

Modular devices



SUMMARY OF MODELS

Installation contactors and relays, impulse relays
switch depending on applied voltage or impulse

Type	RSI	RPI	MIG	MIR
I_{th}, I_e	20, 25, 32, 40, 63 A	8, 16 A	20, 32, 63 A	16 A
Arrangement of contacts	10, 11, 20, 02, 40, 31, 04	001, 002, 003	10, 11, 20, 40, 31	001
Design	mechanical	electronic	mechanical	electronic
Control	electrical + manual	electrical	electrical + manual	electrical
Noise	standard/quiet	extra quiet	quiet	extra quiet
Max. switched power ¹⁾ of each contact for devices with highest value of I_{th} :				
AC-1 (e.g. boilers, accumulator stoves and tanks)	13.3 kW / 230 V	3.7 kW / 230 V	13.8 kW / 230 V	3.7 kW / 230 V
AC-5a (e.g. parallel compensated fluorescent tubes)	5 kVA / 230 V	0.4 kVA / 230 V	5 kVA / 230 V	0.4 kVA / 230 V
AC-5b (e.g. incandescent lamps)	5 kW / 230 V	1 kW / 230 V	7 kW / 230 V	0.5 kW / 230 V

¹⁾ For complete information look at specific products.

Multiple-function time relays
switch according to set function and time

Type	MCR-MA	MCR-MB	MCR-TK	MQD
Rated voltage U_c	AC/DC 12 ÷ 230 V	AC/DC 12 ÷ 230 V	AC/DC 12 ÷ 230 V	AC 230 V
Arrangement of contacts	001, 003	001, 003	001	100
Operating voltage of contact	AC 250 V	AC 250 V	AC 250 V	AC 250 V
Operating current of contact	8 A	8 A	8 A	16 A
Time setting	0.1 s ÷ 100 hr	0.1 s ÷ 100 hr	0.1 s ÷ 10 day	0.5 ÷ 10 min
Function	Time relay	Time relay	Timing relays	Stair switches
	- 9 functions	- 18 functions	- adjustable duty cycle	- extension of the set time (at start of timing) - subsequent extension of make time (during timing) - premature switching off

STAIR SWITCHES MQD



MQD-16-100-A230

Stair switches MQD-..

- Intended for building and similar installations.
- Mainly for control of lighting circuits from more points in a corridor, on stairs, in the whole house etc.
- By repeated pressing of the control push-button, the set time is extended as many times as the push-button has been pressed.
- Pressing of the push-button longer than 2 seconds enables premature switching off.
- Possibility of 3-wire or 4-wire connection.
- Easy time setting (0.5 ÷ 10 min) by the regulation disc on the front panel of the device.
- Contacts: 1 make.
- Max. 50 control push-buttons with glow lamp 1 mA.

Type	Order code	Number of modules	Weight [kg]	Package [pcs]
MQD-16-100-A230	OEZ:45602	1	0.115	1

Specifications

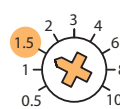
Type	MQD-16-100-A230	
Standards	EN 60669	
Approval marks	CE EAC	
Main circuit (contact)		
Arrangement of contacts ¹⁾	100	
Rated operating voltage	U_e	AC 250 V
Rated current	I_n AC-1	16 A
Inductive load	$\cos\phi$ 0.6	10 A
Lamp load max.	2 000 W	
Max. fluorescent tube load	uncompensated	20x 58 W
	compensated in series	40 pcs 58 W
	duo-connection	2x 20 pcs 58 W
	EVG = electronic ballast	5 pcs 20 W
Min. switched voltage/current	-	
Rated frequency	f_n	50/60 Hz
Connection - Cu conductor	1x 2.5 mm ² ; 2x 1.5 mm ²	
Torque	1.2 Nm	
Control circuit		
Rated control voltage	U_c	AC 230 V
Range of control voltage	90 ÷ 100 % U_c	
Rated frequency	f_n	50/60 Hz
Power loss	at idle state	0.5 W
	at timing process	1.2 W
Time setting	0.5 ÷ 10 min	
Min. excitation time	50 ms	
Max. excitation time ²⁾	unlimited	
Max. number of push-buttons with glow lamp 1 mA	100 pcs	
Reset by next impulse	no	
Additional extension of the set time	yes ³⁾	
Warning before end of timing	no	
Connection – conductor rigid and flexible	1x 2.5 mm ² ; 2x 1.5 mm ²	
Torque	1.2 Nm	
Other data		
Galvanic isolation	4 kV	
Mounting on "U" rail according to EN 60715 - type	TH 35	
Degree of protection	IP20	
Ambient temperature	-15 ÷ +50 °C	
Working position	arbitrary	

¹⁾ Each digit indicates successively the number of make, break and break-make contacts.

