

# Electronic Relays and Actuators Multi and Single Function



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# **13 SERIES** Quiet electronic step relays 10 - 16 A



**13** SERIES

13.81 - Quiet electronic step relay - Rail mount - 1 Pole	13.81	13.91
<ul> <li>13.91 - Quiet electronic step relay and timing step relay Switch box mount - 1 Pole</li> <li>Fixed time (10 minutes) timing function selectable (13.91)</li> <li>Use with 3 or 4 wire connection, with automatic recognition by the relay</li> <li>Control input can be continuously applied</li> <li>Longer mechanical and electrical life, and much quieter than electromechanical step relays</li> <li>"Zero crossing" load switching</li> <li>Can be mounted behind blanking plates, as widely used in residential wiring systems such as; BTicino: Axolute, Matix, Living and Magic, Gewiss: GW24, Vimar: Plana and Idea (13.91)</li> <li>35 mm rail (EN 60715) mount (13.81)</li> <li>Cadmium free contact material</li> </ul>	<ul> <li>1 NO (SPST-NO)</li> <li>35 mm rail (EN 60715) mount</li> <li>17.5 mm wide</li> </ul>	<ul> <li>1 NO (SPST-NO)</li> <li>Step relay and timing step relay (10 minutes)</li> <li>For mounting within residential switch boxes</li> </ul>
13.81/91 Screw terminals		
Contact specification		
Contact configuration	1 NO (SPST-NO)	1 NO (SPST-NO)
Rated current/Maximum peak current A	16/30 (120 - 5 ms)	10/20 (80 - 5 ms)
Rated voltage/		
Maximum switching voltage V AC	230/—	230/—
Rated load AC1 VA	3700	2300
Rated load AC15 (230 V AC) VA	750	450
Nominal lamp rating:		
230 V incandescent/halogen W	3000	1000
fluorescent tubes with	1500	500
electronic ballast W	1500	500
fluorescent tubes with electromagnetic ballast W	1000	350
CFL W	600	300
230 V LED W	600	300
LV halogen or LED with electronic ballast W	600	300
LV halogen or LED with	4500	
electromagnetic ballast W Minimum switching load mW (V/mA)	1500	500
Minimum switching load mW (V/mA) Standard contact material	1000 (10/10) AgSnO <sub>2</sub>	1000 (10/10) AgSnO <sub>2</sub>
Supply specification		
Nominal voltage ( $U_N$ ) V AC (50/60 Hz)	230	230
V DC		
Rated power V A (50 Hz)/W	3/1.2	2/1
Operating range AC (50 Hz)	(0.81.1)U <sub>N</sub>	(0.81.1)U <sub>N</sub>
Technical data		
Electrical life at rated load in AC1 cycles	100 · 10 <sup>3</sup>	100 · 10 <sup>3</sup>
Maximum impulse duration	continuous	continuous
Dielectric strength between: open contacts V AC	1000	1000
		1
supply - contacts V AC	_	_
	-10+60	-10+50
supply - contacts V AC		



13.01 - Electronic step/mo Rail mount - 1 Pole	•	13	.01	13.61.0.024.0000	13.61.8.230.0000		
13.61 - Multifunction step	•		<b>G O</b> 11 14	C C C C C C C C C C C C C C C C C C C			
	nd - Rail mount 1 Pole	Mode in BUIGT 1 072		A STATE			
<ul> <li>Selectable Step or Monost</li> <li>Multifunction (Step, Timin</li> </ul>		13.01 # 220 15.01 # 220	6 <b>7</b> 2007 2007 2009		Research Control of Co		
Light ON) (13.61)		0		1141 2000- 1141 2000- 1141 2000			
Reset feature, for centraliz	ed off command	81 82 83		00	6.6		
<ul><li>(13.61)</li><li>Set feature, for centralized</li></ul>	d on command	CCC					
(13.61.0.024)							
Control input can be cont		• 1 CO (SPDT)		• 1 CO (SPDT)	• 1 NO (SPST-NO)		
<ul> <li>Longer mechanical and el quieter than electromechanical</li> </ul>		Step or monos	stable relay	Reset feature, for centralized	Reset feature, for centralized		
• 1224 V AC/DC and 110.		• 35 mm rail (EN	l 60715) mount	off command	off command		
versions (13.61)		• 35 mm wide		Set feature, for centralized on command	Multifunction:     - step relay		
<ul> <li>Suitable for SELV applicati also for supply 12 and 24</li> </ul>				Multifunction:	- timing step relay		
• "Zero-crossing" load switc	hing (13.61)			- step relay	(30s20min)		
• 35 mm rail (EN 60715) mo				- timing step relay (30s20min)	- monostable relay - light on		
Cadmium free contact ma	iterial			- monostable relay	• 35 mm rail (EN 60715) mount		
13.01/61				- light on	• 17.5 mm wide		
Screw terminals				<ul> <li>35 mm rail (EN 60715) mount</li> <li>17.5 mm wide</li> </ul>			
For outline drawing see page	ae 17						
Contact specification							
Contact configuration		1 CO (	(SPDT)	1 CO (SPDT)	1 NO (SPST-NO)		
Rated current/Maximum pe	eak current A	16/30 (120 A - 5 ms)		16/30 (120 A - 5 ms)	16/30 (120 A - 5 ms)		
Rated voltage/ Maximum switching voltage	e V AC	250	/400	250/400	250/400		
Rated load AC1	VA		00	4000	4000		
Rated load AC15 (230 V AC)	VA	7	50	750	750		
Nominal lamp rating:							
	andescent/halogen W	20	00	2000	3000		
πu	orescent tubes with electronic ballast W	10	000	1000	1500		
	orescent tubes with						
elec	tromagnetic ballast W		50	750	1000		
	CFL W 230 V LED W		00	400	600 600		
IVF	nalogen or LED with	41		400	000		
	electronic ballast W	40	00	400	600		
	nalogen or LED with tromagnetic ballast W	Q	00	800	1500		
Minimum switching load	mW (V/mA)		(10/10)	1000 (10/10)	1000 (10/10)		
Standard contact material			SnO <sub>2</sub>	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>		
Supply specification							
Nominal voltage ( $U_N$ )	V AC (50/60 Hz)	110125	230240	_	110240		
	V DC/AC (50/60 Hz)	12	24	1224	—		
Rated power AC/DC	V A (50/60 Hz)/W		/2.5	1/0.5	3.2/1		
Operating range	V AC (50 Hz) V DC/AC (50 Hz)	90130	184253 20.633.6	10.226.4	90264		
Technical data	v DC/AC (30 HZ)	10.013.2	20.033.0	10.220.4	_		
Electrical life at rated load in	n AC1 cycles	100	· 10 <sup>3</sup>	100 · 10 <sup>3</sup>	100 · 10 <sup>3</sup>		
Maximum impulse duration		conti	nuous	continuous	continuous		
Dielectric strength betweer	n: open contacts V AC	10	00	1000	1000		
	supply - contacts V AC		00	2000	2000		
Ambient temperature range	e °C		+60	-10+60	-10+60		
Protection category		IP	20		IP 20		
Approvals (according to ty	pe)			CE ERE			

