

## Electronic Timers

On Delay • Release Delay • On Pulse • Symmetrical Recycler SXM



### DESCRIPTION

Multifunction timer with 5 functions and 4 time ranges. The function and the time range are selectable via 2 front mounted rotary switches.

Time ranges: 0.1-1sec, 1-10sec, 0.1-1min, 1-10min. The time is adjustable on the timer front.

The timer can be supplied from a.c. mains(10/A2) or from 12-24V AC/DC (11/A3) depending on the terminal used.

Solid state output with triac (AC) or transistor (DC) with LED indication of energized output. Intermittent flashing of LED indicating timing period (over 6 sec.). The version with a.c. output includes zero voltage switching. Supply and output are galvanically isolated. Versions available for DIN rail or 11-pole plug-in mounting.

### VERSIONS/ORDERING CODES

#### Type:

On delay.

Release delay.

On pulse - without control switch.

On pulse - with control switch.

Symmetrical recycler with pause start.

#### Mounting:

11-pole plug-in.

DIN rail.

#### Output:

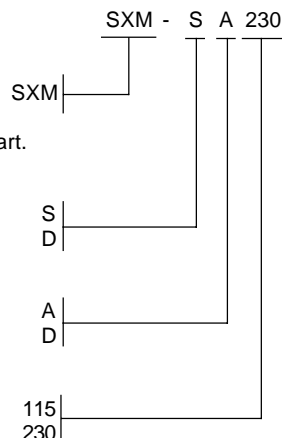
AC. (12-240V).

DC (12-48V).

#### Supply voltage:

110/120V AC/12-24V AC/DC

220/240V AC/12-24V AC/DC



### 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 the supply voltage is connected. When the preset time has elapsed, the output is energized.

The output is de-energized when the supply voltage is disconnected.



#### Release delay.

The timer must be connected to supply voltage permanently.

When the switch is closed, the output is energized. When the switch is opened again, the timing period starts.

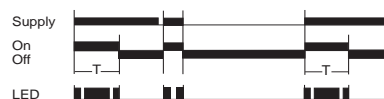
The output is de-energized when the preset time has elapsed.



#### On pulse - without control switch.

A jumper must be connected between 5 and 7 (B1 and B2).

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



#### On pulse - with control switch.

The timer must be connected to supply voltage permanently.

When the control switch is closed, the output is energized and the timing period starts. When the preset time has elapsed, the output de-energizes.

To energize the output again, the control switch must be opened and closed again, after the output is de-energized.



#### Symmetrical recycler with pause start.

When supply voltage is connected and the pause period has elapsed, the output is energized. The output 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:** 0.1-1sec, 1-10sec, 0.1-1min, 1-10min.  
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.

**Start pulse:** Min. 30msec.

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

**Input current (control switch):** 3-5mA (max. 0.2A peak).

**Output :**  
Load ( $\cos\phi=1$ ): DC: Max. 2A/60V (3A/60V peak). <sup>1)</sup> on page 17  
AC: Max. 1A/240V (1.5A/240V peak). <sup>1)</sup> on page 17  
Voltage: DC: 12-48V (10-60V).  
AC: 12-240 V (10-265V).  
Minimum current: DC: 0.  
AC: 5mA/ $\cos\phi>0.25$ .  
Voltage drop: DC: Max. 0.2V.  
AC: Max. 1.2V.  
Leakage current: DC: Max. 0.1mA.  
AC: Max. 1mA.  
Release time: Typ. 20msec.

**Mounting:**  
S: 11-pole plug-in.  
D: Directly on DIN rail TS35 (EN50022).

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

**Supply voltage:** 110/120V AC (95-135V) and 12-24V AC/DC (10-30V).  
220/240V AC (195-265V) and 12-24V AC/DC (10-30V).

**Mains frequency:** 47-63Hz.

**Consumption:** 0.5-3VA.

**Cable lengths:**  
Supply voltage: Max. 25 m.  
Control switch: Max. 50 m.

**Protection:**  
S: IP40.  
D: IP20.

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

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

**Ambient temperature:** -20 to +55°C. <sup>1)</sup> on page 16

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

**Weight:** Approx. 80 g.

## WIRING DIAGRAMS

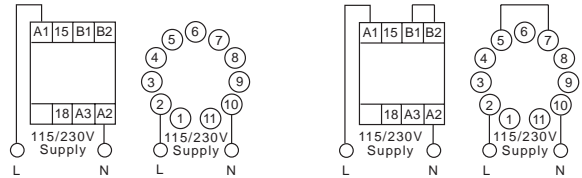
### Supply voltage above 50V.

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 may only be used in circuits made according to the safety regulations.

### Supply voltage below 50V.

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

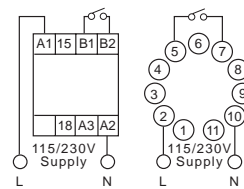
### On delay. Symmetrical recycler. On pulse (without control switch).



See notes on page 17

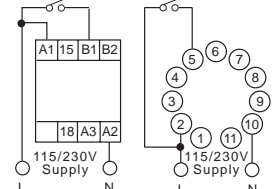
See notes on page 17

### Release delay. On pulse (with control switch). Alternative 1



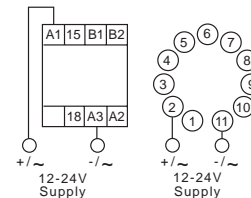
See notes on page 17

### Alternative 2

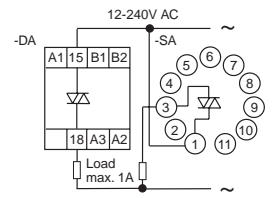


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### 12-24V supply (all functions).

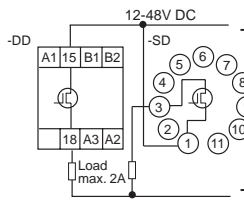


### AC output.

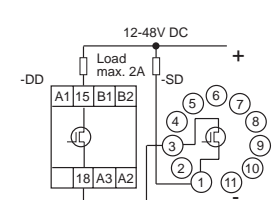


### DC output.

#### Negative common



#### Positive common



## MECHANICAL DIMENSIONS, SXM & SXT

