



Electromechanical Time Relay

SZM 51 for single voltage

Function: ON-delay (AV)

1 time range

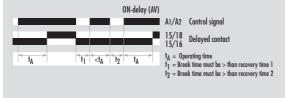
Contact equipment: 1 timed changeover

SZM 51



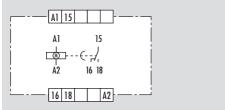
FD 0032 **Function Diagram**

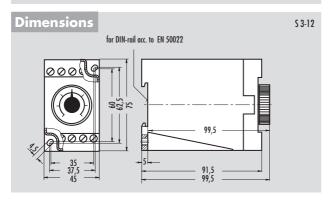
SZM 51



KS 5148/2 **Connection Diagram**

SZM 51





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 51can 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		8	
1	to	30	S		1	to	25	S
2	to	60	c		2	to	50	c

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

Accessories

Cover Z 29 (sealable transparent cover)

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

Г	_	_	

TECHNICAL DATA SZM 51 FUNCTION according to DIN VDE 0435 Part 110:04.89 Electromechanical time relay for single voltage Point 3.12 ON-delay time relay Function display Pointer for operating time Function diagram FD 0032 **POWER SUPPLY** Rated voltage U_N V AC 24 42 48 110-120-230 240 115 125 Rated consumption: motor at 50 Hz and U_N (AC) VA ca. 3,3 Rated consumption: motor at 50 Hz and U_N (AC) W ca. 2,2 Rated consumption: coil at 50 Hz and U_N (AC) VA Rated consumption: coil at 50 Hz and UN (AC) W Rated frequency Hz 50 or 60 Operating voltage range 0,8 to 1,1 x U_N **TIME CIRCUIT** Time setting/Number of time ranges 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 Available time ranges at 50 Hz/60 Hz S \leq 4 % of the operating time Recovery time Minimum switch-ON time ms Release value $\% \; U_N$ ≥ 15 Permissible parallel load yes Internal rectifier Average of the error related to the full-scale value at standard duty: Setting range 30 s; \pm 4 % Setting range 60 s; ± 4 Setting range 10 s; \pm 6 % 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 In 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

1 timed changeover Ag Cu Ag Pd 70/30* or Au Ni 5* 230/230 AC-15 $\rm U_e$ 230 V AC, $\rm I_e$ 2 A DC-13 U_e 24 V DC, I_e 2 A 5 x 106 or 104 motor operations \leq 200 at full scale 10 s and 30 s

≤ 300 at full scale 60 s

GENERAL DATA

Creepage and clearance distances between circuits according to DIN VDE 0110-1:04.97: rated surge voltage k٧ Over voltage category Contamination level Design voltage V AC Test voltage U_{eff} 50 Hz acc. to DIN VDE 0110-1, Table A.1 Protection class housing/terminals acc. to DIN VDE 0470 Sec. 1:11.92 Radiated noise Noise immunity °C Ambient temperature, working range **Dimensions**

Connection diagram Weight kg Accessories Approvals

GENERAL TECHNICAL SPECIFICATIONS

4 Ш 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 + 45S 3-12 KS 5148/2 0,2 cover Z 29 page i.4 page i.5

*) Price: upon request