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<b>13 SERIES</b> Electronic call & reset relays and mor	nostable relays 8 - 12 A	finder				
13.11 - Call & Reset Relay - Rail mount - 1 Pole	13.11	13.12	13.31			
13.12 - Call & Reset Relay - Rail mount - 2 Pole 13.31 - Electromechanical monostable relay Switch box mount - 1 Pole	C C C	C C C				
<ul> <li>Call relay with reset command suitable for residential and commercial applications: publi bathroom, hospital, hotel (type 13.11/13.12)</li> <li>Can be mounted behind blanking plates, as widely used in residential wiring systems such as; BTicino: Axolute, Matix, Living e Magic, Gewiss: GW24, Vimar: Plana e Idea (13.31)</li> <li>35 mm rail (EN 60715) or flange mount (13.11 and 13.12)</li> </ul>		<ul> <li>1 CO (SPDT) + 1 NO (SPST-NO)</li> <li>Call relay with reset command</li> </ul>	• 1 NO (SPST-NO) • Interposing monostable re	elay		
Cadmium free contact material (13.31)     13.11/12/31	• 35 mm rail (EN 60715) mount • 17.5 mm wide	• 35 mm rail (EN 60715) mount • 17.5 mm wide	• For mounting within residential switch boxes			
Screw terminals						
Contact specification						
Contact configuration	1 CO (SPDT)	1 CO (SPDT) + 1 NO (SPST-NO)	1 NO (SPST-NO)			
· · · · · · · · · · · · · · · · · · ·	A 12/30	8/15	12/20 (80 A - 5 ms)			
Rated voltage/ Maximum switching voltage V A	C 250/400	250/400	250/400			
	A 3000	2000	3000			
	A 750	400	450			
Nominal lamp rating:						
230 V incandescent/halogen V	N 1200	800	800			
fluorescent tubes with						
electronic ballast	N 500	300	400			
electromagnetic ballast	W 400	250	300			
CFL	W 300	150	200			
230 V LED V	W 300	150	200			
LV halogen or LED with electronic ballast \	W 300	150	200			
LV halogen or LED with	JUU		200			
electromagnetic ballast	N 500	300	400			
Minimum switching load mW (V/m/	A) 500 (5/5)	300 (5/5)	1000 (10/10)			
Standard contact material	AgCdO	AgCdO	AgSnO <sub>2</sub>			
Supply specification			10.5	ŀ		
Nominal voltage (U <sub>N</sub> ) V AC (50/60 H		12 - 24	12 - 230			
Rated power AC/DC V A (50 Hz)/V		12 - 24 3/2.5*	24			
Operating range AC (50 Hz)		(0.81.1)U <sub>N</sub>	(0.81.1)U <sub>N</sub>			
		(0.81.1)U <sub>N</sub>	(0.81.1)U <sub>N</sub>			
Technical data		(	()•N			
Electrical life at rated load in AC1 cycle	es 100 · 10 <sup>3</sup>	100 · 10 <sup>3</sup>	70 · 10 <sup>3</sup>			
Maximum impulse duration	10 s (100 ms minimum)	10 s (100 ms minimum)	continuous			
Dielectric strength between: open contacts V A	C 1000	1000	1000			
supply - contacts V A	C 2000	2000	2000			
Ambient temperature range	C -10+60	-10+60	-10+60			
Dielectric strength between: open contacts V A supply - contacts V A Ambient temperature range	IP 20	IP 20	IP 20			
Protection category	11 20	CE ERE	20			

