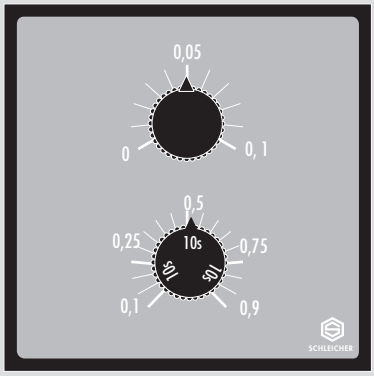
Electronic Time Relays

DZTR 320 L, DZTR 420 L for single voltage

Function: OFF-delay (RV) to limit the safety time (with TÜV Test Certificate), for burning control systems

Contact equipment: DZTR 320 L = 1 changeover for safety time and 1 changeover
DZTR 420 L = 1 changeover for safety time and 1 changeover

DZTR 320 L, ... 72 x 72



Function

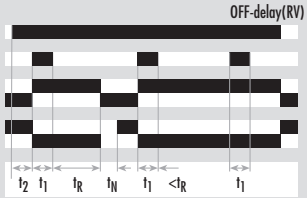
Infinitely variable coarse time setting within a range is carried out with the aid of the upper rotary knob. Infinitely variable fine time setting within a range is carried out with the aid of the upper rotary knob.

Upon application of the control signal and presence of the supply voltage, the contacts trigger. When the control signal is removed, the operating time starts. After the selected OFF-delay time has elapsed, the contacts go into their off position.
The electronic time relays contain two different time circuits. Each of them has a relay that is switched according to the VDE 0435 norm. The contact used for the safety time with the terminals 15/16/18 results from the internal serial connection of the switched contacts belonging to both relays. It is granted that in case of interruption of one of both time circuits, there is no parallel operation of both relays and that terminals 16 or 18 will not be triggered. Therefore, it is assured that in case of failure of the time relay, the preset OFF-delay time is shortened. This condition complies with the requirements of the TÜV according to the Vd TÜV Direction Sheet No.452. The contact 25/26/28 cannot be used for the safety time circuit.

Function Diagram

FD 0062

DZTR 320 L, ...



A1/A2 Supply voltage
B1 Control signal
25/28 25/26 Contact
15/16 15/18 Contact for safety time

t_R = Returning time
t_N = Overshoot time is < than 0,3 % of t_R
t_1 = Make time must be > than minimum switch-on time
t_2 = Time between application of the supply voltage and of the control signal B1, must be > than recoverry time 1

Product Description

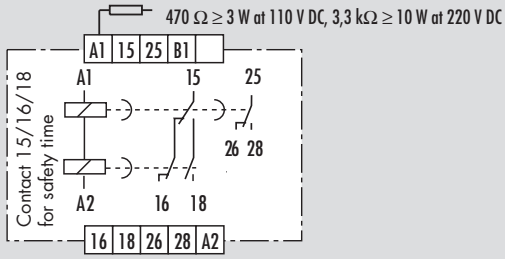
The electronic time relays DZTR ... are single range items and available in the following time ranges:

Time Range		
0,5	to	5 s
1	to	10 s
2	to	20 s
0,1	to	1 min
1	to	10 min
3	to	30 min

Connection Diagram

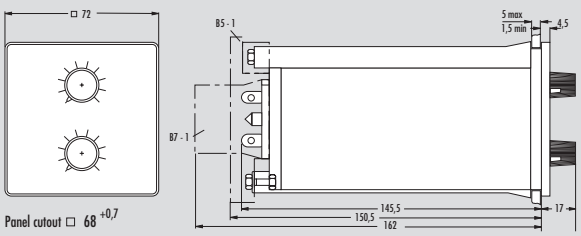
KS 0135/2

DZTR 320 L, ...



Dimensions

D 1-22



Type	Standard Voltage	Price Code
DZTR 320 L 5 s DZTR 320 L 10 s DZTR 320 L 20 s	230 V AC 50 to 60 Hz	**D 3/29.1**
DZTR 320 L 1 min	230 V AC 50 to 60 Hz	**D 3/29.2**
DZTR 320 L 10 min	230 V AC 50 to 60 Hz	**D 3/29.3**
DZTR 320 L 30 min	230 V AC 50 to 60 Hz	**D 3/29.4**
DZTR 420 L 5 s DZTR 420 L 10 s DZTR 420 L 20 s	24 V DC 48 V DC 60 V DC 110 V DC 220 V DC	**D 3/29.5**
DZTR 420 L 1 min	24 V DC 48 V DC 60 V DC 110 V DC 220 V DC	**D 3/29.6**
DZTR 420 L 10 min	24 V DC 48 V DC 60 V DC 110 V DC 220 V DC	**D 3/29.7**
DZTR 420 L 30 min	24 V DC 48 V DC 60 V DC 110 V DC 220 V DC	**D 3/29.8**

