



Electromechanical Time Relay

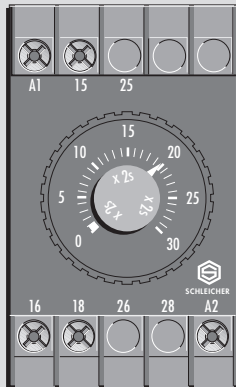
SZM 51 for single voltage

Function: ON-delay (AV)

1 time range

Contact equipment: 1 timed changeover

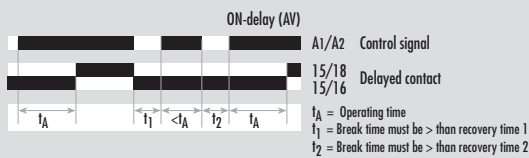
SZM 51



Function Diagram

FD 0032

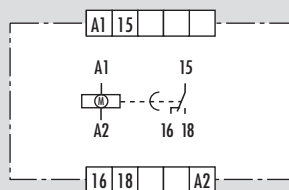
SZM 51



Connection Diagram

KS 5148/2

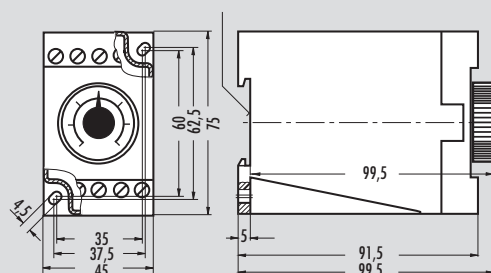
SZM 51



Dimensions

S 3-12

for DIN-rail acc. to EN 50022



General

AV (see page S 1/3).

Infinitely variable time setting within a range is carried out with the aid of a transparent rotary knob.

The time-remaining indicator moves during operation from the set time in the direction of zero.

Function

Upon application of the supply voltage and elapsing of the preselected delay time, the contact is actuated.

Upon de-energization, the sliding armature is decoupled from the gear train and the contact reverts to its off-position. A torsion spring resets the timing gear to zero.

Note

- ▶ Re-energization during the reset movement has to be avoided.
- ▶ The mounting position of the SMZ 51 can only be on a vertical flat face or with a maximum inclination of 15 °.

Product Description

The electromechanical time relay SZM 51 has a single setting range and is available in the following time ranges:

Time Range

at 50 Hz rated frequency		at 60 Hz rated frequency	
0,4	to 10 s	0,4	to 8 s
1	to 30 s	1	to 25 s
2	to 60 s	2	to 50 s

Type	Standard voltage	Special voltage	Price Code
SZM 51 10 s	24 V AC	42 V AC	S 1/39.1
SZM 51 30 s	110 to 115 V AC	48 V AC	
SZM 51 60 s	230 V AC 50 or 60 Hz	120 to 127 V AC 240 V AC 50 or 60 Hz	

Accessories

Cover Z 29 (sealable transparent cover)

Price code for accessories (see page S 1/72).



TECHNICAL DATA

FUNCTION according to DIN VDE 0435 Part 1 110:04.89

Point 3.12

Function display
Function diagram

POWER SUPPLY

Rated voltage U_N V AC

Rated consumption: motor at 50 Hz and U_N (AC) VA
 Rated consumption: motor at 50 Hz and U_N (AC) W
 Rated consumption: coil at 50 Hz and U_N (AC) VA
 Rated consumption: coil at 50 Hz and U_N (AC) W
 Rated frequency Hz
 Operating voltage range

TIME CIRCUIT

Time setting/Number of time ranges
 Available time ranges at 50 Hz/60 Hz s

Recovery time ms
 Minimum switch-ON time % U_N
 Release value
 Permissible parallel load
 Internal rectifier
 Average of the error related to the full-scale value

Dispersion related to the full-scale value %

OUTPUT CIRCUIT

Contact equipment
 Contact material
 Available modifications
 Switching voltage U_n V AC/DC
 Maximum continuous current I_n A
 Application category according to EN 60947-5-1:1991

Permissible switching frequency switching cycles/h
 Mechanical service life switching cycles
 Response time ms
 Release time ms

GENERAL DATA

Creepage and clearance distances between circuits according to DIN VDE 0110-1:04.97: rated surge voltage kV
 Over voltage category
 Contamination level
 Design voltage V AC
 Test voltage U_{eff} 50 Hz acc. to DIN VDE 0110-1, Table A.1 kV
 Protection class housing/terminals acc. to DIN VDE 0470 Sec. 1:11.92
 Radiated noise
 Noise immunity

Ambient temperature, working range °C
 Dimensions
 Connection diagram
 Weight kg
 Accessories
 Approvals

GENERAL TECHNICAL SPECIFICATIONS

SZM 51

Electromechanical time relay for single voltage
 ON-delay time relay
 Pointer for operating time
 FD 0032

24 42 48 110-120-230 240
115 125

ca. 3,3
 ca. 2,2
 -
 -
 50 or 60
 0,8 to 1,1 x U_N

analog/1
 0,4 to 10; / 0,4 to 8
 1,0 to 30; / 1,0 to 25
 2,0 to 60 / 2,0 to 50
 $\leq 4\%$ of the operating time
 -
 ≥ 15
 yes
 -
 at standard duty:
 Setting range 30 s; $\pm 4\%$
 Setting range 60 s; ± 4
 Setting range 10 s; $\pm 6\%$
 ± 1

1 timed changeover
 Ag Cu
 Ag Pd 70/30* or Au Ni 5*
 230/230
 5
 AC-15 U_e 230 V AC, I_e 2 A
 DC-13 U_e 24 V DC, I_e 2 A
 1200
 5×10^6 or 10^4 motor operations
 -
 ≤ 200 at full scale 10 s and 30 s
 ≤ 300 at full scale 60 s

4
 III
 3 outside, 2 inside
 250
 2,21
 IP 30/IP 20
 EN 50081-1:03.93, -2:03.94
 EN 50082-2:1995

- 10 to + 45
 S 3-12
 KS 5148/2
 0,2
 cover Z 29
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page i.5

*) Price: upon request