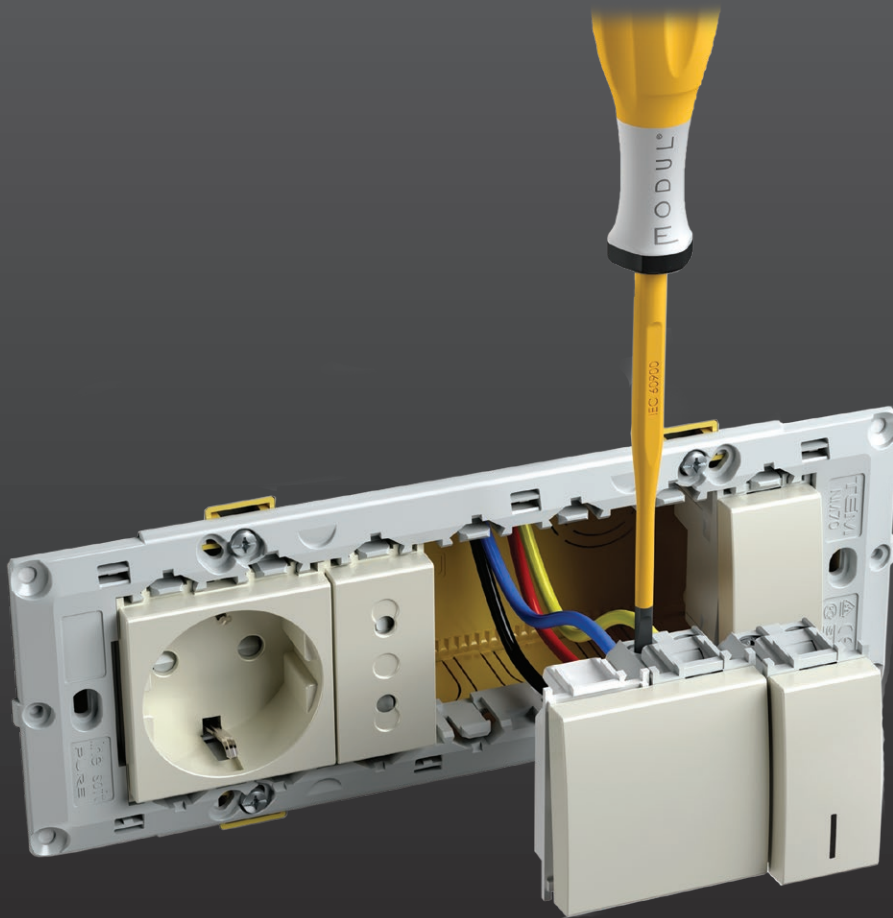


TEM

On|Off and everything in between

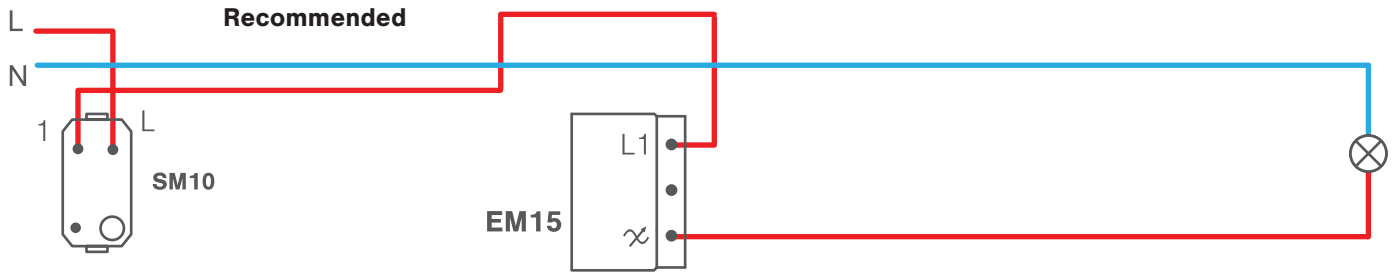
WIRING AND CIRCUIT DIAGRAMS

Best practice examples



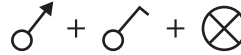
2026

Wiring diagram 1: dimmer EM15 + 1 way switch SM10



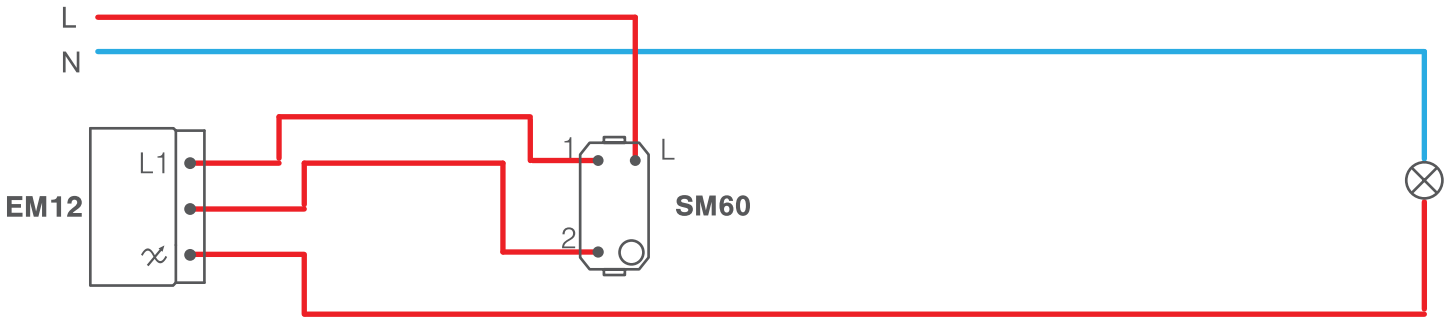
EM15 (40÷250W)

Symbol:



	1	2
Min.	40 W	40 W
Max.	250 W	250 W

Wiring diagram 2: dimmer EM12 + 2 way switch SM60



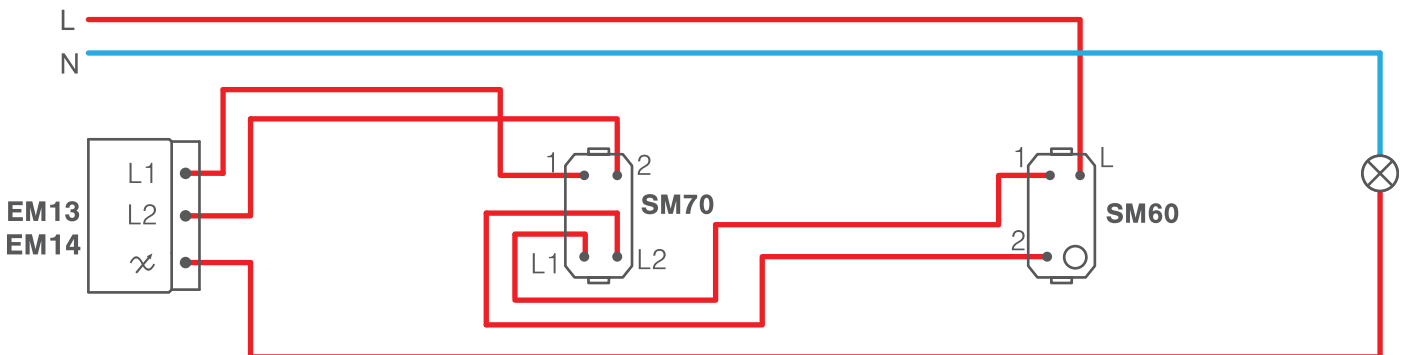
EM12 (40÷300W)

Symbol:



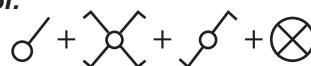
	1	2	5
Min.	40 W	40 W	40 W
Max.	300 W	300 W	300 W

Wiring diagram 3: dimmer EM13, EM14 + changeover switch SM70 + 2 way switch SM60



EM13 (0÷60W),
EM14 (0÷180W),

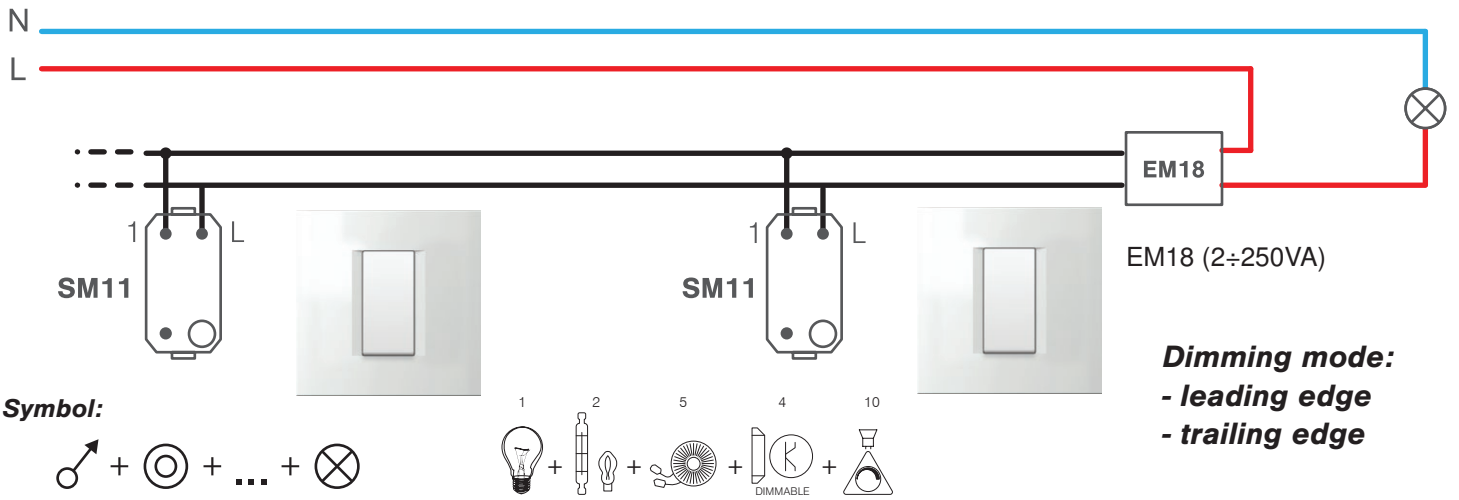
Symbol:



