



## Electronic Multi-Range Relays

**KZT 710 KM for multi-voltage 24 to 240 V AC/DC**

**KZT 710 KD for dual-voltage 24 V AC/DC and 230 V AC**, voltage selection by means of a DIP-switch

**KZT 710 K for single voltage**

**Function: OFF-delay (RV) with supply voltage**  
**1 setting range, divided into 4 time ranges**  
**Contact equipment: 1 timed changeover**

### KZT 710 KM, ...



### Function

RV (see page K 2/3).

The setting of the time ranges is done on the timer's front by means of a selector switch. The time setting within a range is carried out with the aid of a thumbwheel disc.

On the KZT 710 KD the voltage can be selected with the DIP-switch situated on the rear of the item (factory preset at 220 V AC).

### Product Description

The electronic multi-range time relays KZT 710... are available in 1 setting range, divided into 4 time ranges.

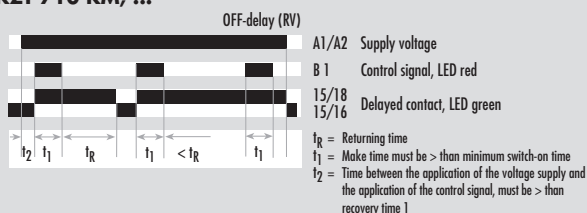
Setting Range	Time Range
<b>0,15 s to 400 s</b> divided into :	0,15 to 1,5 s
	0,6 to 6 s
	5 to 50 s
	40 to 400 s
or	
<b>1,5 s to 60 min</b> divided into:	1,5 to 15 s
	0,1 to 1 min
	0,8 to 8 min
	6 to 60 min

Type	Standard voltage	Special voltage	Price Code
KZT 710 KM 400 s KZT 710 KM 60 min	24 to 240 V AC/DC 50 to 60 Hz		<b>K 2/38.1</b>
KZT 710 KD 400 s KZT 710 KD 60 min	24 V AC/DC and 220 to 240 V AC 50 to 60 Hz		<b>K 2/38.2</b>
KZT 710 K 400 s KZT 710 K 60 min	24 V AC/DC 110 to 127 V AC 220 to 240 V AC 50 to 60 Hz	42 V AC/DC 48 V AC/DC 60 V AC/DC 50 to 60 Hz	<b>K 2/38.3</b>

### Function Diagram

FD 0037

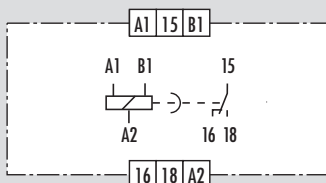
KZT 710 KM, ...



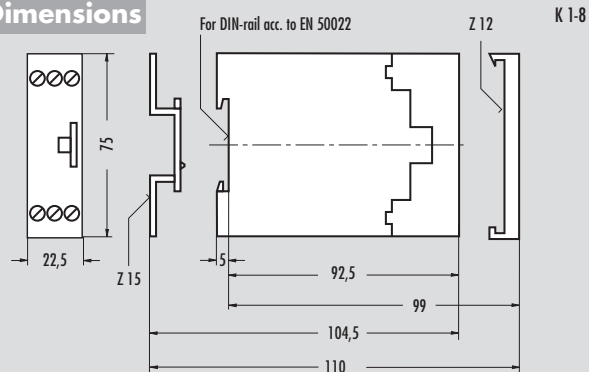
### Connection Diagram

KS 0194/2

KZT 710 KM, ...



### Dimensions



### Accessories

- Cover Z 12 (selectable transparent cover)
  - Seal Z 13 (to protect the time range selector switch)
  - Adaptor Z 15 (to be fixed with 2 screws type M49)
- The housing can be snapped onto the adaptor.

Price code for accessories: see page K 2/71



## TECHNICAL DATA

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

Function display Point 3.16  
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  
2 setting ranges available  
s  
s  
s/min  
min  
min  
Rated current for the energizing quantity mA  
Recovery time 1/2 ms  
s  
ms  
ms  
Release valve %  $U_N$   
Permissible parallel load  
Internal rectifier  
Average of the error  
Dispersion %  $\pm 10$  ms  
Influence of the energizing quantity or supply voltage %/%  $\Delta U_N$   
Influence of the ambient temperature %/K

### OUTPUT CIRCUIT

Contact equipment  
Contact material  
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 III  
Contamination level 3 outside, 2 inside  
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

