

## Electronic Timers

On Delay • On Pulse • Symmetrical Recycler XM



### DESCRIPTION

Multifunction timer with 4 functions and 4 time ranges. The function and the time range are selectable via 2 front mounted rotary switches.

Time ranges: 0.6-6sec, 6-60sec, 0.6-6min, 6-60min. The time is adjustable on the timer front.

The timer can directly be connected to the supply voltage in the range of 10.5-265V AC/DC.

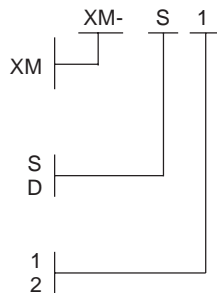
Single or double relay output with LED indication of energized relay. Intermittent flashing of LED indicating timing period (over 6 sec.). Versions available for DIN rail or 11-pole plug-in mounting.

### VERSIONS/ORDERING CODES

**Type:**  
On delay.  
On pulse.  
Symmetrical recycler.

**Mounting:**  
11-pole plug-in.  
DIN rail.

**Output relay:**  
SPDT.  
DPDT.



### OPERATION

The function is selected via the rotary switch on the timer front. The switch may only be operated, when the supply voltage is disconnected.

#### On delay.

The timing period starts when supply voltage is connected. When the preset time has elapsed, the relay is energized.

The relay is de-energized when the supply voltage is disconnected. If the supply voltage is disconnected before the preset time has elapsed, the timer resets.



#### On pulse.

When supply voltage is connected, the relay is energized and the timing period starts. When the preset time has elapsed, the relay is de-energized.

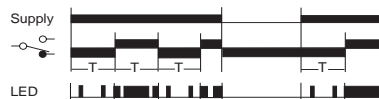
If the supply voltage is disconnected before the preset time has elapsed, the relay will be de-energized and the timer resets.



#### Symmetrical recycler with pause or pulse start.

Depending on the setting of the function switch the timer starts with e.g a pause period, when supply voltage is connected. When the pause period has elapsed, the relay energizes. The relay remains energized during the pulse period. The sequence is repeated until the supply voltage is disconnected.

The duration of the pause and pulse periods is equal.



## TECHNICAL DATA

**Time ranges:** 0.6-6sec, 6-60sec, 0.6-6min, 6-60min.  
Full linearity between the ranges is provided i.e. an adjustment made to a specific time in seconds will give the same time in minutes just by operating the range switch.

**Timer accuracy:**  
Repeating accuracy:  $\pm 0.5\%$  at constant conditions.  
Setting accuracy:  $\pm 10\%$ .  
Temperature drift: Max. 0.15% per °C.

**Reset time:** Max. 100msec.

**Output relay:** SPDT or DPDT. <sup>1)</sup>  
Load ( $\cos\phi=1$ ):  
D1/S1: Max. 8A/240V AC <sup>2)</sup>  
Min. 10mA/24VDC  
D2/S2: Max. 5A/240V AC <sup>2)</sup>  
Min. 100mA/24VDC

Contact material:  
D1/S1: AgNi 0,15  
D2/S2: AgCdO

Frequency: Max. 1000 operations per hour at max. load.  
Mechanical life time: Min.  $10 \times 10^6$  operations.  
Electrical life time: Min. 100,000 operations at max. load.  
Operate time: Max. 50msec.  
Release time: Max. 20msec.

**Mounting:**  
S1/S2: 11-pole plug-in.  
D1/D2: Directly on DIN rail TS35 (EN50022).

**Terminals:** Max. conductor size 4 mm<sup>2</sup>.  
(D1/D2 only)  
Screw type terminals with self-lifting clamps shrouded in accordance to VDE0106 (finger and back of hand protection).

**Supply voltage:** 10.5-265V AC/DC

**Mains frequency:** 40-440Hz.

**Consumption:** 0.5-3VA.

**Cable lengths:**  
Supply voltage: Max. 50 m.

**Protection:**  
S1/S2: IP40.  
D1/D2: IP20.

**EMC:** Conforming to EN 50081-1/EN 50082-2.

**Isolation:**  
Supply to relay contacts: 2kV AC according to EN 60950 class I.

**Ambient temperature:** -20 to +55°C.

**Housing:** Black Noryl SE-1.

**Weight:** Typically 80 g.

## NOTES/REMARKS

- 1) Double output relay available in S2/D2 versions.
- 2) When inductive or DC loads are switched the load capacity of the output relay is reduced, see the output load diagrams on fig. 1 and 2. When inductive loads are switched, it is recommended to use a RC-network, see accessories on page 130, to protect the relay contacts.

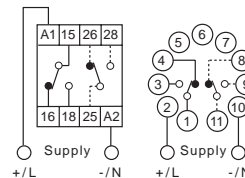
## WIRING DIAGRAMS

### Supply voltage above 50V.

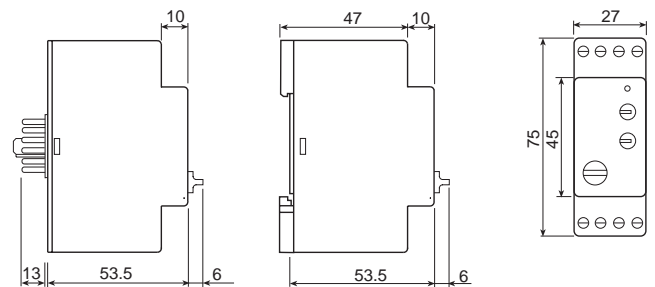
The installation (all terminals) must be carried out according to the safety regulations! The control input and the supply input must be connected to the same circuit (phase and main switch). The output relay may only be used in circuits made according to the safety regulations.

### Supply voltage below 50V.

The output relay may NOT be used for voltages above 50V unless the entire supply circuit is made according to the safety regulations.



## MECHANICAL DIMENSIONS



## OUTPUT LOAD DIAGRAMS, X & TX TIMERS.

Fig. 1

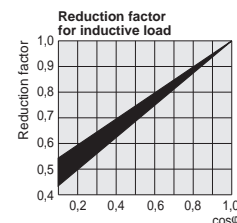


Fig. 2