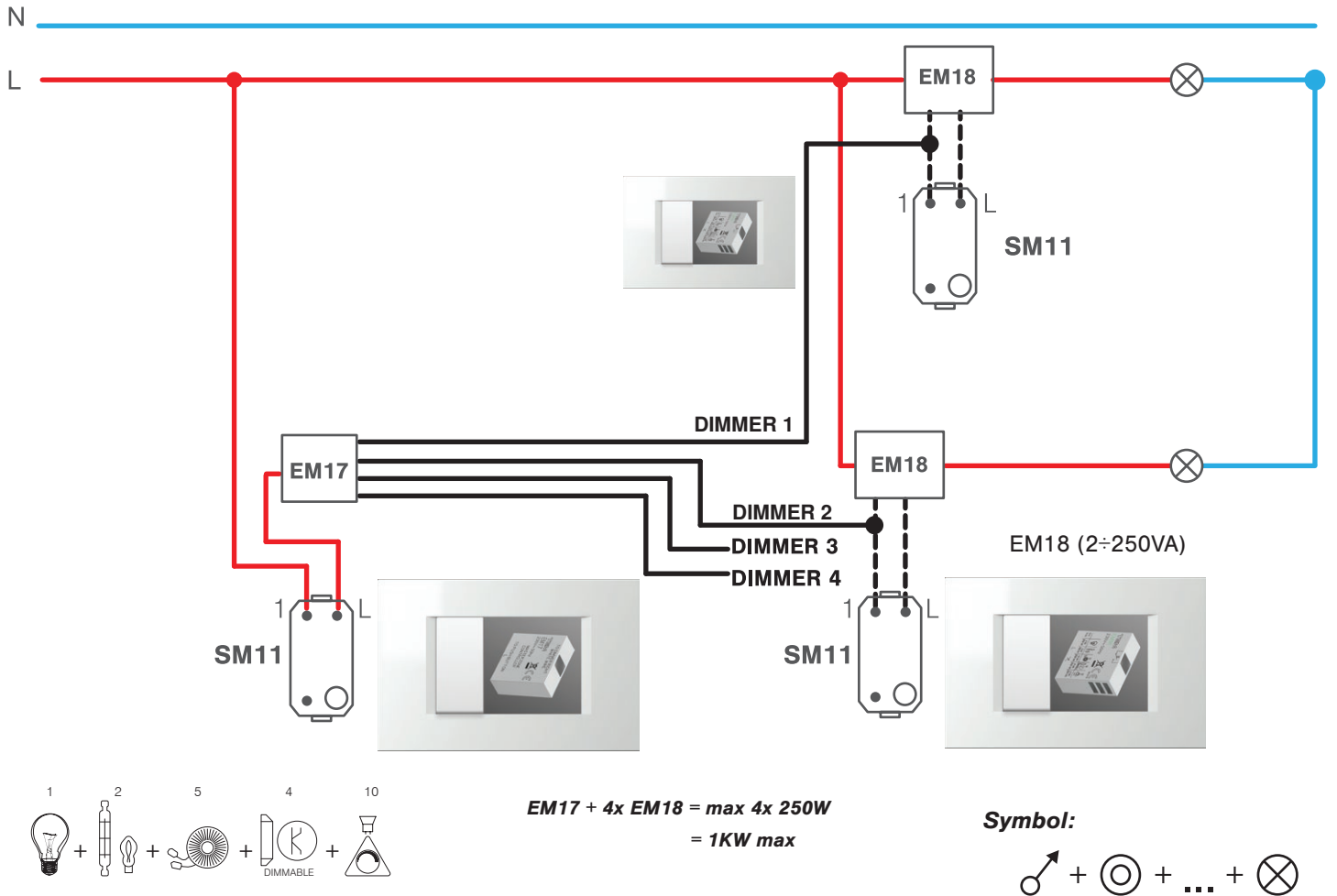
Dimming mode: leading edge

	1	2	5	10
Min.	40 W	40 W	40 W	40 W
Max.	300 W	300 W	300 W	300 W

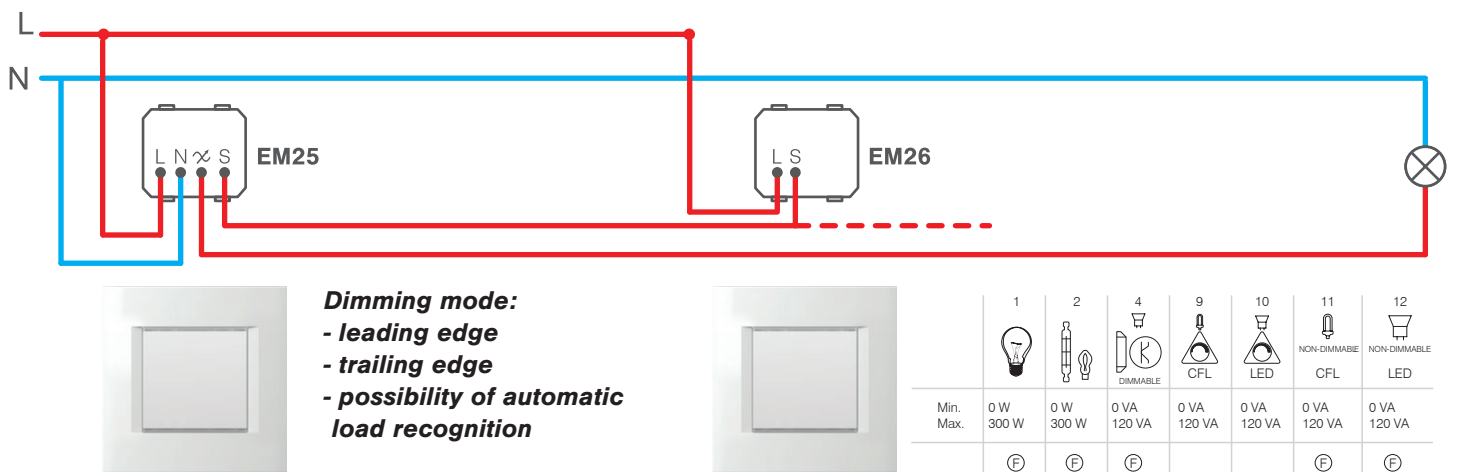
Wiring diagram 4: dimmer EM18 + push button SM11



