



## Electronic Time Relay

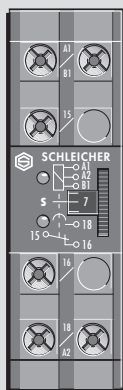
### KZT 310 for single voltage

**Function: OFF-delay (RV)** with auxiliary supply

**1 time range**

**Contact equipment: 1 timed changeover**

### KZT 310



### Function

RV (see page K 2/3).

The time setting within a range is carried out with the aid of a thumbwheel disc. Scale values are absolute related to the selected time factor.

### Product Description

The electronic time relay KZT 310 is a single range item and available in the following time ranges:

#### Time Range

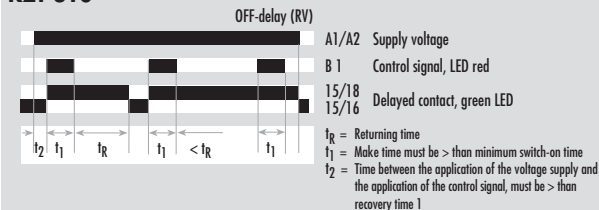
0,05	to	1 s
0,15	to	3 s
0,5	to	10 s
1,5	to	30 s
5	to	100 s
15	to	300 s
0,5	to	10 min
1,5	to	30 min

# 2

### Function Diagram

FD 0037

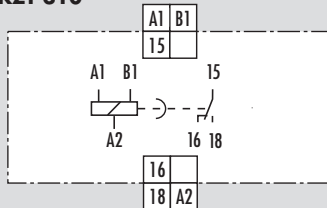
#### KZT 310



### Connection Diagram

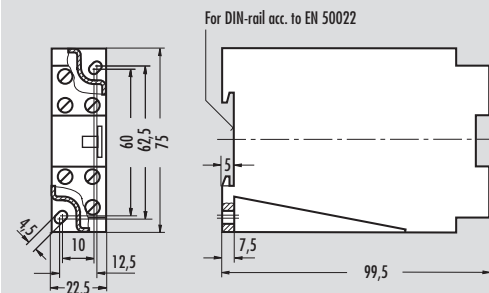
KS 0194/2a

#### KZT 310



### Dimensions

K 1-7



Type	Standard voltage	Special voltage	Price Code
KZT 310 1 s	24 V AC/DC	42 V AC/DC	<b>K 2/41.1</b>
KZT 310 3 s	110 to 127 V AC	48 V AC/DC	
KZT 310 10 s	220 V AC	60 V AC/DC	
KZT 310 30 s	240 V AC	50 to 60 Hz	
KZT 310 100 s	50 to 60 Hz		
KZT 310 300 s			
KZT 310 10 min			
KZT 310 30 min			



## TECHNICAL DATA

**FUNCTION** according to DIN VDE 0435 Part 1 110:04.89

Point 3.16

Function display  
Function Diagram

### POWER SUPPLY

Rated voltage  $U_N$  V AC/DC  
Rated voltage  $U_N$  V AC

Rated consumption at 50 Hz and  $U_N$  (AC) VA  
Rated consumption at 50 Hz and  $U_N$  (AC) W  
Rated consumption (DC) W  
Starting current inrush A/ms  
Rated frequency Hz  
Operating voltage range

### TIME CIRCUIT

Time setting/Number of time ranges s  
Available time ranges s

Rated current for the energizing quantity mA  
Recovery time 1/2 ms

Minimum switch-ON time ms  
Release value %  $U_N$   
Permissible parallel load yes  
Internal rectifier yes  
Average of the error diagram 4, page i.5  
Dispersion %  $\pm 10$  ms  $\leq \pm 0,5$   
Influence of the energizing quantity or supply voltage %/%  $\Delta U_N \leq 0,02$   
Influence of the ambient temperature %/K  $\leq 0,025$

### OUTPUT CIRCUIT

Contact equipment 1 timed changeover  
Contact material Ag-alloy; gold-plated  
Switching voltage  $U_n$  V AC/DC 230/230  
Maximum continuous current  $I_n$  A 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  
Permissible switching frequency switching cycles/h 3600  
Mechanical service life switching cycles  $20 \times 10^6$   
Response time ms ca. 35  
Release time ms ca. 70

### GENERAL DATA

Creepage and clearance distances between circuits according to DIN VDE 0110-1:04.97: rated surge voltage kV 4  
Over voltage category III  
Contamination level 3 outside, 2 inside  
Design voltage V AC 250  
Test voltage  $U_{eff}$  50 Hz acc. to DIN VDE 0110-1, Table A.1 kV 2,21  
Protection class housing/terminals acc. to DIN VDE 0470 Sec. 1:11.92 IP 30/IP 20  
Radiated noise EN 50081-1:03.93, -2:03.94  
Noise immunity EN 50082-2:1995

Ambient temperature, working range °C -20 to + 60  
Dimensions K 1-7  
Connection diagram KS 0194/2a  
Weight kg 0,11  
Approvals page i.4

### GENERAL TECHNICAL SPECIFICATIONS

## KZT 310 K

Electronic time relay for single voltage  
OFF-delay time relay with auxiliary supply  
1 LED green, 1 LED red  
FD 0037

	24	42	48	60	110-127	220	240
Rated consumption at 50 Hz and $U_N$ (AC) VA	2,3	2,7	3,1	2,5	4,4	6,8	8,4
Rated consumption at 50 Hz and $U_N$ (AC) W	1,3	1,6	1,9	1,5	1,5	1,6	1,9
Rated consumption (DC) W	1,1	1,3	1,6	1,1			
Starting current inrush A/ms	1,5/1,5	1,7/2	1,6/3	1,7/3	1,6/1	1,5/5	1,5/5
Rated frequency Hz	50 to 60						
Operating voltage range	0,8 to 1,1 x $U_N$						

analog/1  
0,05 to 1 s  
0,15 to 3 s  
0,5 to 10 s  
1,5 to 30 s  
5 to 100 s  
15 to 300 s  
0,5 to 10 min  
1,5 to 30 min  
 $\leq 3$  mA  
ca. 50/- on standard duty,  
ca. 3/-after longer shutdown  
20 ms  
 $\geq 15$  %  $U_N$   
yes  
yes  
diagram 4, page i.5  
 $\leq \pm 0,5$  %  $\pm 10$  ms  
 $\leq 0,02$  %/%  $\Delta U_N$   
 $\leq 0,025$  %/K

1 timed changeover  
Ag-alloy; gold-plated  
230/230 V AC/DC  
5 A  
AC-15  $U_e$  230 V AC,  $I_e$  2 A  
DC-13  $U_e$  24 V DC,  $I_e$  2 A  
3600 switching cycles/h  
 $20 \times 10^6$  switching cycles  
ca. 35 ms  
ca. 70 ms

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

-20 to + 60 °C  
K 1-7  
KS 0194/2a  
0,11 kg  
page i.4

page i.5