

# Modular step relays 16 A



Automation for  
blinds, grilles  
and shutters



Living room  
light control



Bedroom  
light control



Lighting control  
in corridors (for  
hotels, offices  
and hospitals)



20  
SERIES



**1 or 2 Pole 16 A Step relays for direct 35 mm rail (EN 60715) mounting**

- 17.4 mm wide
- Test button with mechanical indicators
- Choice of 7 switching sequences
- AC coils and DC coils
- Identification label
- According to EN 60601-1 2 x MOPP
- Possible to connect illuminated push buttons with the additional part 026.00
- 35 mm rail (EN 60715) mount
- Cadmium free contact material

20.21/22/24/26/27/28/23  
Screw terminal



FOR UL RATINGS SEE:  
"General technical information" page V

For outline drawing see page 5

**Contact specification**

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

**Coil specification**

Nominal voltage (U <sub>N</sub> )	V AC (50/60 Hz)	8 - 12 - 24 - 48 - 110 - 120 - 230 - 240	
	V DC	12 - 24 - 48 - 110	12 - 24 - 48 - 110
Rated power AC/DC	VA (50 Hz)/W	6.5/5	6.5/5
Operating range	AC	(0.85...1.1)U <sub>N</sub> (50 Hz)/(0.9...1.1)U <sub>N</sub> (60 Hz)	
	DC	(0.9...1.1)U <sub>N</sub>	(0.9...1.1)U <sub>N</sub>

**Technical data**

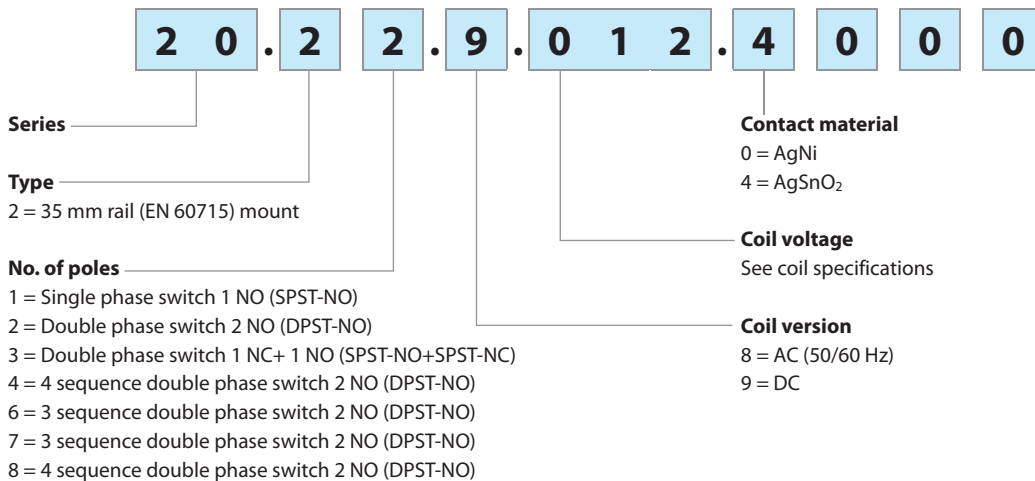
Mechanical life AC/DC	cycles	300 · 10 <sup>3</sup>	300 · 10 <sup>3</sup>	300 · 10 <sup>3</sup>
Electrical life at rated load in AC1	cycles	100 · 10 <sup>3</sup>	100 · 10 <sup>3</sup>	100 · 10 <sup>3</sup>
Minimum/Maximum impulse duration		0.1 s/1 h (according to EN 60669)	0.1 s/1 h (according to EN 60669)	0.1 s/1 h (according to EN 60669)
Insulation between coil and contacts (1.2/50 μs)	kV	4	4	4
Ambient temperature range	°C	-40...+40	-40...+40	-40...+40
Protection category		IP 20	IP 20	IP 20

**Approvals** (according to type)



## Ordering information

Example: 20 series relay, 35 mm rail (EN 60715) mount, double phase switch, 2 NO 16 A contacts, coil rated at 12 V DC, AgSnO<sub>2</sub> contacts.




## Technical data

### Insulation

Dielectric strength		
between supply and contacts	V AC	4000
between open contacts	V AC	2000
between adjacent contacts	V AC	2000

### Other data

Power lost to the environment					
with rated current and coil deenergised	W	1.3 (20.21, 20.23, 20.28)		2.6 (20.22, 20.24, 20.26, 20.27)	
 Screw torque	Nm	0.8		0.8	
Max. wire size		<b>Coil terminals</b>		<b>Contact terminals</b>	
		solid cable	stranded cable	solid cable	stranded cable
	mm <sup>2</sup>	1 x 4 / 2 x 2.5	1 x 2.5 / 2 x 2.5	1 x 6 / 2 x 4	1 x 4 / 2 x 2.5
	AWG	1 x 12 / 2 x 14	1 x 14 / 2 x 14	1 x 10 / 2 x 12	1 x 12 / 2 x 14

If the coil is operated for a prolonged period of time, adequate ventilation of the relays must be provided - suggested gap of 9 mm between adjacent relays.





