**13** SERIES

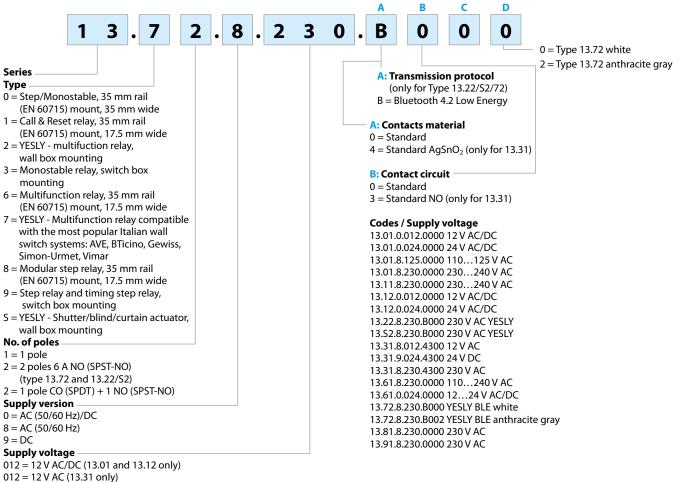


Multi and Single function electroni with Bluetooth	c relays	13.22	13.72	13.52			
.22 - Electronic multifunction relay		YESLY	YESLY	YESLY			
2 Pole - Round wall box (ie: Ø 60 mm) mour - 21 available functions (step relays, staircase timer) for lighting and far control	timer,	<ul> <li>● パバワイクタイ</li> <li>13 228 230 8000</li> <li>14 23010</li> <li< td=""><td>a la constant all primeres</td><td>() firsden     13 52 8 230 8000     Ur391-     Kanon-     ()</td></li<></ul>	a la constant all primeres	() firsden     13 52 8 230 8000     Ur391-     Kanon-     ()			
<ul> <li>13.72 - Electronic multifunction relation 2 Pole</li> <li>Wall mounting, compatible with m popular Italian residential switch b AVE, BTicino, Gewiss, Simon-Urmet</li> </ul>	ost oxes:	12 11 Okohi L N		12 11 doon L N			
<ul> <li>21 available functions: step relays, (1s - 24h), electric shutter, blind or control</li> </ul>	timing	<ul> <li>Offering a variety of ON/OFF functions associated with lighting and fan motor control</li> </ul>	<ul> <li>Offering a variety of ON/OFF functions associated with lighting, electric shutters,</li> </ul>	<ul> <li>Suitable for electric shutters, blind or curtain control</li> <li>Transmission protocol</li> </ul>			
<ul> <li><b>13.S2 - Electronic roller shutter act</b></li> <li>Round wall box (ie: Ø 60 mm) mout</li> <li>For electric shutter, blind or curtain</li> </ul>	nting n control	<ul> <li>Transmission protocol Bluetooth 4.2 Low Energy</li> <li>Safe connection with 128-bit</li> </ul>	blinds or curtains • Transmission protocol Bluetooth 4.2 Low Energy	Bluetooth 4.2 Low Energy • Safe connection with 128-bit encryption			
<ul> <li>2 contacts NO 6 A - 230 V AC indeper programmable channels</li> <li>2 inputs for wired pushbuttons (one channel)</li> <li>Transmission range: approximately space and without obstacles</li> </ul>	e input per	encryption • App programming with iOS or Android Smartphone: Finder TOOLBOX • Can be managed through	<ul> <li>Safe connection with 128-bit encryption</li> <li>App programming with iOS or Android Smartphone: Finder TOOLBOX</li> </ul>	<ul> <li>App programming with iOS of Android Smartphone: Finder TOOLBOX</li> <li>Can be managed through standard pushbuttons, BEYO</li> </ul>			
13.22/52/72 Screw terminals		standard pushbuttons, BEYON and Type 013.B9 wireless buttons	<ul> <li>Can be managed through standard pushbuttons, BEYON and Type 013.B9 wireless buttons</li> </ul>	and Type 013.B9 wireless buttons			
For outline drawing see page 18							
Contact specification							
Contact configuration		2 NO (DPST-NO)	2 NO (DPST-NO)	2 NO (DPST-NO)			
Rated current/Maximum peak curren Rated voltage/	t A	6/40	6/40	6/40			
Maximum switching voltage	V AC	230/—	230/—	230/—			
Rated load AC1	VA	1380	1380	1380			
Rated load AC15 (230 V AC)	VA	300	300	300			
Single phase motor rating (230 V AC)	W	200	200	200			
Nominal lamp rating 230V: incandescen	t/halogen W	200	200				
fluorescent t electro	ubes with nic ballast W	200	200				
fluorescent t electromagne		200	200				
	CFL W	200	200	_			
LV halogen o	LED 230 V W	200	200				
electro	nic ballast W	200	200				
LV halogen o electromagne		200	200	_			
Supply specification							
Nominal voltage (U <sub>N</sub> )	C (50/60 Hz) V DC	230	230	230			
Rated power AC/DC	/A (50 Hz)/W	2/0.5	2/0.5	2/0.5			
Operating range	AC (50 Hz)	(0.81.1)U <sub>N</sub>	(0.81.1)U <sub>N</sub>	(0.81.1)U <sub>N</sub>			
	DC	(0.01.1)0 <sub>N</sub>					
Technical data							
Electrical life at rated load in AC1	cycles	60 · 10 <sup>3</sup>	60 · 10 <sup>3</sup>	60 · 10 <sup>3</sup>			
Electrical file at fated foad in ACT	,		continuous	continuous			
Maximum impulse duration		continuous	Continuous	continuous			
	ntacts VAC	continuous 1000	1000	1000			
Maximum impulse duration	ntacts VAC °C						
Maximum impulse duration Dielectric strength between: open co		1000	1000	1000			

