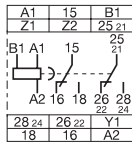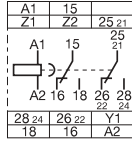# Multifunction timer
MBS timetron®
with relay output

CE

Supply voltage versions:
12...40 V AC / 12...60 V DC and
380...440 V AC

- 10 time ranges from 0.05 s ... 300 h covered by one unit
- 2 SPDT contacts, 2nd SPDT contact as instantaneous contact
- Controllable by 3-wire proximity switch
- Suitable for the connection of a remote potentiometer
- 3 LEDs to indicate operational status
- Supply voltage versions:
  12...40 V AC / 12...60 V DC and 380...440 V AC

10 time ranges in one unit

1	0.05 - 1 s*	6	15.0 - 300 s
2	0.15 - 3 s*	7	1.50 - 30 min.
3	0.50 - 10 s	8	15.0 - 300 min.
4	1.50 - 30 s	9	1.50 - 30 h
5	5.00 - 100 s	10	15.0 - 300 h

* In this time range no flashing of the green LED while timing.

Technical data

Input circuit

Supply voltage - power consumption	**A1-A2**	12...40 V AC	- approx. 0.5...1.2 VA
	A1-A2	12...60 V DC	- approx. 0.5...1.8 W
	A1-A2	110...240 V AC	- approx. 2.5...12 VA
	A1-A2	240 V AC	- approx. 12 VA
	A1-A2	380...440 V AC	- approx. 1.2 VA
Tolerance of the supply voltage		-15 % ... +10 %	
Supply voltage frequency		50...60 Hz	
Control contact connections	**Y1-Z2**	external timer start	
Voltage supplied at the control contacts		Voltage supplied internally; no external supply required	
Minimum controller pulse length		20 ms	
Floating voltage at the control contacts		10...40 V DC	
Maximum switching current in the control circuit		< 1 mA	
Maximum cable length to the control inputs		50 m	
Remote potentiometer connection	**Z1-Z2**	50 kΩ	
Maximum cable length to the remote potentiometer		25 m shielded, shield connected to Z2	
Duty time		100 %	

Timing circuit

Time ranges	0.05 s ... 300 h
Recovery time	< 50 ms
Repetitive accuracy (constant parameters)	< 0.2 %
Timing error within the tolerance of supply voltage	< 0.008 % / % ΔV
Timing error within temperature range	< 0.07 % / °C

Display of operational status

Supply voltage/ timer	LED green steady/ flashing while timing
1st output relay energized	LED red
2nd output relay energized	LED red

Output circuit   **15-16/18, 25-26/28**

		Relay, 2 SPDT contacts
Rated voltage	VDE 0110, IEC 947-1	250 V
Rated switching voltage		250 V AC
Rated switching current	AC 12 (resistive)	4 A (at 230 V)
Rated switching current	AC 15 (inductive)	3 A (at 230 V)
Rated switching current	DC 12 (resistive)	4 A (at 24 V)
Rated switching current	DC 13 (inductive)	2 A (at 24 V)
Maximum mechanical life		30 x 10^6 operations
Maximum electrical life (to AC 12 / 230 V/ 6 A)		1 x 10^5 operations
Short-circuit proof, max. fuse rating		10 A / fast, operating class *gL*

General data

Rated impulse withstand voltage V_{imp}	4 kV
Operating temperature	-25°C ... +65°C
Storage temperature	-40°C ... +85°C
Installation position	any
Mounting of DIN rail (EN 50022)	Snap-on mounting/ Screw mounting by adapter
Wire size stranded with wire end ferrule	2 x 14 AWG (2 x 2.5 mm²)
Weight	approx. 5.3 oz (150 g)

Operation

A timer for service and maintenance purposes must be suitable to replace a large variety of types featuring various functions, voltages and time ranges. Simple and reliable setting is also essential to minimize downtimes of machines and installations.

With the multi-function timer MBS timetron® in a 22.5 mm width, you have an appropriate timer for any application and multiple time ranges.

The eight functions can be selected by a rotary switch on which every function is shown with a international sign, e. g. ⬚ for "delay on operate."

