

# Light dependent relay 16 A



Exterior light control



Driver's control console



Internal light management



11  
SERIES

### Relays for automatic control of lighting according to ambient light level - with separate light sensor

- Complies with EN 45545-2:2020 (protection against fire of materials), EN 61373 (resistance against random vibrations and shock, Category 1, Class B), EN 50155 (resistance to temperature and humidity, OT4/ST1 class)
- Sensitivity adjustment from 1 to 100 lux
- One module, 17.5 mm wide
- Low energy consumption
- 24 V DC/AC version
- For the first 3 working cycles the delay time (On and Off) is reduced to zero in order to aid installation
- LED status indication
- SELV separation between contact and supply circuit
- Double insulation between supply and light sensor
- Delay Time: 1 sec ON  
6 sec OFF
- 35 mm rail (EN 60715) mount
- Cadmium free contact material
- Cadmium free light sensor (IC photo diode)

\* Short term (10 min) +70°C

For outline drawing see page 5

### 11.31



- 1 pole
- 17.5 mm wide

#### Contact specification

Contact configuration		1 NO (SPST-NO)
Rated current/Maximum peak current	A	16/30 (120 - 5 ms)
Rated voltage/ Maximum switching voltage	V AC	250/400
Rated load AC1	VA	4000
Rated load AC15 (230 V AC)	VA	750
Nominal lamp rating:		
230 V incandescent/halogen W		2000
fluorescent tubes with electronic ballast W		1000
fluorescent tubes with electromagnetic ballast W		750
CFL W		400
230 V LED W		400
LV halogen or LED with electronic ballast W		400
LV halogen or LED with electromagnetic ballast W		800
Minimum switching load	mW (V/mA)	1000 (10/10)
Standard contact material		AgSnO <sub>2</sub>

#### Supply specification

Nominal voltage (U <sub>N</sub> )	V AC (50/60 Hz)	24
	DC	24
Rated power	VA (50 Hz)/W	2.5/0.9
Operating range	V AC (50 Hz)	16.8...28.8
	DC	16.8...32

#### Technical data

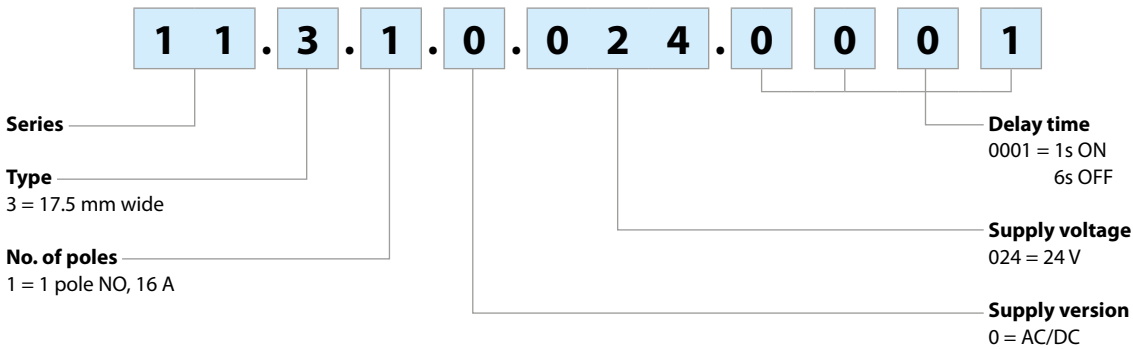
Electrical life at rated load in AC1	cycles	100 · 10 <sup>3</sup>
Threshold setting:	Standard range lx	1...100
	High range lx	—
Hysteresis (switching Off/On ratio)		1.25
Delay time: switching On/Off	s	1/6
Ambient temperature range	°C	-25...+55*
Protection category: light dependent relay/light sensor		IP 20/IP 54

#### Approvals (according to type)




## Ordering information

Example: 11 series light dependent relay, 1 NO (SPST-NO) 16 A contact, 24 V AC/DC supply.