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#### **Ordering information**

Example: Multifunction relay with YESLY Bluetooth, 2 contacts 6 A NO (SPST-NO), 230 V AC supply.



#### **Technical data**

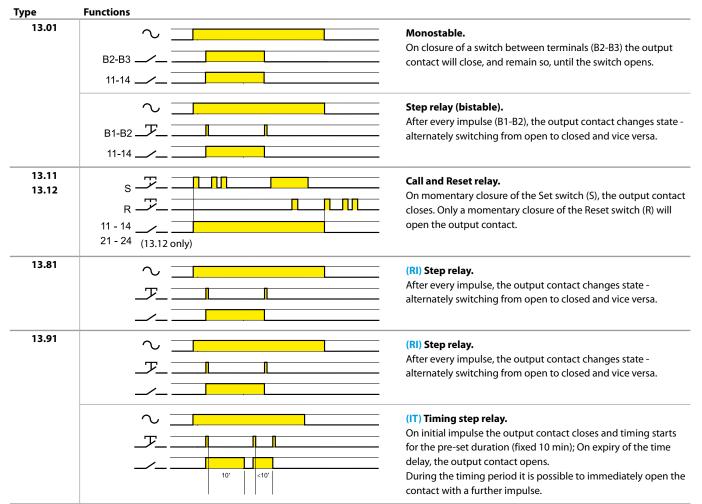
13.01.8	13.01.0	13.11 - 13.12	13.3	31 - 13	8.61	13.81 - 13	8.91			
C 4000	_	—	-			—				
C 4000	4000	—	_			—				_
c —	_	2000	-			—				
C 4000	4000	—	200	0		—				
C 1000	1000	1000	100	0		1000				
13	3.01	13.11 - 13.12	13.3	31	13.61	13.81	13.9	1	13.22 13.52 13.72	K
N	2.2	—	0.4		1	1.2	0.7		0.5	_
N	3.5	1.5	1.6		1.8	2	1.8		1.5	
n 1	100 100 —			200	200	100		100		
4)	_		-		10*	15	12		5	
13	3.01			13 77 - 13 57						
solid cable	olid cable stranded cable solid cable stranded cable solid cab		stranded cable		solid cable	5	stran	ded cable		
$1^{2}$ 1 x 6 / 2 x 4	1 x 6 / 2 x 2.5	1 x 6 / 2 x 4		1 x 4 /	2 x 2.5	1 x 2.5 / 2	x 1.5	1 x 2	.5 / 2 x 1	
G 1 x 10 / 2 x 12	1 x 10 / 2 x 14	1 x 10 / 2 x 12		1 x 12	/ 2 x 14	1 x 14 / 2 :	x 16	1 x 1	4/2x16	_
n 0.8		0.8				0.5				
	AC 4000 AC 4000 AC 4000 AC	AC 4000 AC 4000 4000 AC AC 4000 4000 AC 1000 1000 AC 1000 1000 $I_{J}$ W 2.2 W 3.5 m 100 AC 100 AC 1000 1000 $I_{J}$ W 1.2 M 2.2 M 3.5 M 1.0 M 1.0	AC       4000           AC       4000       4000          AC       4000       4000          AC       4000       4000          AC       4000       1000       1000         AC       1000       1000       1000         AC       1000       1000       1000         M       2.2           W       3.5       1.5       1.5         m       1.0       100       100         AI        1.3.11 - 13.12       1.3.72 - 13.81         Solid cable       stranded cable       solid cable       solid cable         m <sup>2</sup> 1x6/2x4       1x6/2x2.5       1x6/2x4         YG       1x10/2x12       1x10/2x14       1x10/2x12	AC       4000            AC       4000       4000           AC       4000       4000        200         AC       4000       4000        200         AC       4000       1000       1000       100         AC       1000       1000       100       100         AC       1000       1000       100       100         M       2.2        0.4         W       3.5       1.5       1.6         m       100       100          AC       13.11 - 13.12       13.3         MX       3.5       1.5       1.6         m       100           AD            AD            AD            AD            AD            AD            AD            AD	AC       4000            AC       4000       4000            AC       4000       4000             AC       4000       4000        2000           AC       4000       4000        2000           AC       4000       1000       1000       1000       1000         AC       1000       1000       1000           W       2.2        0.4          W       3.5       1.5       1.6          M       100             M       1.01       100             M       1.00                M       1.01       1.3.11 - 13.12 - 13.31 - 13.91       13.13.13.91	AC       4000       —       —       —         AC       4000       4000       —       2000       —         AC       4000       1000       1000       1000       1000         AC       1000       1000       1000       100       Istant       13.61         W       2.2       —       0.4       1       13.61         W       3.5       1.5       1.6       1.8         m       100       100       —       200         AI          10*         AI             W       3.5       1.5       1.6       1.8         m       1.01             AI              M	AC       4000       —       —       —       —       —       —       —       —       —       —       AC       4000       4000       —       —       —       —       —       AC       4000       4000       —       —       —       —       —       —       AC       4000       4000       —       —       —       —       AC       4000       4000       —       —       —       —       AC       4000       4000       —       —       —       —       —       AC       4000       4000       —       —       —       —       —       AC       1000       MC       MC       1000       MC       I       1000       MC       I       I       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	AC       4000       —       —       —       —       —       —       —         AC       4000       4000       —       —       —       —       —       —         AC       4000       4000       —       —       —       —       —       —       —         AC       4000       4000       —       2000       —       —       —       —       —         AC       4000       4000       —       2000       —       —       —       —       —         AC       1000       1000       1000       1000       1000       1000       —       …       13.19       3.19       3.19       3.19       3.19       3.19       3.19       3.1	AC       4000              AC       4000       4000              AC       4000       4000               AC       4000       4000        2000             AC       4000       4000        2000              AC       4000       1000       1000       1000       000 <t< td=""><td>AC       4000   </td></t<>	AC       4000