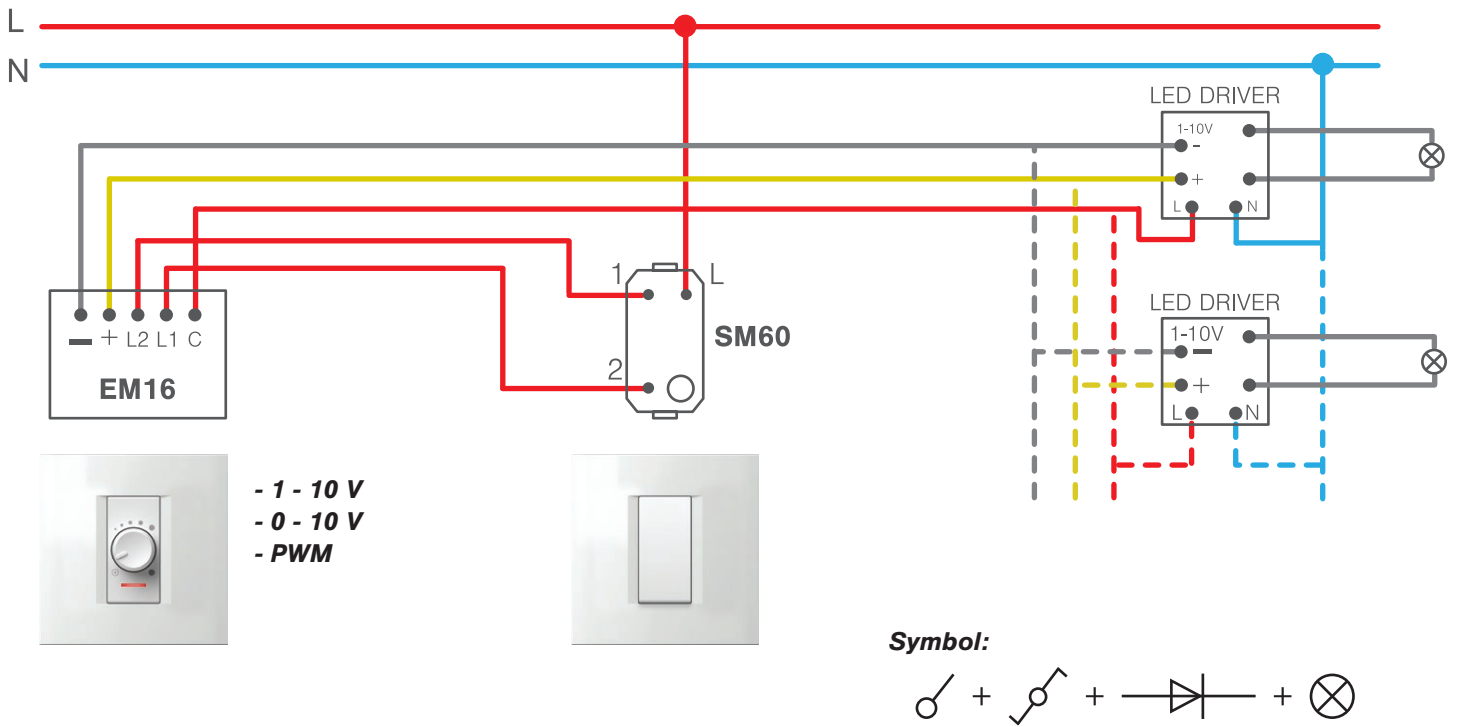
Wiring diagram 5: control modul EM17 + dimmer EM18



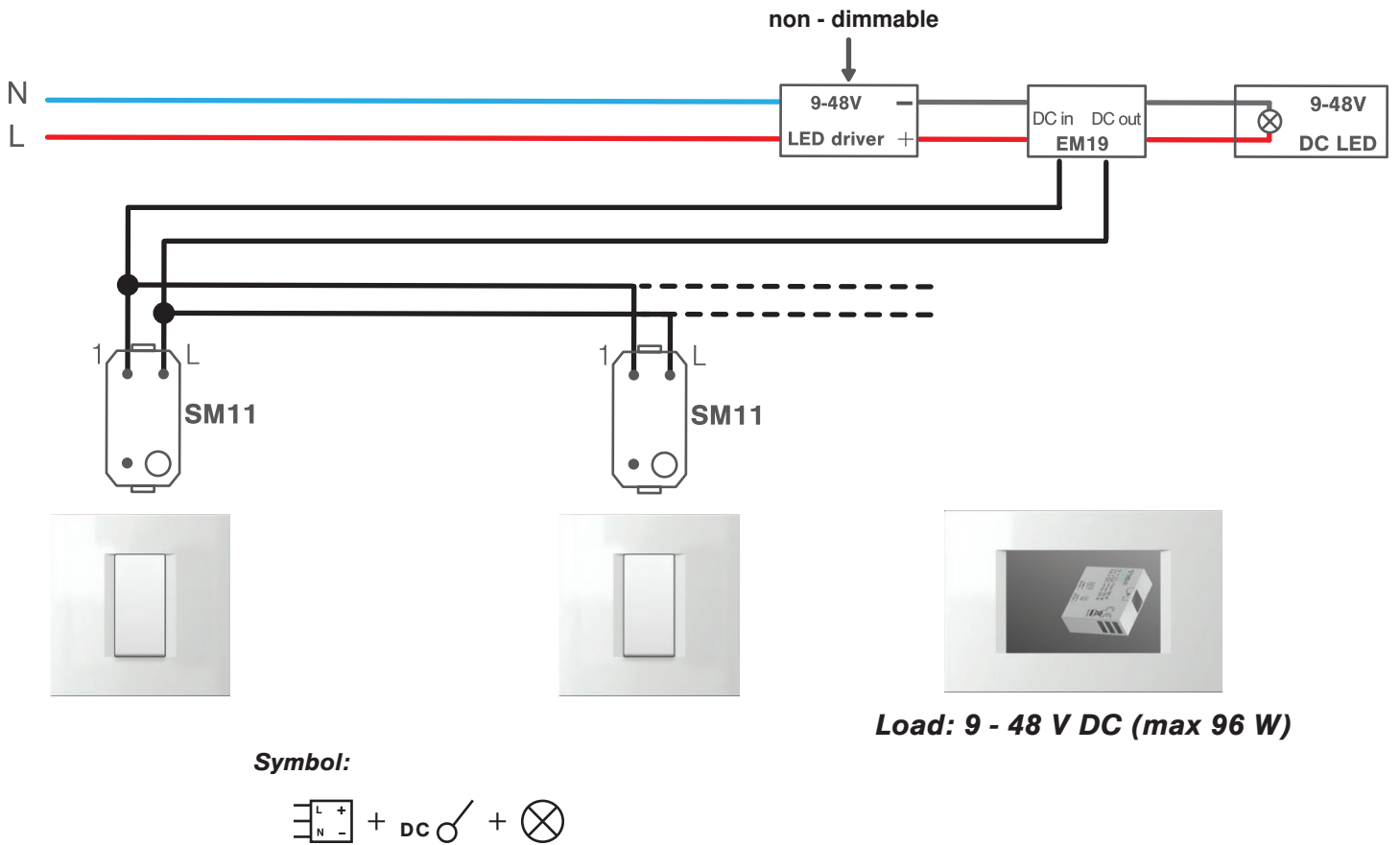
Wiring diagram 6: master dimmer EM25 + slave dimmer EM26



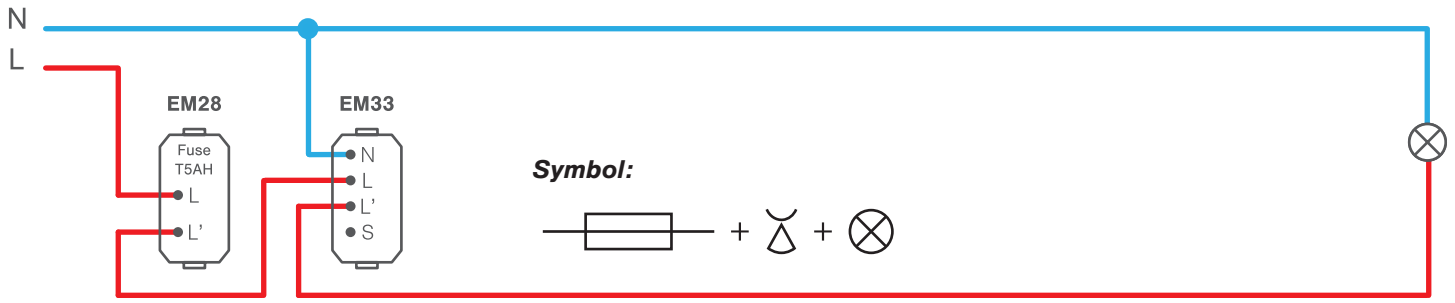
Wiring diagram 7: control modul EM16 + 2 way switch EM60 + LED driver (1-10V)



