



EAN code

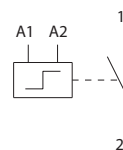
BR-216-10/230V: 8595188168854  
 BR-216-11/230V: 8595188168878  
 BR-216-20/230V: 8595188168861  
 BR-220-20/230V: 8595188168885  
 BR-232-20/230V: 8595188168892

- Bistable relays are used to switch electrical circuits by impulse command, especially for lighting control in ordinary houses, warehouses, production halls and other buildings.
- Faster and easier installation thanks to an unlimited number of buttons, connected in parallel by two wires, which is a practical replacement for AC and cross switches.
- Last but not least, they offer savings in the number of wires used and, in the case of the control circuit, the possibility of using wires with a smaller cross-section, where the power input is minimal compared to the power circuit.
- The state of the Bistable relay changes with a short control pulse. As a result of which the relay in the steady state has zero consumption and is noiseless.
- All relays can be controlled manually using a switch on the relay panel (I-O), which also serves as to signal the status of the contacts.
- For types BR-220 and BR-232, it is possible to disconnect the electrical switch control and as a result the state of the relay can then only be changed manually (service, maintenance).

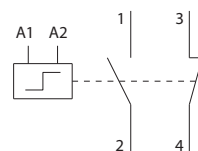
Technical parameters	BR-216-10/11/20	BR-220-20	BR-232-20
<b>Main circuit (contact)</b>			
Rated insulation voltage (U <sub>i</sub> ):		440 V	
Thermal current (I <sub>th</sub> ):	16 A	20 A	32 A
Number of poles:	1, 2, 2	2	2
Contact configuration:	10, 11, 20	20	20
Operational Power (P <sub>o</sub> )			
AC-1, AC-7a for 230 V, 1 phase:	3.5 kW	4.4 kW	7 kW
AC-2 for 230 V, 1 phase:	1.2 kW	1.5 kW	2.4 kW
AC-3, AC-7b for 230V, 1 phase:	0.37 kW	0.55 kW	1.1 kW
DC-1 (L/R ≤ 1 ms)			
U <sub>e</sub> = 24V (1 contact/2 contacts in series):	16 A/16 A	20 A/20 A	32 A/32 A
U <sub>e</sub> = 48V (1 contact/2 contacts in series):	12 A/5 A	15 A/18 A	25 A/28 A
U <sub>e</sub> = 60V (1 contact/2 contacts in series):	8 A/14 A	10 A/15 A	20 A/22 A
U <sub>e</sub> = 110V (1 contact/2 contacts in series):	4 A/7 A	5 A/8 A	7 A/12 A
U <sub>e</sub> = 220V (1 contact/2 contacts in series):	0.4 A/3 A	0.5 A/4 A	0.7 A/6 A
Load capacity of light sources AC-5a, AC-5b			
Max. operating frequency (op./hr)			
without load:	900	900	450
AC-1, AC-7a:	600	600	450
AC-2:	120	120	120
AC-3, AC-7b:	600	600	450
AC-5a, AC-5b:	600	600	450
DC-1:		300	
Electrical endurance: DC-1, DC-3, DC-5, AC-1, AC-7a, AC-2, AC-3, AC-7b, AC-5a / AC-5b (I <sub>e</sub> = 10 A):		100 000 op. c.	
Mechanical lifetime:		1 000 000 op. C	
Power dissipation per pole:	1 W	1.5 W	3 W
Contact reliability:		>10 V, >100 mA	
Max. back-up fuse against short circuit gL/gG (I <sub>v</sub> ) - coordination type 1:	16 A	20 A	32 A
Rated impulse withstand voltage (U <sub>imp</sub> ):		4 kV	
Overload current withstand capability: 10s:	48 A	56 A	80 A
Terminal capacity (solid and stranded):		1 až 10 mm <sup>2</sup>	
Maximum tightening torque:		1.2 Nm	
Screw head:		PZ2	
<b>Control circuit (coil)</b>			
Rated control voltage:		AC 230 V	AC 120 V
Rated frequency:		50 Hz	60 Hz
Impulse duration:		min. 50 ms/max. 1 h	
Duration between two impulses (of control voltage):		min. 150 ms	
Maximum load of illuminated buttons (glow lamps, LEDs,...):		2,5 mA	
Terminal capacity (solid and stranded):		1 to 4 mm <sup>2</sup>	
Maximum tightening torque:		0.6 Nm	
Screw head:		PZ1	
<b>General</b>			
Mounting:		DIN Rail, TH35 (IEC/EN 60715)	
Number of contactors or switches side-by-side:		no limitation under 55 °C (55 to 70 °C max. 3)/ 131 °F (131 °F - 158 °F)	
Degree of protection:		IP20	
Operational temperature:		-25 to +55 °C (> 55 to +70 at max. pulse length - 1min) (13 °F to 131 °F (> 131 to 158 at max. pulse length - 1min))	
Storing temperature:		-30 to +80 °C (-22 °F to 176 °F)	
Disconnection of remote control (coil) by switch:	no	yes	yes
Standards:		IEC/EN 60669-2-2	