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\* For 8.230 version.



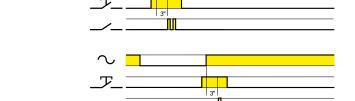
#### Functions for types 13.01, 13.11, 13.12, 13.81, 13.91



#### **Operating mode setup for type 13.91**

 $\text{RI} \rightarrow \text{IT}$ 

 $IT \rightarrow RI$ 



a) Remove the supply voltage

b) Press the control button

c) Apply the supply to the relay, keeping the button closed. After 3 second, the light will flash twice to indicate the selection of the "IT" function, or flash once for "RI" function.

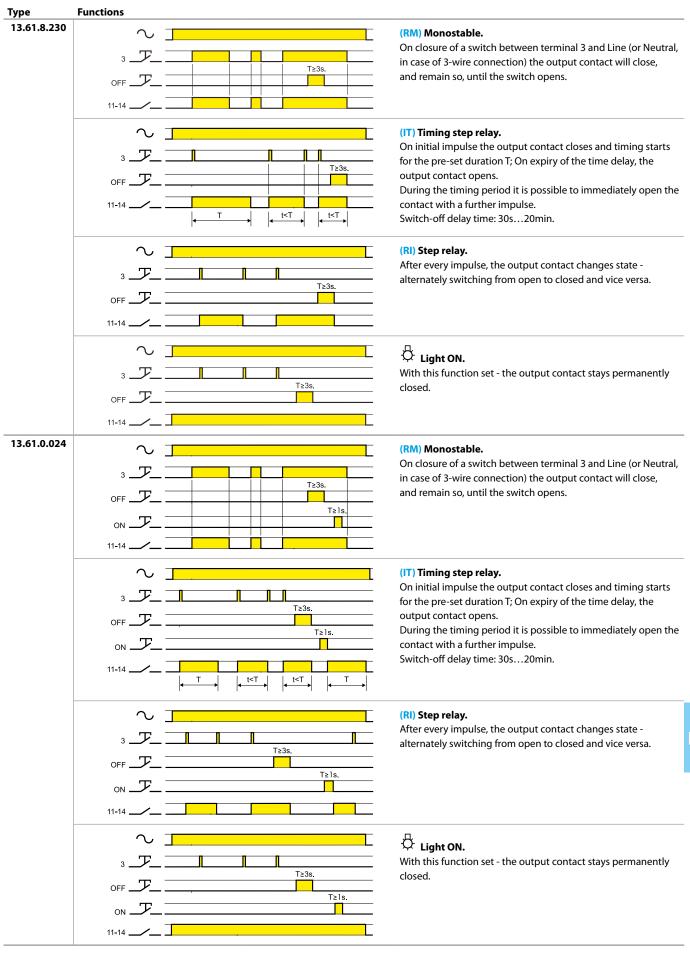
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#### Functions for type 13.61