## Coil specifications

### DC version data

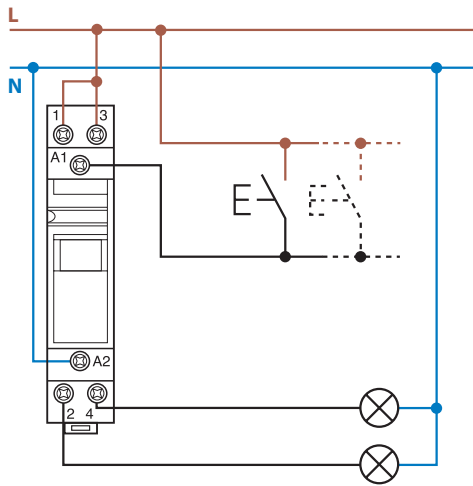
Nominal voltage U <sub>N</sub>	Coil code	Operating range		Resistance R	Consumption I at U <sub>N</sub>
		U <sub>min</sub>	U <sub>max</sub>		
V		V	V	Ω	mA
12	<b>9.012</b>	10.8	13.2	27	440
24	<b>9.024</b>	21.6	26.4	105	230
48	<b>9.048</b>	43.2	52.8	440	110
110	<b>9.110</b>	99	121	2330	47

### AC version data

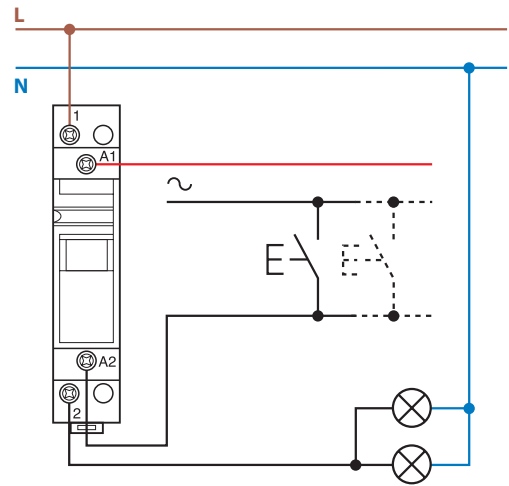
Nominal voltage U <sub>N</sub>	Coil code	Operating range		Resistance R	Consumption I at U <sub>N</sub> (50 Hz)
		U <sub>min</sub>	U <sub>max</sub>		
V		V	V	Ω	mA
8	<b>8.008</b>	6.8	8.8	4	800
12	<b>8.012</b>	10.2	13.2	7.5	550
24	<b>8.024</b>	20.4	26.4	27	275
48	<b>8.048</b>	40.8	52.8	106	150
110	<b>8.110</b>	93.5	121	590	64
120	<b>8.120</b>	102	132	680	54
230	<b>8.230</b>	192	253	2500	28
240	<b>8.240</b>	204	264	2700	27.5

Type	Number of steps	Sequence			
		1	2	3	4
20.21	2				
20.22	2				
20.23	2				
20.24	4				
20.26	3				
20.27	3				
20.28	4				

### Wiring diagrams



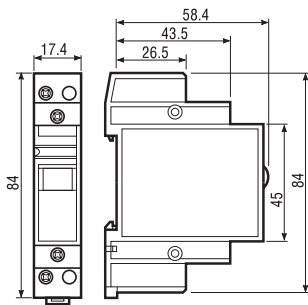
Example: 230 V AC supply voltage.



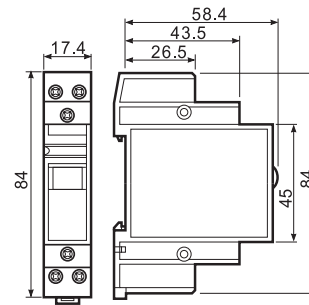
Example: 24 V AC supply voltage.

### Outline drawings

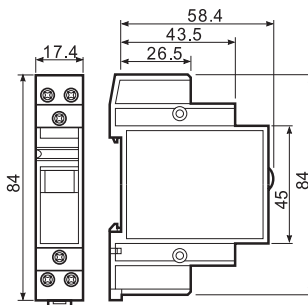
Type 20.21  
Screw terminal



Types 20.22/24/26/27/28  
Screw terminal

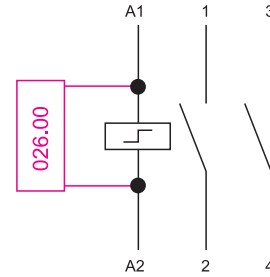
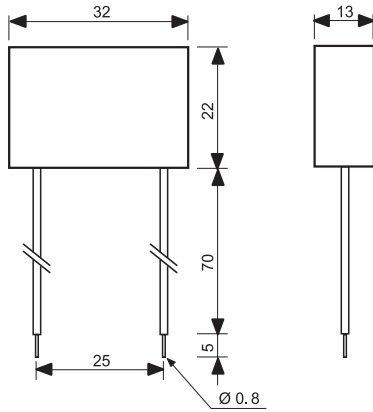


Type 20.23  
Screw terminal



Accessories

Module for use with illuminated push-buttons



Type 026.00

Sealed construction, 7.5 cm insulated flexible wire termination.

Example of wiring diagram of type 026.00

This module is necessary when using between 1 and a maximum of 15 illuminated push buttons in the coil circuit (Each 1.5 mA max, 230 V AC). It must be connected in parallel to the coil of the relay.



020.01

Adaptor for panel mounting, 17.5 mm wide

020.01



022.09

Separator for rail mounting, plastic, 9 mm wide

022.09

