

## Multi function timer

MKE timetron®

MKC timetron®

with thyristor output



MKE screw connection



MKC cage clamp connection

## ■ 4 functions:

Delay on operate AC/DC

Single pulse on release only AC

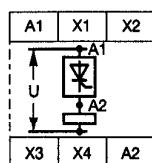
Single pulse on operate only AC

## ■ solid-state for high switching frequency

Continuous voltage range 24...240 V AC/DC

■ 2 time ranges 0.1... 300 s in one device

■ Function and time range selection by external bridge



## Time ranges

Supplied in packs of 10 units  
per reference0.1...10 s  
3...300 s

## Technical data

## Input circuit

Supply voltage	A1, A2	24...240 V AC/DC
Tolerance of the supply voltage		-10% ... +10%
Mains frequency		50...60Hz
Voltage drop in connected state		(A1/A2) ≤ 3 V
Current consumption whilst delay time		≤ 2 mA (24...60 V AC/DC) ≤ 8 mA (60...240 V AC/DC)

## Timing circuit

Time ranges	0.1...10s	3...300 s
Recovery time	100 ms	
Repetitive accuracy	± 0.2 %	
Timing error within the tolerance of the supply voltage	± 0.5 %	
Timing error within the temperature range	≤ 0.1 % / °C	

## Display of operational status

## Timer

## Output circuit

Switching voltage	max. 240 V AC
Load current min.	20 mA
Load current max.	0.8 A at T <sub>a</sub> 20 °C
Load current reduced	10 mA/°C
Surge current max.	≤ 20 A for t ≤ 20 ms

## Maximal cable length

between MKE/MKC and connected switching load	at 24 V AC = 220 m/22 nF
at 50 Hz and a cable capacity of 100 pF/m:	at 42 V AC = 100 m/10 nF
	at 60 V AC = 65 m/6.5 nF
	at 110 V AC = 50 m/5.0 nF
	at 240 V AC = 22 m/2.2 nF

## General data

Pulse voltage withstand U <sub>imp</sub>	4 kV
Operating temperature range	-20°C ... +60°C
Storage temperature range	-40°C ... +85°C
Installation position	any
Mounting on DIN rail (EN 50022)	Snap-on mounting/ Screw mounting by adapter
Wire size stranded with wire end ferrule	2 x 1.5 mm²
Weight	approx. 150 g

## Note

## Operation

MKE/MKC is a solid-state timer for various applications with thyristor output for 2-wire technique.

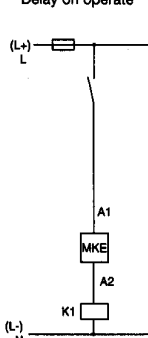
It is connected in line to the control inductor of contactors or relays. The voltage should not be connected without a load being connected, because it does not have a current limitation.

Functions and time ranges are programmed simply by plugging external wire bridges.

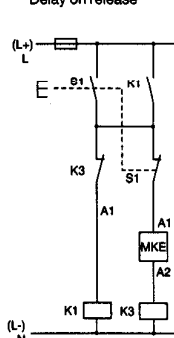
Times can be set exactly by a knurled thumb wheel with relative time scale.

Connection scheme when being used as timer delayed on release  
S1 = control contact  
K1 = contactor with timer delayed on release  
K2 = Switching delayer MKE  
K3 = Auxiliary contactor

## Delay on operate



## Delay on release



■ Approvals: CE, UL, VDE

Supply voltage	P/N: E series Screw connection	P/N C series Spring connection
24...240 V AC/DC	2 550 019 00	2 530 019 00

**Programming of functions and time ranges**  
Functions and time ranges are programmed simply by plugging external wire bridges.

## Function "Delay on operate"

Without external connection. If voltage is connected e. g. by an external control contact to a series connection of contactor or relay, the timer will start. After the set delay time the thyristor will switch and energise the contactor. MKE/MKC works as a switching delayer.

## Function "Delay on release"

With an additional auxiliary contactor it is possible also to realize a circuit with "delay OFF" afterwards the circuit on the scheme beneath.

## Function "Single pulse on operate"

External connection X<sub>1</sub>-X<sub>2</sub>. If voltage is connected e. g. by an external control contact to a series connection of contactor or relay, the thyristor will switch without delay and energizes the contactor. After the time has elapsed, the thyristor blocks, the contactor opens.

## Function "Flashing, starting with operate"

External connection X<sub>1</sub>-X<sub>2</sub> and X<sub>3</sub>-X<sub>4</sub>. If voltage is connected e. g. by an external control contact to a series connection of contactor or relay, the relay will control the contactor cyclically. The ON and OFF times are identical. It starts with an "ON" time.

## Function "Flashing, starting with release"

External connection X<sub>1</sub>-X<sub>2</sub>. If voltage is connected e. g. by an external control contact to a series connection of contactor or relay, the contactor controls cyclically with the preset time. The ON and OFF times are identical. It starts with an "OFF" time.

## Programming the time ranges

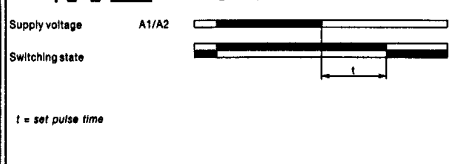
Time ranges 0.1...10 s - necessary connection: X<sub>3</sub>-X<sub>4</sub>  
3...300 s - no connection

## 4 Functions

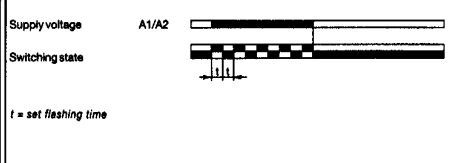
## ☒ = Delay on operate



## 1 □ ☒ = Single pulse on operate



## □ ☒ = Flasher, starting with "ON"



## □ ☒ = Flasher, starting with "OFF"