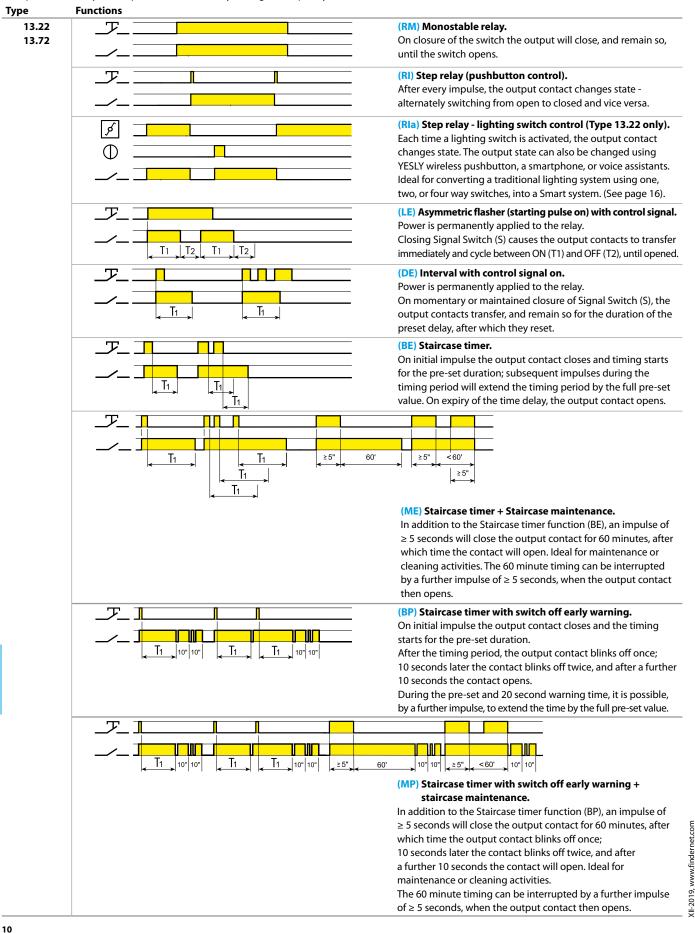
#### Functions for type 13.22, 13.52, 13.72

#### **Relay settings**

13

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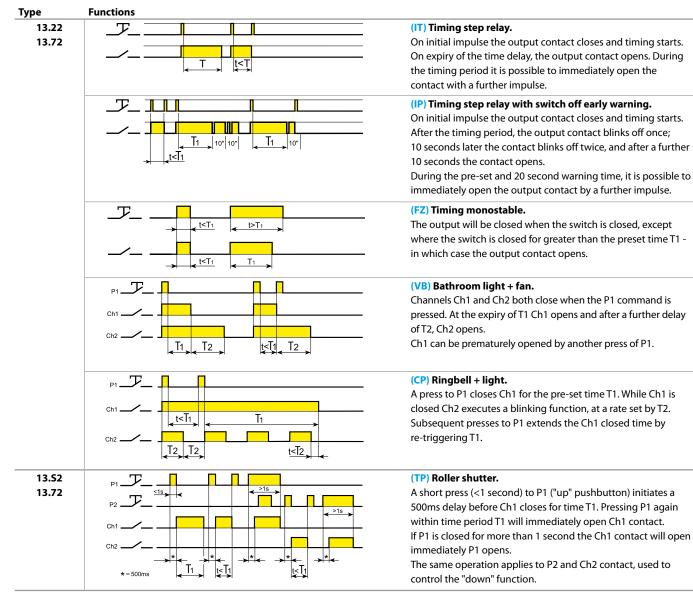
Multifunction electronic relays can be configured with the Finder TOOLBOX App, available for iOS or Android systems. This product is ready-to-use preset with the factory setting (RI) Step relay on both channels.





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#### Functions for type 13.22, 13.S2, 13.72



#### **Sequences**

P1 (SET): press to advance through the sequence

P2 (RESET): press to return to Step 1

 $\frac{1}{1}$ 

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Туре

Functions

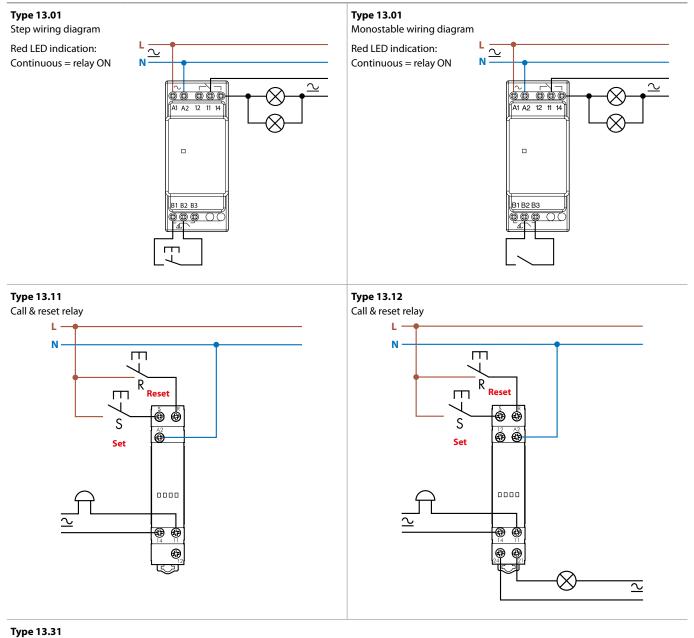
Sequences

4

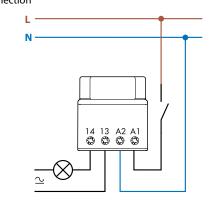
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#### Wiring diagrams (13.01, 13.11, 13.12 and 13.31)