## Connection

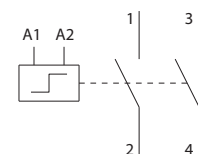
## BR-216-10



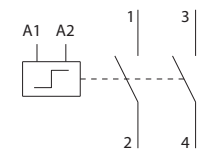
## BR-216-11



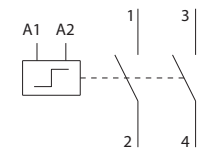
## BR-216-20



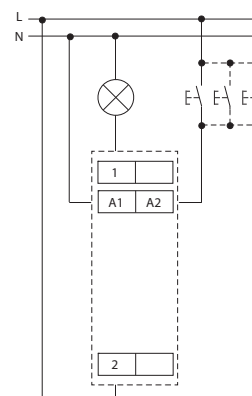
## BR-220-20



## BR-232-20



## Connection BR-216-10



Lamps Type	Power	Current	Capacitor	Maximum number of lamps per pole			
	P (W)	I (A)	C (µF)	BR-216-10/11/20	BR-220-20	BR-232-20	
LED lamps Power supplies for LEDs	-	-	-	max. 2 A per pole	max. 6 A per pole	max. 12 A per pole	
Incandescent lamps and halogen lamps	15	0,07	-	133	133	233	
	25	0,11	-	80	80	140	
	40	0,17	-	50	50	88	
	60	0,26	-	33	33	58	
	75	0,33	-	27	27	47	
	100	0,44	-	20	20	35	
	150	0,65	-	13	13	23	
	200	0,87	-	10	10	18	
	300	1,3	-	7	7	12	
Fluorescent lamps with external electromagnetic ballasts - uncorrected	500	2,17	-	4	4	7	
	1000	4,35	-	2	2	4	
	18	0,37	-	43	43	43	
	36	0,43	-	37	37	37	
	58	0,67	-	24	24	24	
	Fluorescent lamps with external electromagnetic ballasts - parallel corrected	18	0,19	4,5	18	22	33
		36	0,29	4,5	18	22	33
		58	0,46	7	11	14	21
	Lead-lag circuit for fluorescent lamps with external electromagnetic ballasts - series corrected	2x18	0,26	2,7	62	62	62
2x36		0,48	4,5	33	33	33	
2x58		0,78	7	21	21	21	
Fluorescent lamps with external electronic ballasts	18	0,09	-	33	67	133	
	2x18	0,17	-	18	35	71	
	36	0,16	-	19	38	75	
	2x36	0,31	-	10	19	39	
	58	0,25	-	12	24	48	
	2x58	0,48	-	6	13	25	
	80	0,4	-	8	15	30	
	2x80	0,76	-	4	8	16	
High pressure mercury vapour lamps with external electromagnetic ballasts - uncorrected	50	0,6	-	17	27	27	
	80	0,8	-	13	20	20	
	125	1,2	-	8	13	13	
	250	2,2	-	5	7	7	
	400	3,3	-	3	5	5	
	700	5,4	-	2	3	3	
	1000	7,5	-	1	2	2	
High pressure mercury vapour lamps with external electromagnetic ballasts - parallel corrected	50	0,3	7	11	14	21	
	80	0,4	8	10	13	19	
	125	0,6	10	8	10	15	
	250	1,2	18	4	6	8	
	400	1,8	25	3	4	6	
	700	3,4	40	2	3	4	
1000	4,8	60	1	2	3		
Metal halide lamps with external electromagnetic ballasts - uncorrected	35	0,5	-	16	32	32	
	70	1	-	8	16	16	
	150	1,8	-	4	9	9	
	250	3	-	3	5	5	
	400	4,6	-	2	3	3	
	1000	9,7	-	1	2	2	
2000	12,2	-	0	1	1		
Metal halide lamps with external electromagnetic ballasts - parallel corrected	35	0,23	6	13	17	25	
	70	0,42	12	7	8	13	
	150	0,77	20	4	5	8	
	250	1,26	32	3	3	5	
	400	2	45	2	2	3	
	1000	5	85	0	1	2	
2000	10,5	125	0	0	1		
High pressure sodium vapour lamps with external electromagnetic ballasts - uncorrected	150	1,8	-	7	9	9	
	250	3	-	4	5	5	
	400	4,4	-	3	4	4	
	1000	10,3	-	1	1	1	
High pressure sodium vapour lamps with external electromagnetic ballasts - parallel corrected	150	0,77	20	4	5	8	
	250	1,26	32	3	3	5	
	400	2	45	2	2	3	
	1000	5,1	100	0	0	1	
High pressure sodium vapour lamps with external electronic ballasts	150	0,72	-	4	8	17	
	250	1,3	-	2	5	9	
	400	2	-	2	3	6	
	1000	5	-	0	1	2	
Low pressure sodium vapour lamps with external electromagnetic ballasts - uncorrected	18	0,4	-	25	40	40	
	35	0,6	-	15	27	27	
	55	0,6	-	15	27	27	
	90	0,9	-	10	18	18	
	135	0,9	-	10	18	18	
	180	0,9	-	10	18	18	
Low pressure sodium vapour lamps with external electromagnetic ballasts - parallel corrected	18	0,35	5	16	20	30	
	35	0,28	20	4	5	8	
	55	0,35	20	4	5	8	
	90	0,55	26	3	4	6	
	135	0,8	40	2	3	4	
	180	1	40	2	3	4	