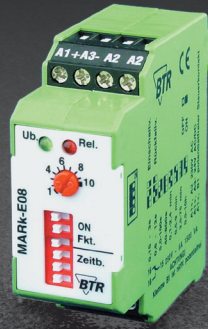


Electronic Timer Relays



Multi-function



MARK-E08

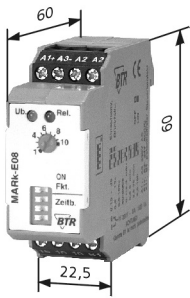
230 V AC/24 V AC/DC, 1 changeover contact

- five selectable functional modes
- eight selectable time ranges up to 10 h
- LED indication

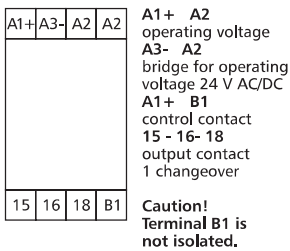
Part Number

110 657 MARK-E08 230 V AC/24 V AC/DC

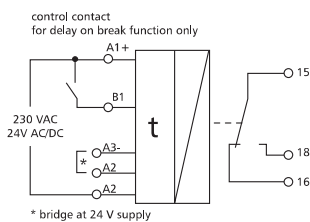
Housing Dimensions



Wiring



Wiring Diagram



Description

Multi-functional timer relay with five selectable functional modes. Multi-time with eight selectable time ranges from 0.15 s up to 10 h. Functional modes and time ranges are programmed by selection switches on the front side.

Time setting is done by means of a linear potentiometer on relative scales.

Technical Data

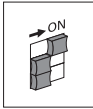
Input	nominal voltage U_N	230 V AC/24 V AC/DC
	power consumption	
	at 230 V AC	5.2 VA
	at 24 V AC	0.5 VA
	at 24 V DC	0.3 W
	operating voltage range	0.9 ... 1.1 x U_N
	frequency range	50 ... 60 Hz
	duty cycle	100 %
	recovery time t_w	>50 ms
	minimum turn-on time	>0.2 s
	repeat accuracy	0.1 %
	operating temperature range	-10 °C ... +55 °C
	storage temperature range	-25 °C ... +70 °C
	protective circuitry	polarity reversal protection of operating voltage, varistor for interference voltage protection
	relay status indication	red LED for relay lights when relay is active
	function indication	green LED
Output	output contact	1 changeover contact
	contact material	AgNi
	switching voltage max.	250 V
	continuous current max.	6 A
	making/breaking capacity	230 V~ 6 A AC1, 230 V~ 1.5 A AC3, 230 V- 0.12 A, 60 V- 0.6 A 24 V- 3 A 12 V- 4 A DC1 6 A
	contact fuses	6 A
	mechanical endurance	1x10 ⁷ switching cycles
	electrical endurance	1x10 ⁵ switching cycles
	permissible switching frequency	1200 switching cycles/h
	isolation per VDE 0110	
	rated voltage	250 V AC/DC
	overvoltage category	III
	pollution degree	2
	test voltage coil/contact	2000 V, 50 Hz 1 min.
	EMC test	emission per EN 50 081 T1 interference immunity per EN 50 082 T2
Housing	type of protection (EN 60529)	housing IP50, terminal blocks IP20
	wire cross section	2.5 mm ²
	mounting position	any
	colour	green
	weight	about 70 g
	housing dimensions WxHxL	22.5 x 60 x 60 mm
	modular	without spacing



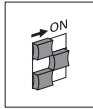
- five selectable functional modes
- eight selectable time ranges up to 10 h
- LED indication

Multi-function

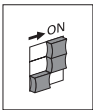
Time range selection



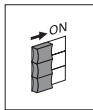
0.15 - 3 s



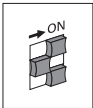
0.6 - 12 s



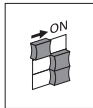
5 - 100 s



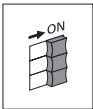
40 - 800 s



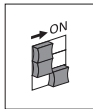
0.1 - 2,4 min.



0.5 - 9 min.



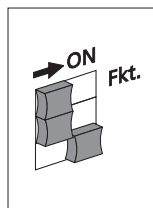
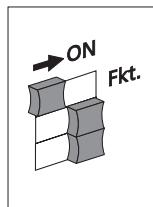
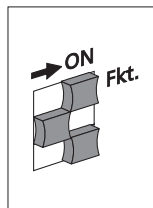
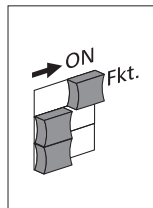
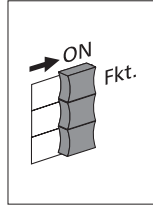
3.5 - 75 min.



0.5 - 10 h

Function Selection

Function



Functional Description

Delay on make

On application of power the selected delay time t_v starts and at its end the output relay pulls on. It only drops off when power is removed. If power is interrupted during the delay time run, the delay time starts anew after application of power and the recovery time cycle t_w .

Delay on break

Power needs to be applied continuously. The output relay pulls on without delay when the potential free control contact is closed. After opening of the control contact the selected delay time t_v starts, at its end the relay drops off.

Circuit closing, wiping

On application of power the output relay pulls on without delay and drops off after the wipe time cycle t_v . Power has to be applied at least for the wipe time period. If it is interrupted before the end of the wipe time the relay immediately drops off. This operation is only repeated when power is again applied and the recovery time t_w is over.

Flashing, interval start

On application of power the output relay stays in stored position for the selected interval time cycle t_p and then pulls on for the pulse time t_i . This operation is repeated until power is removed.

interval / pulse time ratio = 1 : 1

Flashing, pulse start

On application of power the output relay pulls on for the selected pulse time t_i and then drops out for the interval time t_p . This operation is repeated until power is removed.

pulse / interval time ratio = 1 : 1

Function Diagram