## KZT 710 KM

Multi-range time relay for multi-voltage

OFF-delay time relay  
1 LED green, 1 LED red  
FD 0037

**24 to 240**

7,5  
1,9  
1,9  
-  
50 to 60  
0,8 to 1,1 x  $U_N$

analog/4  
1. setting range 0,15 to 400 s  
divided into:  
0,15 to 1,5; 0,6 to 6; 5 to 50;  
40 to 400  
2. setting range 1,5 s to 60 min  
divided into:  
1,5 s to 15 s; 0,1 min to 1 min;  
0,8 to 8; 6 to 60  
ca. 1  
-/-  
20  
 $\geq 10$ ; permiss. line inductivity 0,2  $\mu$ F  
B1 no  
B1 yes  
diagram 4, page i.5  
 $\leq \pm 0,5$   
 $\leq 0,02$   
 $\leq 0,025$

1 timed changeover  
Ag-alloy; gold-plated  
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  
3600  
 $20 \times 10^6$   
ca. 20  
ca. 25

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

-20 to + 60  
K 1-8  
KS 0194/2  
0,12  
cover Z 12, seal Z 13,  
adaptor Z 15  
page i.4

page i.5

## KZT 710 KD

Multi-range time relay for dual-voltage with switchable supply voltages

OFF-delay time relay  
1 LED green, 1 LED red  
FD 0037

**24**

**220 to 240**

1,8	8,4
1,5	1,1
1,0	
1,5/2	0,7/0,5
50 to 60	
0,8 to 1,1 x $U_N$	

analog/4  
1. setting range 0,15 to 400 s  
divided into:  
0,15 to 1,5; 0,6 to 6; 5 to 50;  
40 to 400  
2. setting range 1,5 s to 60 min  
divided into:  
1,5 s to 15 s; 0,1 min to 1 min;  
0,8 to 8; 6 to 60  
 $\leq 3$   
ca. 50/- on standard duty,  
ca. 3/-after longer shutdown  
20  
 $\geq 15$   
no  
no  
diagram 4, page i.5  
 $\leq \pm 0,5$   
 $\leq 0,02$   
 $\leq 0,025$

1 timed changeover  
Ag-alloy; gold-plated  
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  
3600  
 $20 \times 10^6$   
ca. 25  
ca. 40

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

-20 to + 60  
K 1-8  
KS 0194/2  
0,12  
cover Z 12, seal Z 13,  
adaptor Z 15  
page i.4

page i.5





## TECHNICAL DATA

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

Function display Point 3.16  
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  
2 setting ranges available  
s  
s  
s/min  
min  
min  
mA  
ms  
s  
ms  
%  $U_N$   
ms  
%  $\pm 10$  ms  
%/ %  $\Delta U_N$   
%/K  
Rated current for the energizing quantity  
Recovery time 1/2  
Minimum switch-ON time  
Release value  
Permissible parallel load  
Internal rectifier  
Average of the error  
Dispersion  
Influence of the energizing quantity or supply voltage  
Influence of the ambient temperature

### OUTPUT CIRCUIT

Contact equipment  
Contact material  
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 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 1-8  
Connection diagram KS 0194/2  
Weight kg 0,12  
Accessories cover Z 12, seal Z 13, adaptor Z 15

Approvals

### GENERAL TECHNICAL SPECIFICATIONS

## KZT 710 K

Multi-range time relay for single voltage

OFF-delay time relay  
1 LED green, 1 LED red  
FD 0037

24	42	48	60	110-127	220-240
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2,4	2,2	2,3	1,7	4,7	8,0
1,4	1,8	1,8	1,5	1,6	1,7
1,0	1,1	1,2	1,2		
1,5/2	,8/1	,6/1	,8/1	1/5	,7/5

50 to 60 Hz  
0,8 to 1,1 x  $U_N$

analog/4

- setting range 0,15 to 400 s  
divided into:  
0,15 to 1,5; 0,6 to 6; 5 to 50;  
40 to 400
  - setting range 1,5 s to 60 min  
divided into:  
1,5 s to 15 s; 0,1 min to 1 min;  
0,8 to 8; 6 to 60
- $\leq 3$   
ca. 50/- on standard duty,  
ca. 3/-after longer shutdown  
20  
 $\geq 15$   
yes  
yes  
diagram 4, page i.5  
 $\leq \pm 0,5$   
 $\leq 0,02$   
 $\leq 0,025$

1 timed changeover  
Ag-alloy; gold-plated  
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  
3600  
 $20 \times 10^6$   
ca. 70  
ca. 150

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

-20 to + 60  
K 1-8  
KS 0194/2  
0,12  
cover Z 12, seal Z 13,  
adaptor Z 15  
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page i.5