²⁾ The device is able to withstand permanent load in control push-button locking.

³⁾ By repeated pressing of the control push-button, the set time is extended as many times as the push-button has been pressed.

Example of time setting:



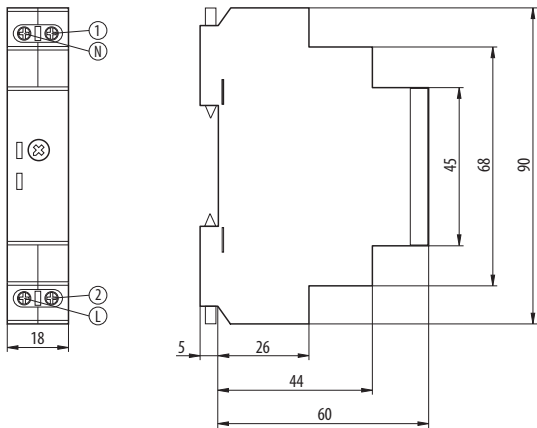
Setting the values by trimmers may cause impression of wrong setting. Regulation elements have certain tolerance. Trimmer path is notionally divided into several sections so the deducted value of trimmer resistance defines the given section, the set value. In spite of accurate

setting of regulation element to desired value the different time setting may occur. This may happen especially when setting values at the beginning of time range. In such cases it is necessary to find the required value by turning the regulation element to the left or right.

STAIR SWITCHES MQD

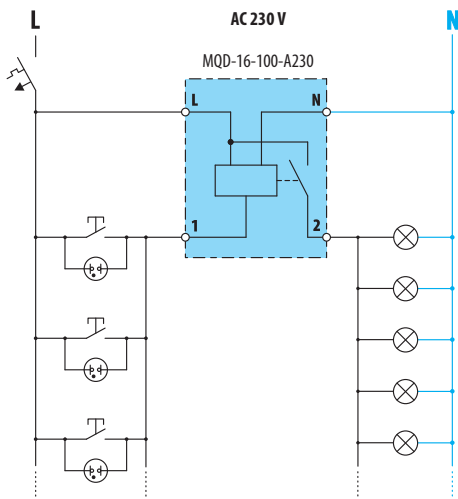
Dimensions

MQD-16-100-A230



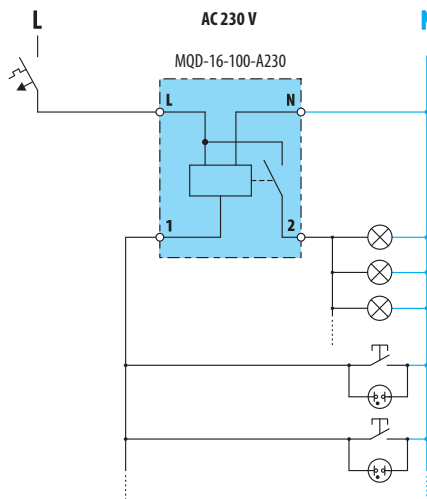
Connection examples

4-wire connection



Stair switch is controlled by switching of the phase conductor. This connection is used mainly in new installations.

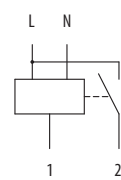
3-wire connection



Stair switch is controlled by switching of the N-conductor. This connection is used only in old installations.

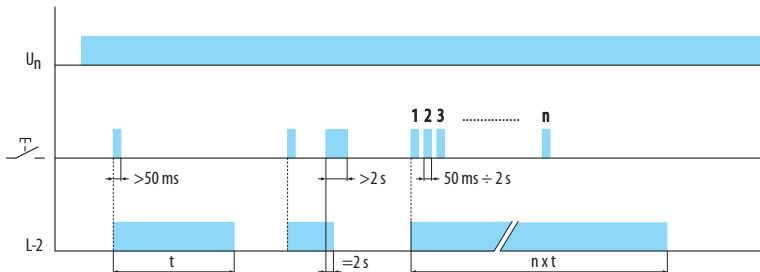
Diagram

MQD-16-100-A230



Graph

MQD-16-100-A230



Note:

In case of blocking of the control push-button in closed position for more than 4 s, the MQD stair switches remain in closed condition continuously.

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