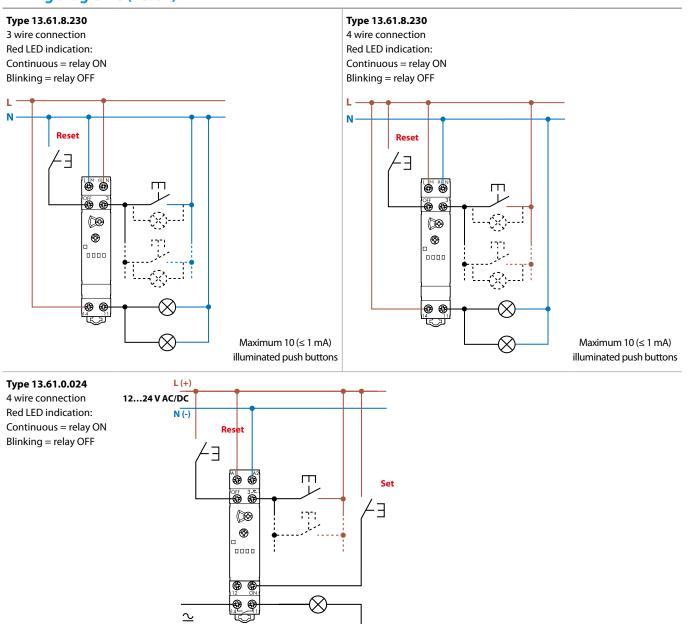


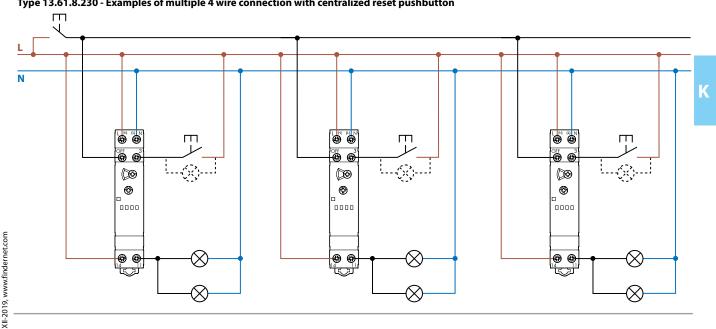
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#### Wiring diagrams (13.61)



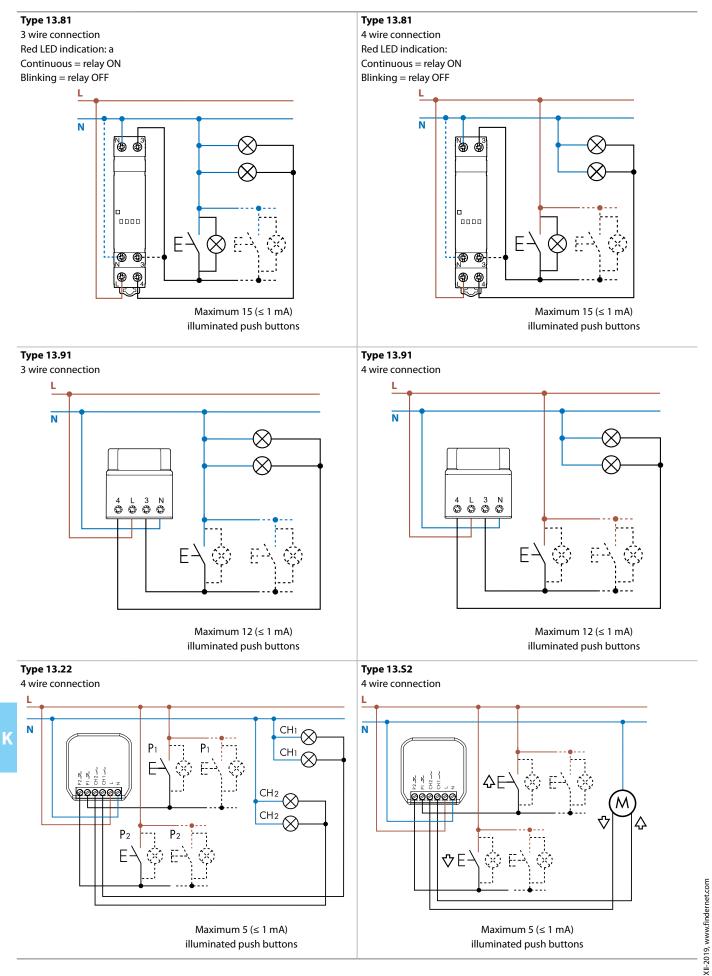


# Type 13.61.8.230 - Examples of multiple 4 wire connection with centralized reset pushbutton

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#### Wiring diagrams (13.81, 13.91, 13.22 and 13.S2)