TECHNICAL DATA

		DZTR 320 L	DZTR 420 L
FUNCTION according to DIN VDE 0435 Part 110:04.89		Single range time relay for single voltage	Single range time relay for single voltage
	Point 3.16	OFF-delay time relay with auxiliary supply acc. to VdTÜV-Direction Sheet No. 452 for safety times	OFF-delay time relay with auxiliary supply acc. to VdTÜV-Direction Sheet No. 452 for safety times
Function diagram		FD 0062	FD 0062
POWER SUPPLY			
Rated voltage U_N	V DC		**24** | **48** | **60** | **110** | **220**
Rated voltage U_N	V AC	**230**	
Rated consumption at 50 Hz and U_N (AC)	VA	14	
Rated consumption at 50 Hz and U_N (AC)	W	3,0	
Rated consumption DC	W		3 | 3,5 | 3,5 | 5,3* | 9**
			* with ext. series resistance 470 Ω ≥ 3 W
			** with ext. series resistance 3,3 kΩ ≥ 10 W
Rated frequency	Hz	50 to 60	
Operating voltage range		0,8 to 1,1 x U_N	0,8 to 1,1 x U_N
Rated current of the control signal (B1)	mA	ca. 3	ca. 3
TIME CIRCUIT			
Time setting/Number of time ranges		analog/1	analog/1
Available setting ranges	s	0,5 to 5; 1 to 10; 2 to 20;	0,5 to 5; 1 to 10; 2 to 20;
	min	0,1 to 1; 1 to 10; 3 to 30	0,1 to 1; 1 to 10; 3 to 30
Recovery time 1/2	ms	–/–	–/–
Minimum switch-ON time	ms	ca. 30	ca. 30
Release value	% U_N	–	–
Permissible parallel load		no	no
Internal rectifier		yes	yes
Average of the error		–	–
Dispersion	% + ± 10 ms	≤ ± 1	≤ ± 1
Influence of the energizing value, supply voltage	%/% Δ U_N	≤ 0,1	≤ 0,1
Influence of the ambient temperature	%/K	≤ 0,3	≤ 0,3
OUTPUT CIRCUIT			
Contact equipment		1 changeover for safety time and 1 timed changeover	1 changeover for safety time and 1 timed changeover
Contact material		Ag CD O	Ag CD O
Switching voltage U_n	V AC/DC	250/300	250/300
Maximum continuous current I_n	A	5	5
Application category according to EN 60947–5–1:1991		AC–15 U_e 230 V AC, I_e 2 A DC–13 U_e 24 V DC, I_e 2 A	AC–15 U_e 230 V AC, I_e 2 A DC–13 U_e 24 V DC, I_e 2 A
Permissible switching frequency	switching cycles/h	6000	6000
Mechanical service life	switching cycles	30×10^6	30×10^6
Response time	ms	–	–
Release time	ms	–	–
GENERAL DATA			
Creepage and clearance distances between circuits acc. to DIN VDE 0110-1:04.97: Rated surge voltage	kV	2	2
Over voltage category		III	III
Contamination level		3 outside, 2 inside	3 outside, 2 inside
Design voltage	V AC	250	250
Test voltage U_{eff} 50 Hz acc. to DIN VDE 0110-1, Table A.1	kV	2,21	2,21
Protection class: Housing front panel/housing rear panel/flat pin terminal		IP 50/IP 20/IP 00	IP 50/IP 20/IP 00
Radiated noise		EN 50081–1:03.93, –2:03.94	EN 50081–1:03.93, –2:03.94
Noise immunity		EN 50082–2:1995	EN 50082–2:1995
Ambient temperature, working range	°C	-20 to + 60	-20 to + 60
Dimensions		D 1-22	D 1-22
Connection diagram		KS 0135/2	KS 0135/2
Weight	kg	0,45	0,45
Accessories		cover DA 1, lockable cover V 4, seal Z 1, socket connector B 5, pin holder B 7,	cover DA 1, lockable cover V 4, seal Z 1, socket connector B 5, pin holder B 7,
Approvals		page i.4	page i.4
GENERAL TECHNICAL SPECIFICATIONS		page i.5	page i.5