The 10 time ranges from 0.05 s ... 300 h can also be selected by another rotary switch on which the time values are shown.

Then the desired time value is set by a potentiometer with absolute scale.

When connecting an external potentiometer the internal logic detects an occupied control input, and automatically the external resistance value is used. The green LED flashes while timing.

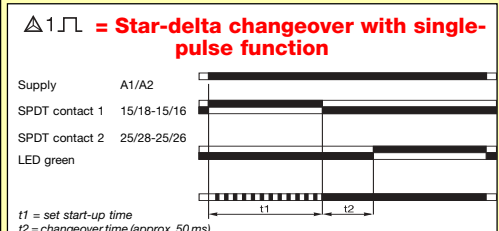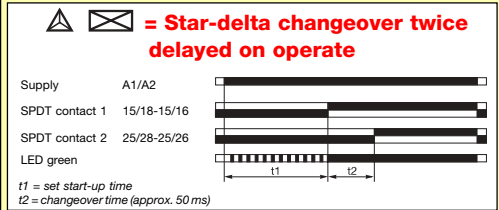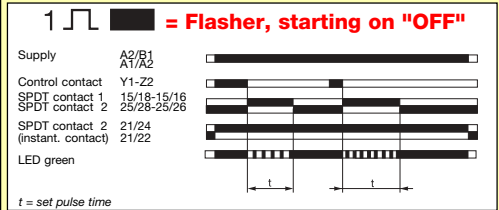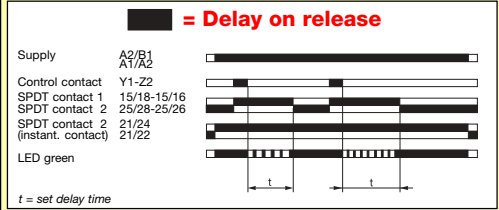Dimensions (W x H x D): 22.5 x 78 x 100 mm

■ Approvals:

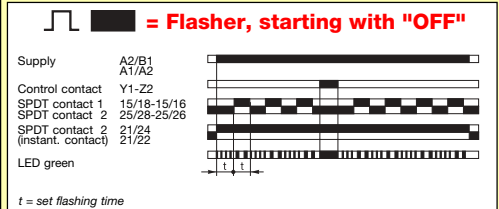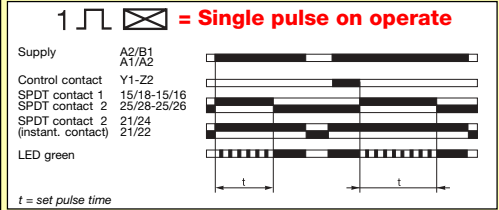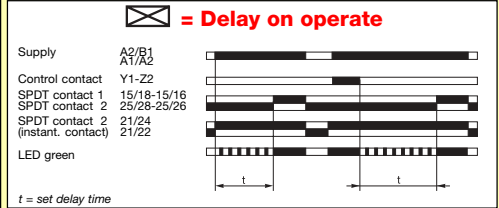| Supply voltage	P/ N:
12...40 V AC / 12...60 V DC	2 430 010 12
24 V AC/DC / 110...240 V AC	2 430 012 02
380...440 V AC	2 430 011 22

Accessories	P/ N:
Remote potentiometer	3 701 800 10
Sealable transparent cover	3 430 005 01
Adapter for screw mounting	3 440 029 01

8 Functions

⬚ = Delay on operate

t = set delay time

1 ⊓ ⬚ = Single pulse on operate

t = set pulse time

⊓ ■ = Flasher, starting with "OFF"

t = set flashing time

⊓ ⬚ = Flasher, starting with "ON"

t = set flashing time

■ = Delay on release

t = set delay time

1 ⊓ ■ = Flasher, starting on "OFF"

t = set pulse time

⚠ ⬚ = Star-delta changeover twice delayed on operate

t1 = set start-up time
t2 = changeover time (approx. 50 ms)

⚠1⊓ = Star-delta changeover with single-pulse function

t1 = set start-up time
t2 = changeover time (approx. 50 ms)

Accessories: See Accessories page at end of section.