Wiring diagram 8: DC dimmer EM17 + push button SM11

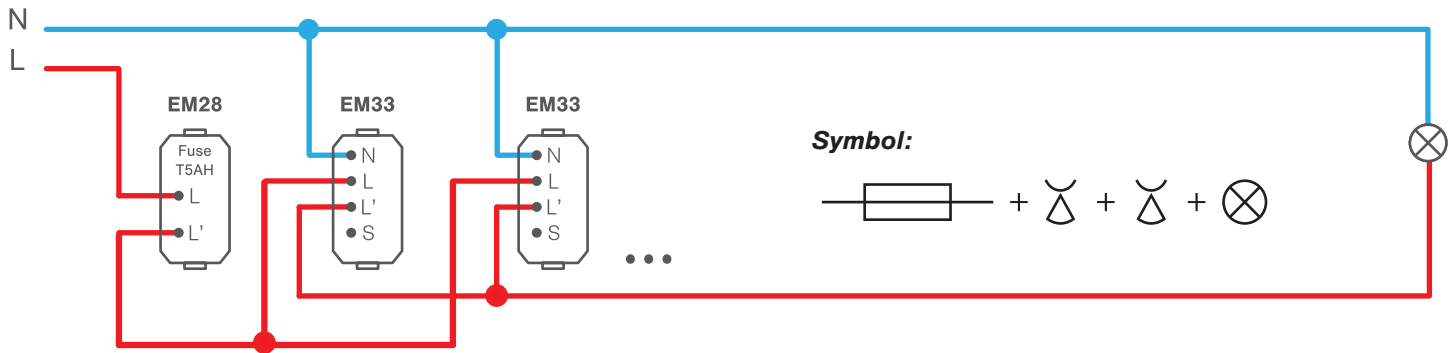


Wiring diagram 9: IR sensor switch EM33 + fuse box EM28



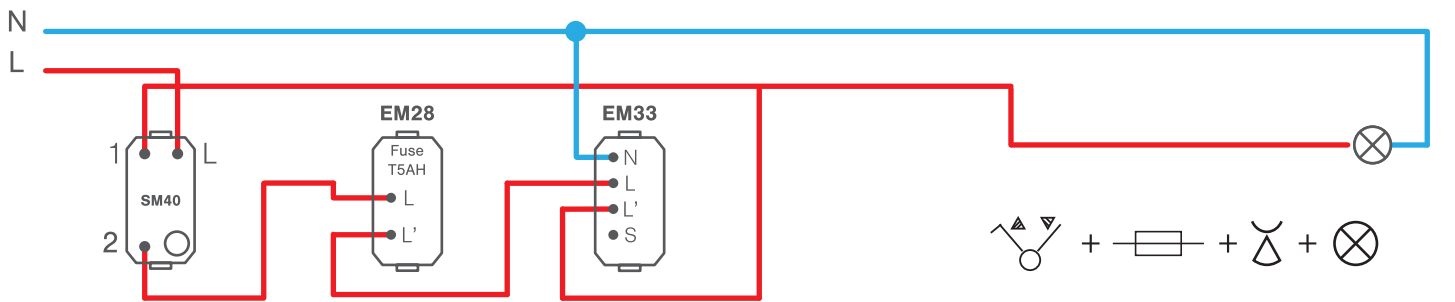
		1	2	3	4	5	6	7	8	9	10
EM33	min.	1 W	1 W	—	1 VA	—	—	1 W	1 W	1 VA	1 VA
EM33	max.	1000 W	1000 W	5 A	650 VA	650 VA	2 A	—	—	100 VA	100 VA

Wiring diagram 9.1: 2x IR sensor switch EM33 + fuse box EM28



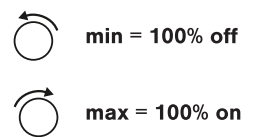
		1	2	3	4	5	6	7	8	9	10
EM33	min.	1 W	1 W	—	1 VA	—	—	1 W	1 W	1 VA	1 VA
EM33	max.	1000 W	1000 W	5 A	650 VA	650 VA	2 A	—	—	100 VA	100 VA

Wiring diagram 9.2: IR sensor switch EM33 + shutters switch SM40

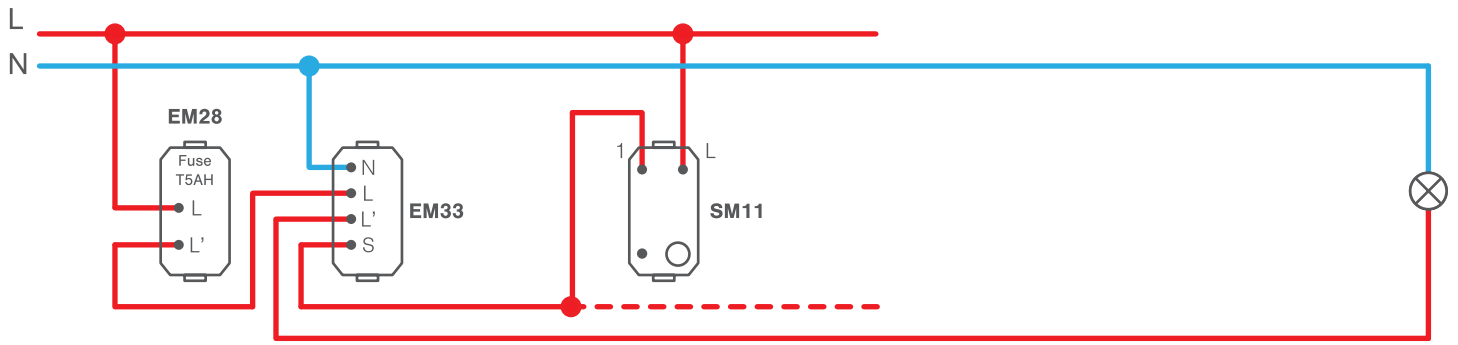


		1	2	3	4	5	6	7	8	9	10
EM33	min.	1 W	1 W	—	1 VA	—	—	1 W	1 W	1 VA	1 VA
EM33	max.	1000 W	1000 W	5 A	650 VA	650 VA	2 A	—	—	100 VA	100 VA

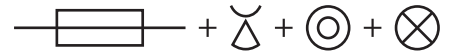
TIMMER



Wiring diagram 10: IR sensor switch EM33 + fuse box EM28 + push button SM11



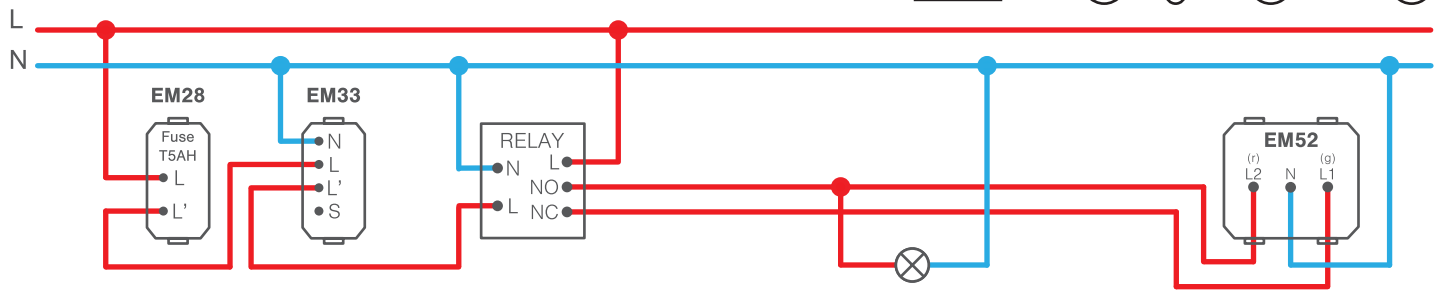
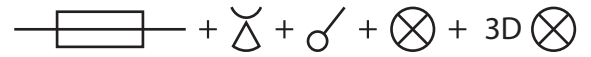
Symbol:



		1	2	3	4	5	6	7	8	9	10
EM33	min.	1 W	1 W	—	1 VA	—	—	1 W	1 W	1 VA	1 VA
EM33	max.	1000 W	1000 W	5 A	650 VA	650 VA	2 A	—	—	100 VA	100 VA

Wiring diagram 11: IR sensor switch EM33 + relay + 3D duel color lamp

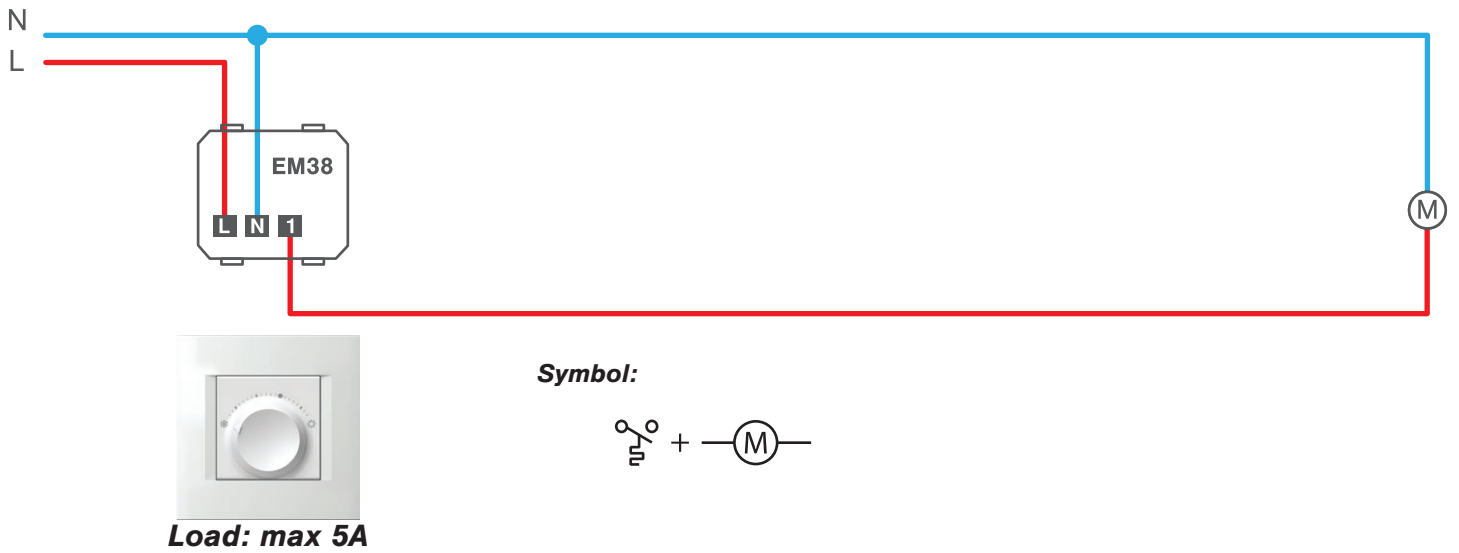
Symbol:



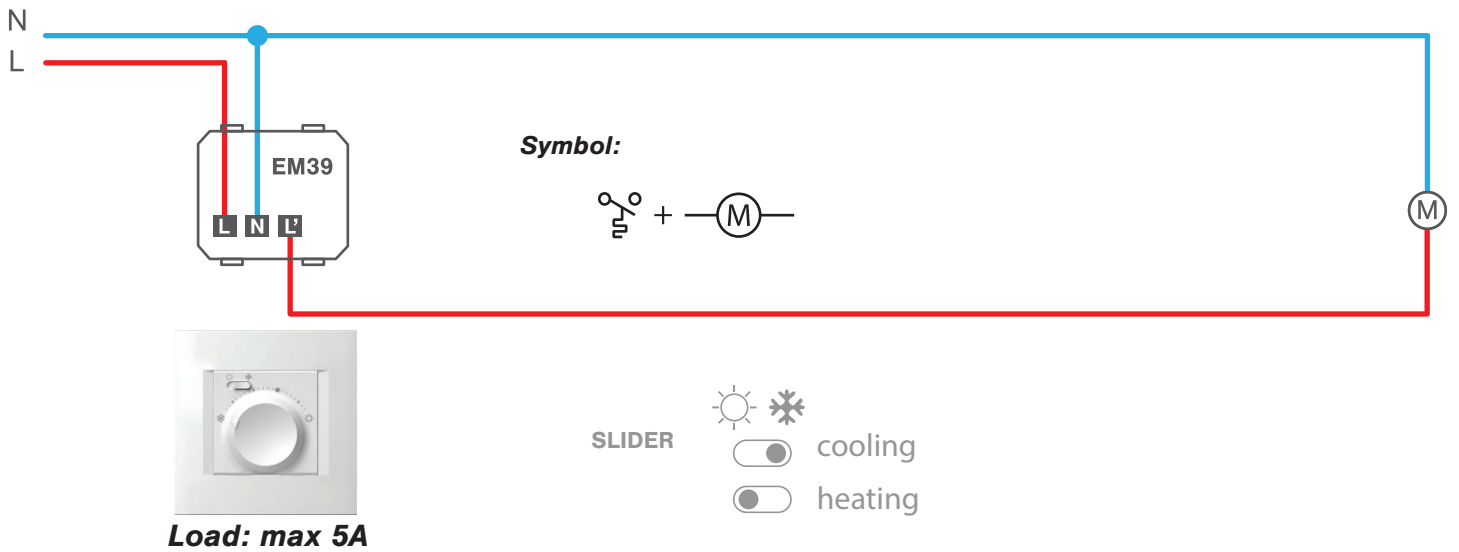
		1	2	3	4	5	6	7	8	9	10
EM33	min.	1 W	1 W	—	1 VA	—	—	1 W	1 W	1 VA	1 VA
EM33	max.	1000 W	1000 W	5 A	650 VA	650 VA	2 A	—	—	100 VA	100 VA



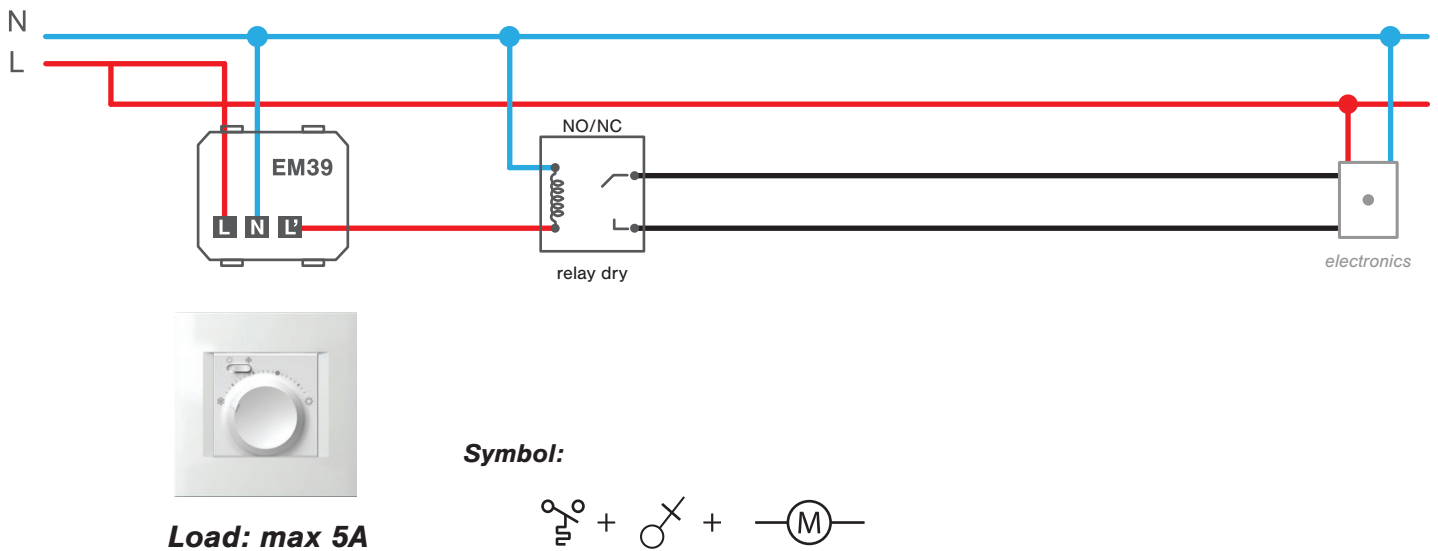
Wiring diagram 12: classic function of thermostat EM38



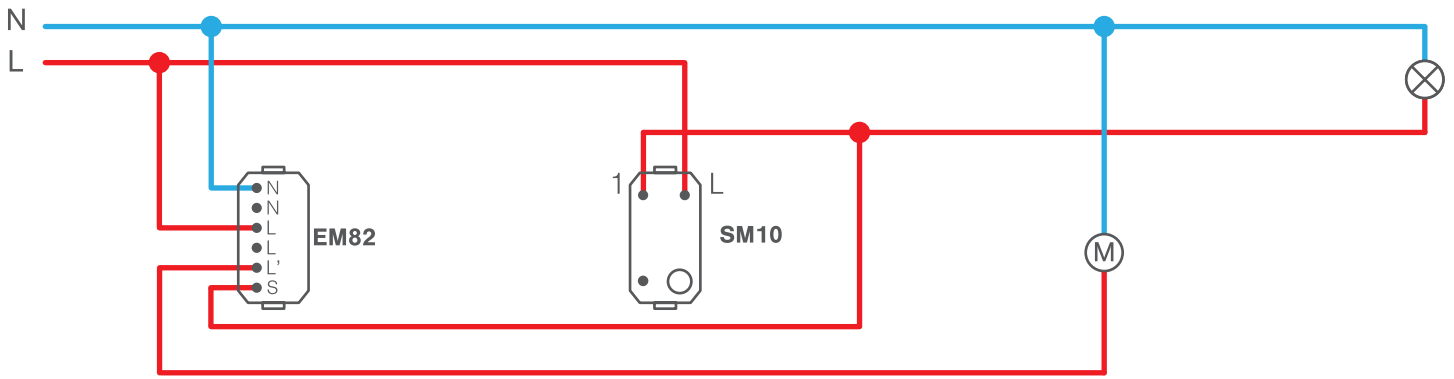
Wiring diagram 12.1: classic function of thermostat EM39



Wiring diagram 12.2: thermostat in function with dry contact relay EM39



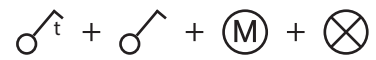
Wiring diagram 15: timer function EM82 + 1 way switch SM10 + fan



S input: Mode 2

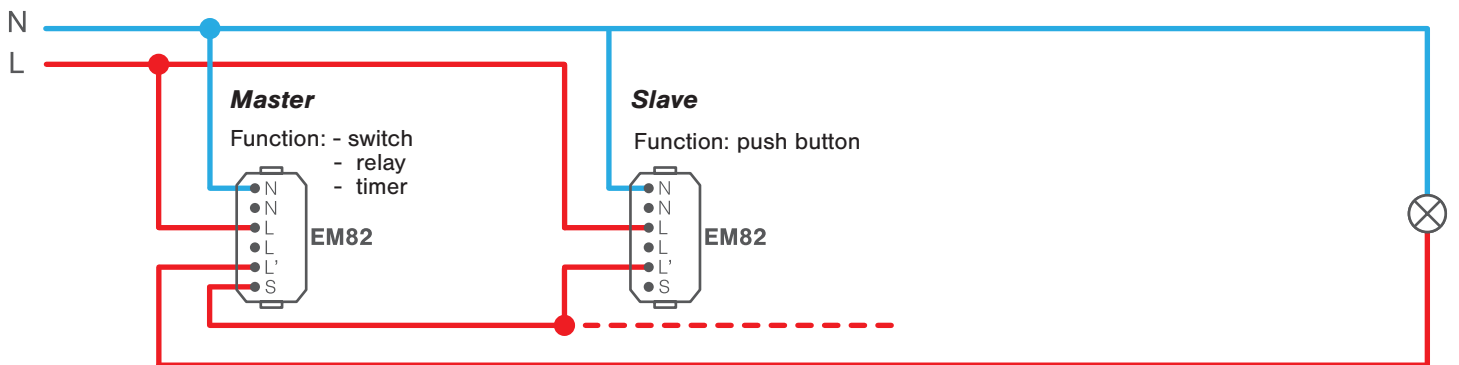


Symbol:



	1	2	3	4	5	6	9	10
EM82								
Max.	16 A	16 A	16 A	8 A	8 A	5 A cos fi=0.6	200 VA	200 VA

Wiring diagram 16: electronic switch EM82 in function master and slave

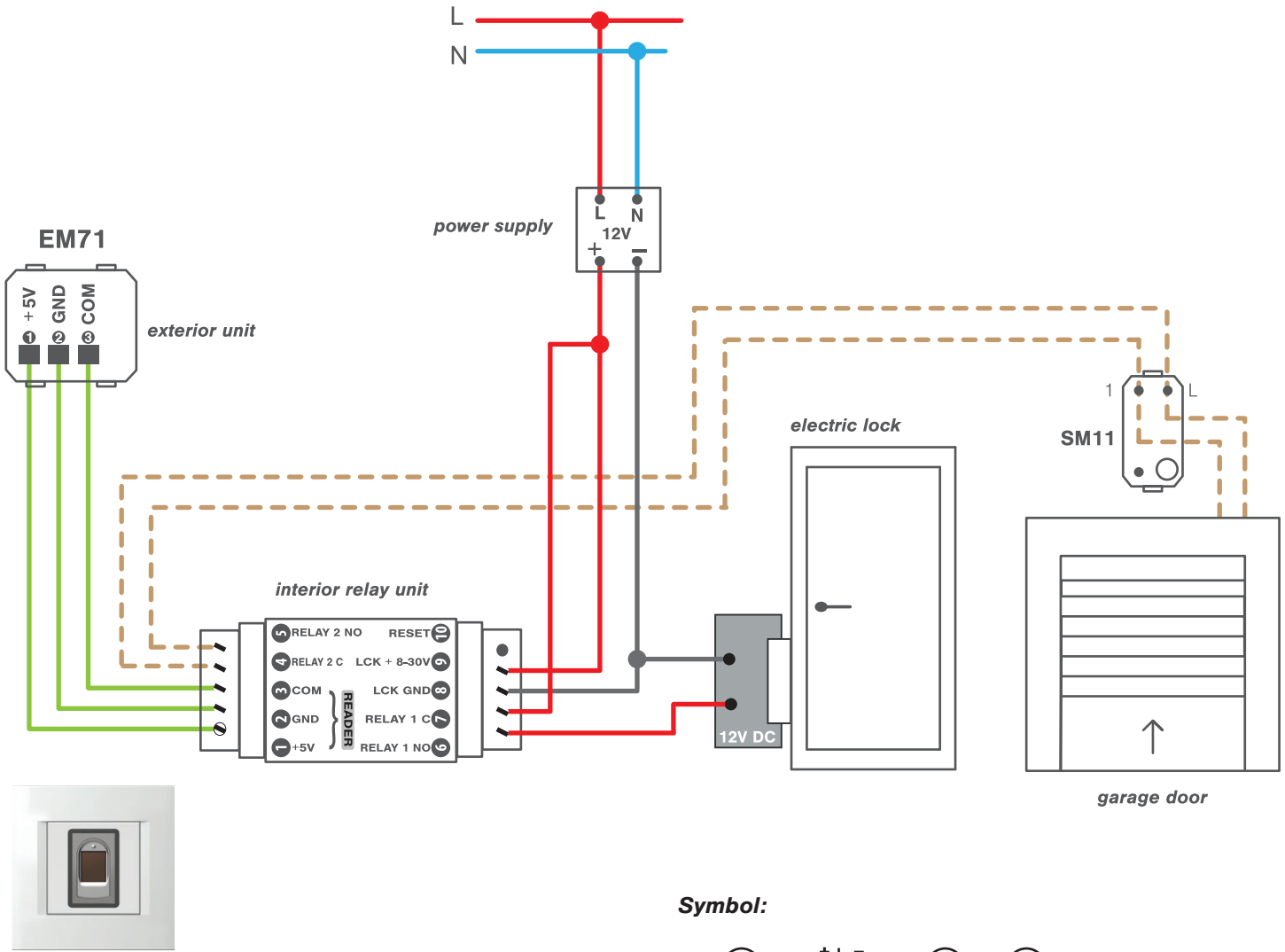


Symbol:

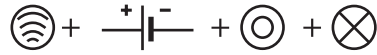


	1	2	3	4	5	6	9	10
EM82								
Max.	16 A	16 A	16 A	8 A	8 A	5 A cos fi=0.6	200 VA	200 VA

Wiring diagram 17: fingerprint switch EM71 - two door control

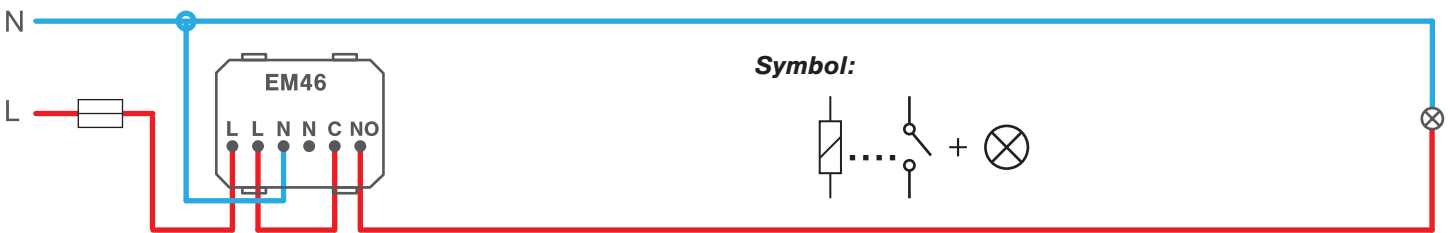


Symbol:

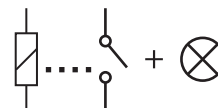


- capacity:**
- 500 fingerprints
 - 2 relay outputs
 - history
 - schedule

Wiring diagram 18: card switch EM46

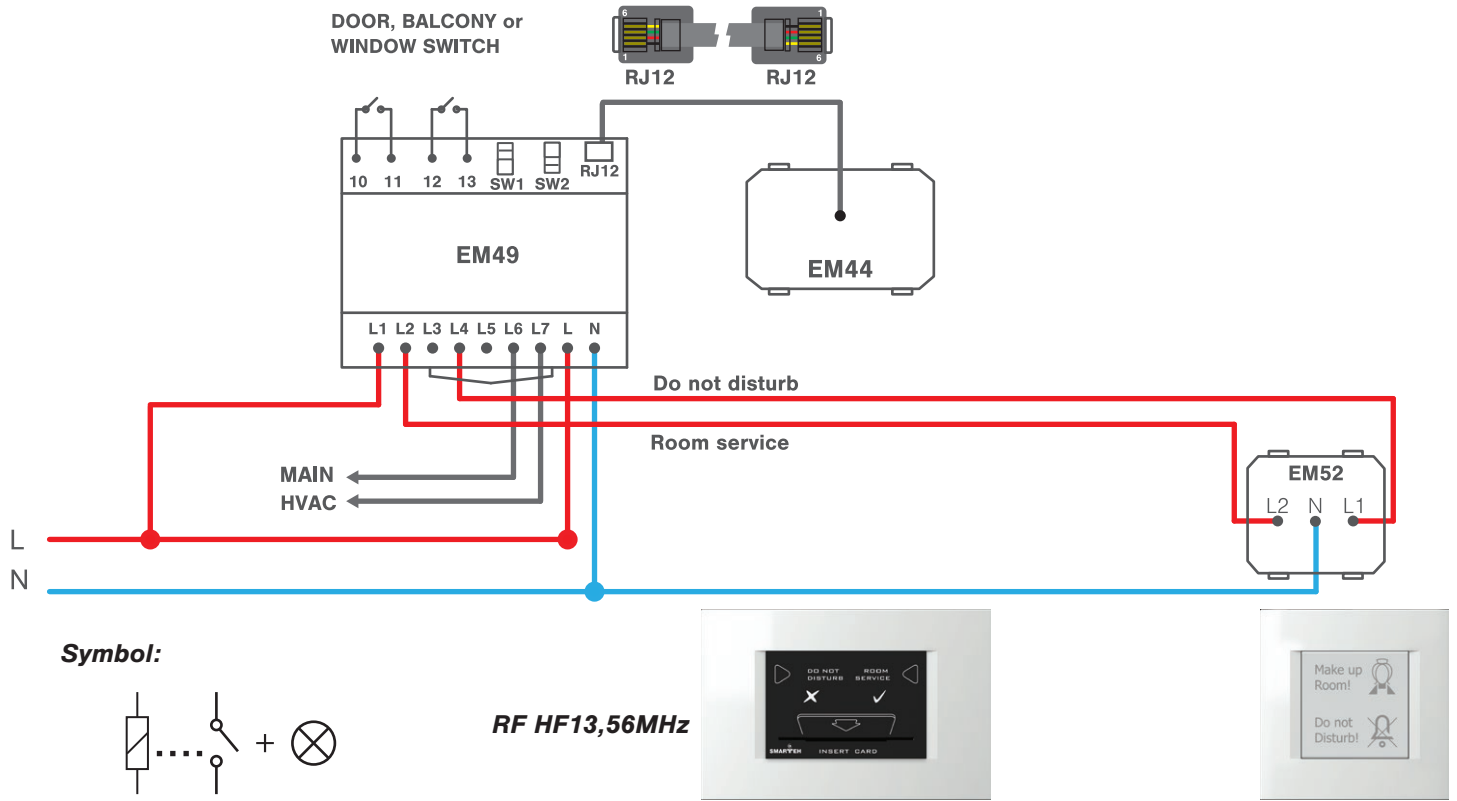


Symbol:

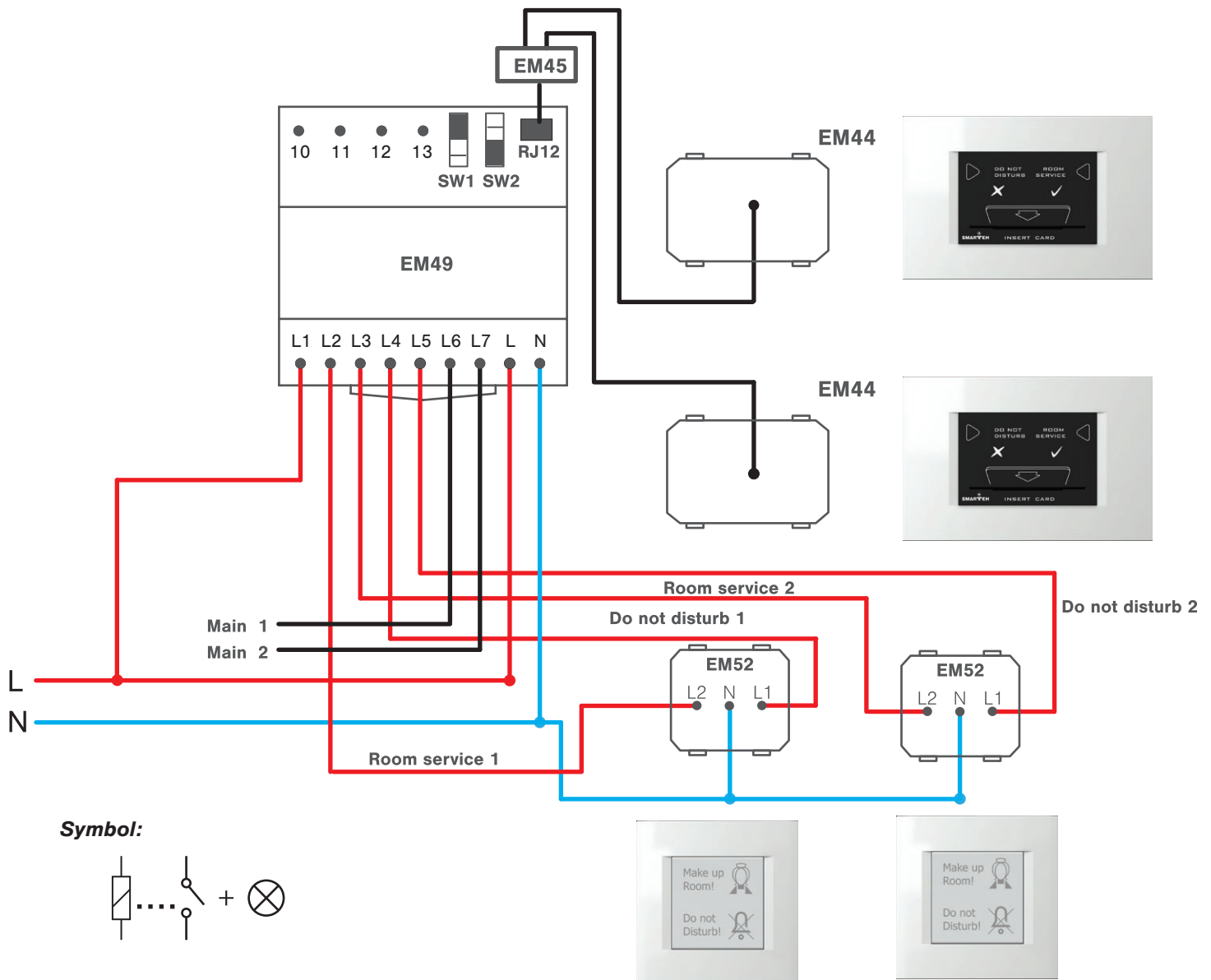


	1	2	3	4	5	6	9	10
EM46								
Max.	16 A	16 A	16 A	8 A	8 A	5 A cos fi=0.6	200 VA CFL	200 VA LED

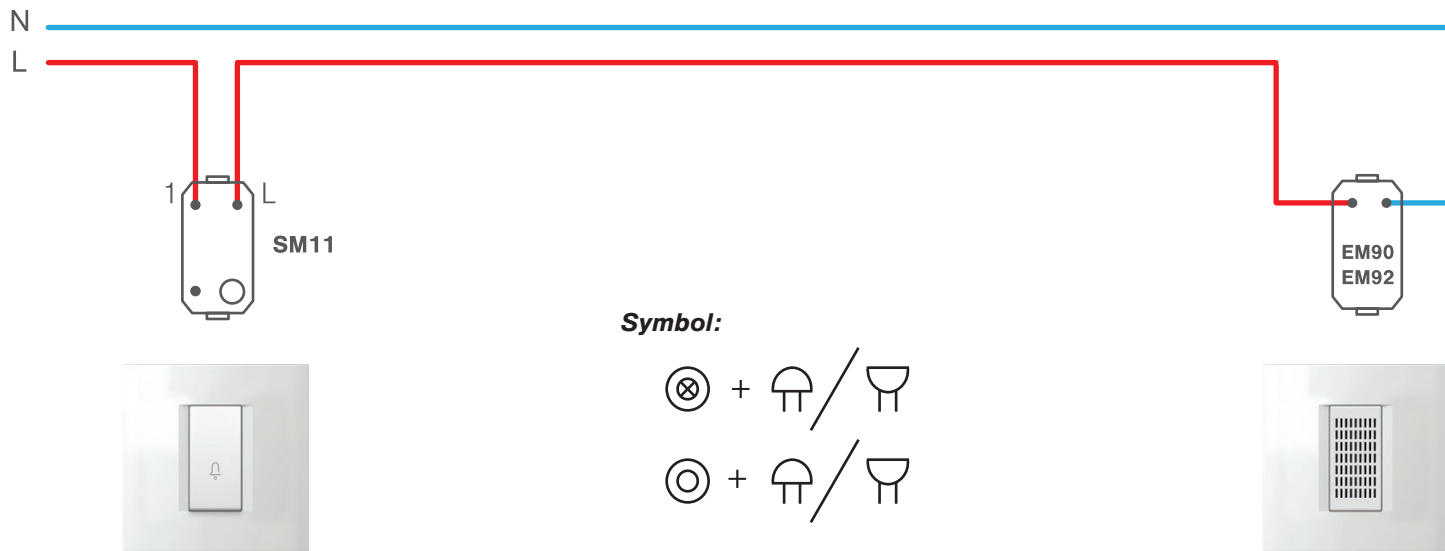
Wiring diagram 19: card switch EM44 + control unit EM49 + dual color lamp EM25