## Technical data

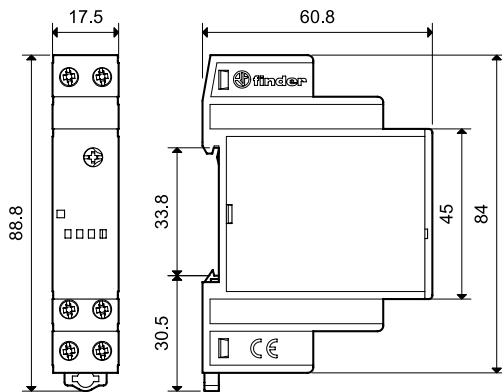
Insulation		Dielectric strength	Impulse (1.2/50 µs)
	between supply and contacts	4000 V AC	6 kV
	between supply and light sensor	2000 V AC	4 kV
	between open contacts	1000 V AC	1.5 kV
EMC specifications			
Type of test		Reference standard	
Electrostatic discharge	contact discharge	EN 61000-4-2	4 kV
	air discharge	EN 61000-4-2	8 kV
Radiated electromagnetic field (80...1000 MHz)		EN 61000-4-3	10 V/m
Fast transients (burst 5/50 ns, 5 and 100 kHz)	on supply terminals	EN 61000-4-4	3 kV
	on light sensor connection	EN 61000-4-4	3 kV
Voltage pulses on supply terminals (surge 1.2/50 µs)	common mode	EN 61000-4-5	4 kV
	differential mode	EN 61000-4-5	3 kV
Radiofrequency common mode voltage (0.15...80 MHz)	on supply terminals	EN 61000-4-6	10 V
	on light sensor	EN 61000-4-6	3 V
Voltage dips	70% U <sub>N</sub> , 40% U <sub>N</sub>	EN 61000-4-11	10 cycles
Short interruptions		EN 61000-4-11	10 cycles
Radio frequency conducted emissions	0.15...30 MHz	EN 55014	class B
Radiated emissions	30...1000 MHz	EN 55014	class B
Terminals			
 Screw torque	Nm	0.8	
Max. wire size	solid cable	1 x 6 / 2 x 4 mm <sup>2</sup>	1 x 10 / 2 x 12 AWG
	stranded cable	1 x 4 / 2 x 2.5 mm <sup>2</sup>	1 x 12 / 2 x 14 AWG
Wire strip length	mm	9	
Other data			
Cable grip of light sensor	mm	7.5...9	
Maximum cable length relay to light sensor	m	50 (2 x 1.5 mm <sup>2</sup> )	
Preset threshold	lx	10	
Power lost to the environment	in stand-by W	0.3	
	without contact current W	0.9	
	with rated current W	1.7	

### LED functions

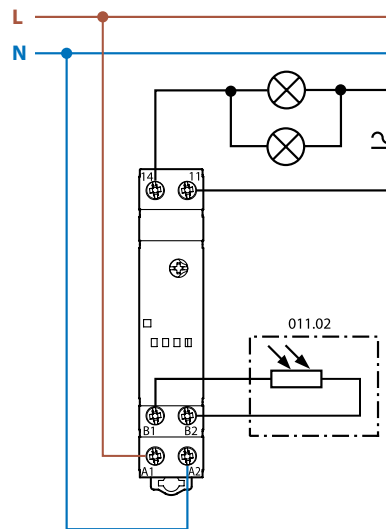
LED	Supply voltage	NO output contact 11.31
	OFF	Open
	ON	Open
	ON	Closed

### Outline drawings

Type 11.31  
Screw terminal



### Wiring diagrams

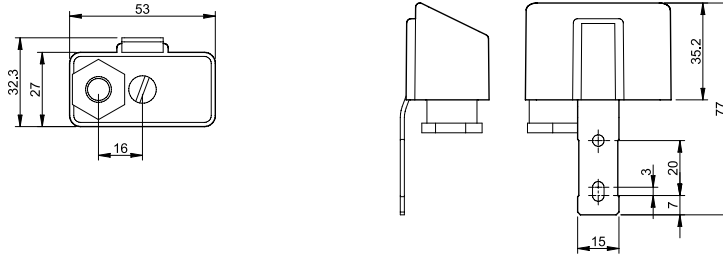


Accessories



011.02

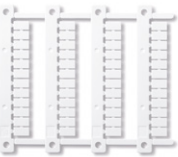
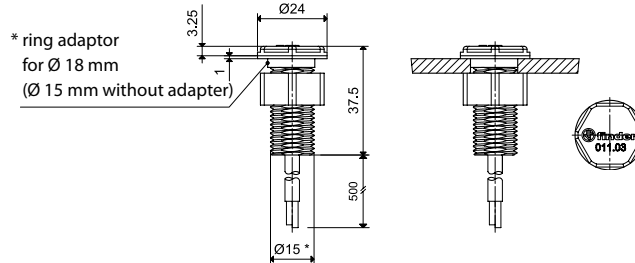
<b>Light sensor</b> (supplied with light dependent relay)	011.02
<ul style="list-style-type: none"> <li>- Ambient temperature range: -40...+70 °C</li> <li>- Cadmium free</li> <li>- Non polarized</li> <li>- Double insulated with respect to light dependent relay supply</li> <li>- Not compatible with type 11.71.0.024.1001</li> </ul>	



011.03

<b>Flush-mounted light sensor</b> (protection category: IP 66/67)	011.03
<ul style="list-style-type: none"> <li>- Ambient temperature range: -40...+70 °C</li> <li>- Cadmium free</li> <li>- Non polarized</li> <li>- Double insulated with respect to light dependent relay supply</li> <li>- Not compatible with type 11.71.0.024.1001</li> <li>- Supplied with light dependent relay (packaging code POA)</li> </ul>	

Connection cable	
Material	PVC, flame retardant
Conductor size	mm <sup>2</sup> 0.5
Cable length	mm 500
Cable diameter	mm 5.0
Working voltage	V 300/500
Test voltage, cable	kV 2.5
Max. temperature	°C +90



060.48

<b>Sheet of marker tags</b> , plastic, 48 tags, 6 x 12 mm, for CEMBRE's thermal transfer printers	060.48
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