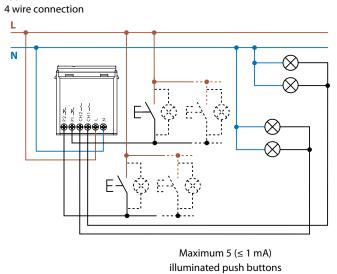
14



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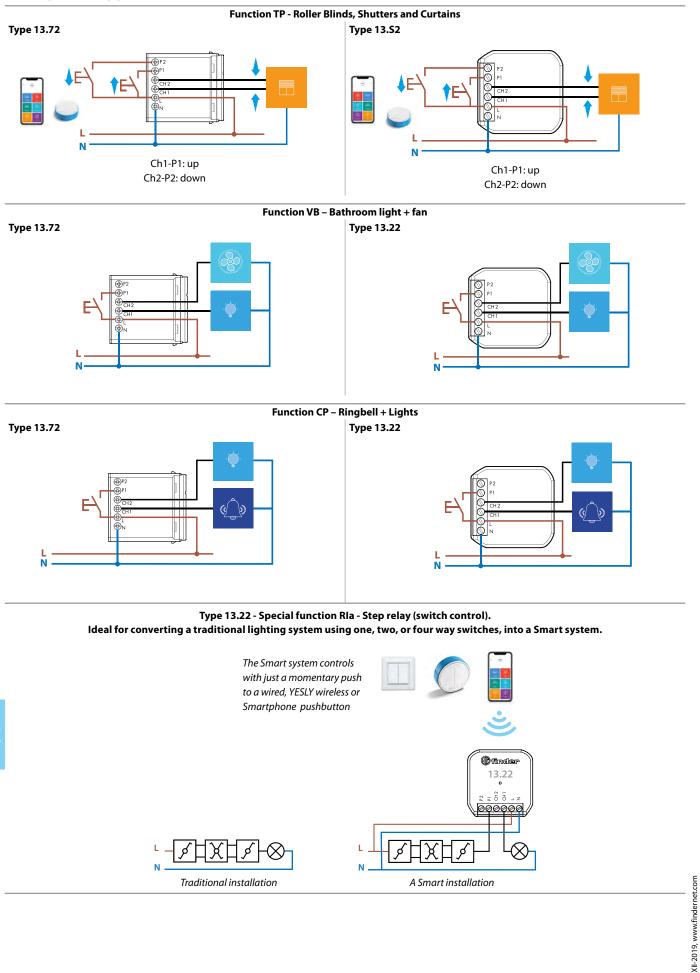
## Wiring diagrams (13.72)







#### **Examples of applications**

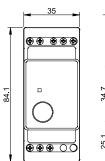


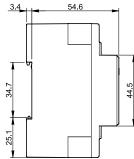


# **Outline drawings**

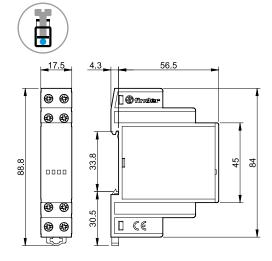
Type 13.01 Screw terminal



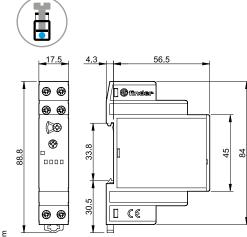




Type 13.12 Screw terminal

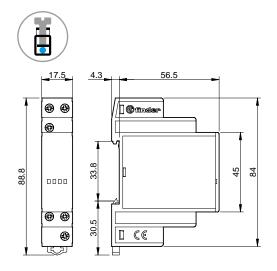


Type 13.61 Screw terminal



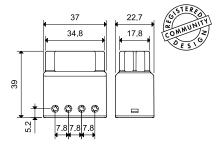
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Type 13.11 Screw terminal

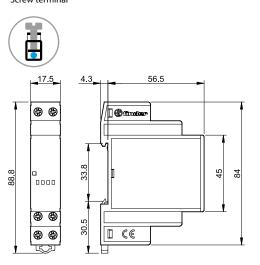


Types 13.31/13.91 Screw terminal





Type 13.81 Screw terminal

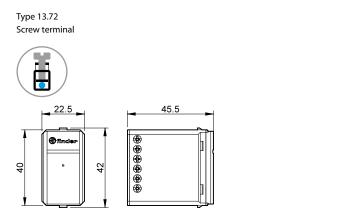


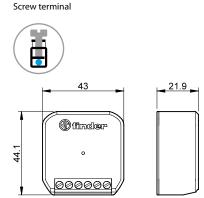


### **Outline drawings**

13

SERIES





Type 13.22 / 13.S2

### Accessories

Į.	Adaptor for panel mounting, for type 13.01, 35 mm wide	011.01
011.01		
	Adaptor for panel mounting, for type 13.11, 13.12, 13.61 and 13.81, 17.5 mm wide	020.01
020.01		
	Sheet of marker tags (CEMBRE Thermal transfer printers) for relays types 13.11, 13.12, 13.61 and 13.81 (48 tags), 6 x 12 mm	060.48
		000.40





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