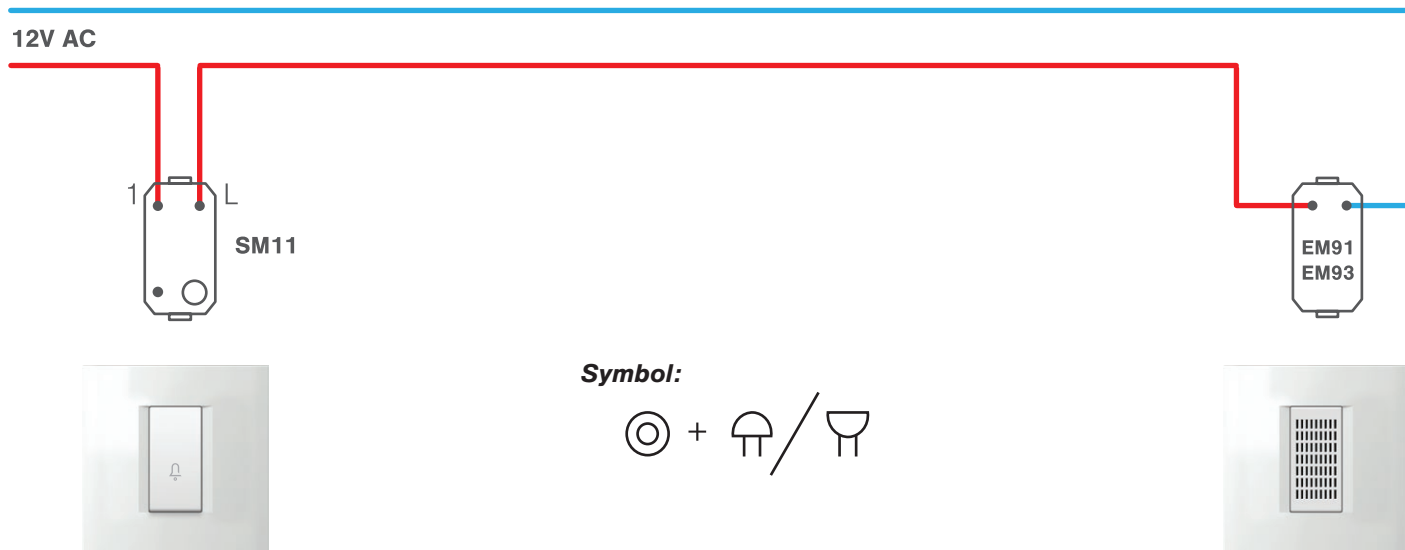
Wiring diagram 20: card switch EM44 (2x) + control unit EM49 + dual color lamp EM25 (2x)



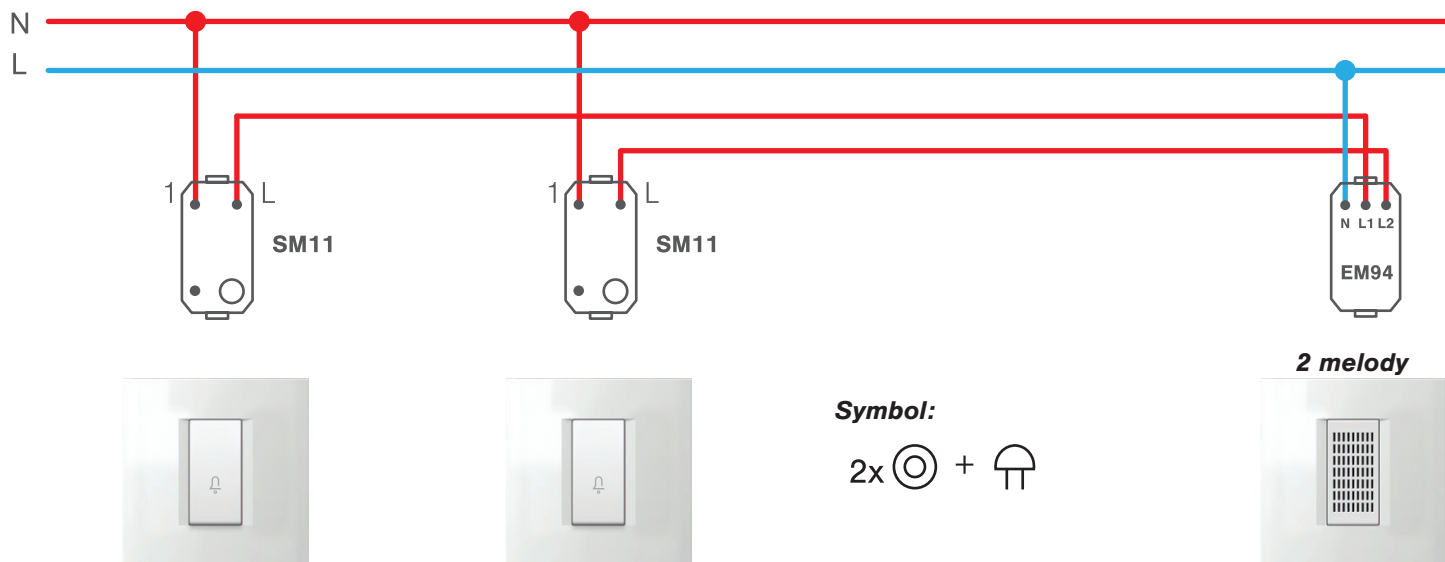
Wiring diagram 21: bell / buzzer EM90 / EM92 + push button SM11



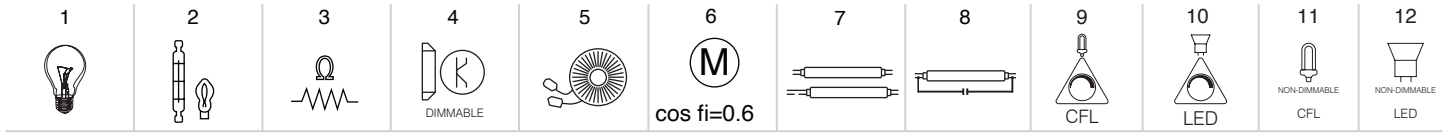
Wiring diagram 22: bell / buzzer EM91 / EM93 + push button SM11



Wiring diagram 23: electronic bell with 2 melody EM92 + 2x push button SM11



TYPES OF LOAD



1 - incandescent lamp

2 - halogen lamp

3 - resistive heating element

4 - electronic transformer

5 - classical transformer

6 - motor

7 - fluorescent tube (version 1)

8 - fluorescent tube (version 2)

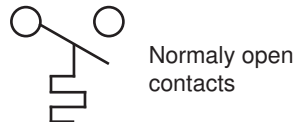
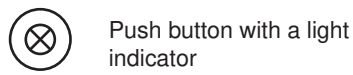
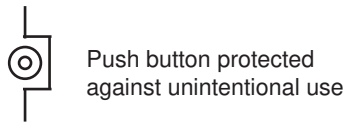
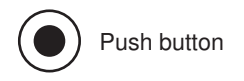
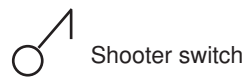
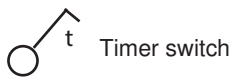
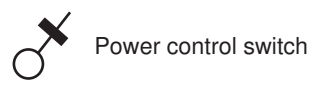
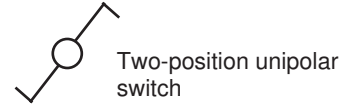
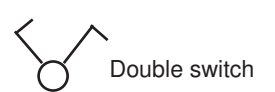
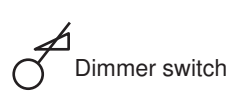
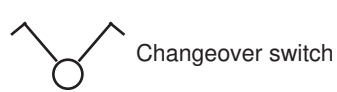
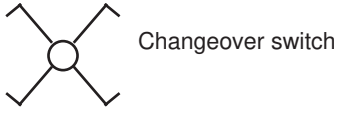
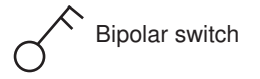
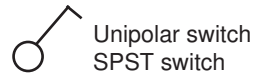
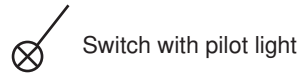
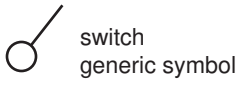
9 - energy saving CFL lamp

10 - LED lamp

11 - some non-dimmable CFL lamps

12 - some non-dimmable LED lamps

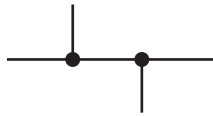
S I N G L E L I N E S W I T C H E S S Y M B O L S



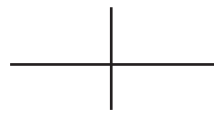
COMMON ELECTRICAL SYMBOLS



connecting wire



wires joined



wires crossing (no contact)



cell



2 cells / battery



battery (with many cells)



direct current (DC)
power supply



alternating current (AC)
power supply



coil of wire / solenoid



galvanometer



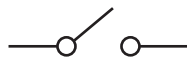
ammeter



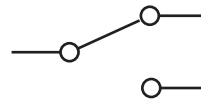
milliammeter



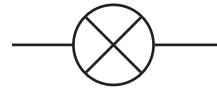
voltmeter



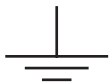
switch



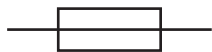
two-way switch



bulb / filament bulb



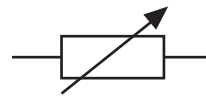
earth



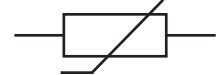
fuse



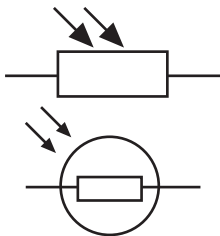
fixed resistor



variable resistor



thermistor



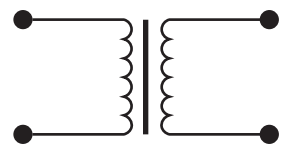
light dependent
resistor (LDR)



diode



light emitting
diode (LED)



transformer



bell



buzzer