

Timer and switching relays

Multi-function KZL 72, KZL 71

interface

Multi-function multi-range timer relay

- Multi-voltage for AC/DC 24 up to 230 V
- 4 functions
- Setting range from 0.1 s to 120 h divided into 7 time ranges
- KZL 72 = 1 instantaneous and 1 timed change-over contact or 2 timed change-over contacts (selectable)
- KZL 71 = 1 timed change-over contact



KZL 72



KZL 71



Time ranges

Setting range from 0.1 s to 120 h divided into:

0.1 s ... 1.2 s	0.1 h ... 1.2 h
1 s ... 12 s	1 h ... 12 h
0.1 min ... 1.2 min	10 h ... 120 h
1 min ... 12 min	

General information

The functions and time ranges are set on the front through selector switches.

Setting of the operating mode

Rotate the operating mode selector switch with a screwdriver until the desired operating mode appears in the "MODE" display window.

Functions for KZL 72, KZL 71:

- A = ON-delay (AV)
- B2 = repeat cycle starting with ON (TI)
- E = interval ON (EW)
- J = one shot (ON-delay) (AI)

Setting of the time and time range factor

Rotate the time selector switch located in the upper right corner of the control panel to set the desired time (sec., min. or hrs.) The time unit will be shown in the display window over the time selecting wheel. The time range factor (0.1 or 1) is set by rotating the selector switch located in the upper left corner of the operating panel. The selected time range factor will be shown in the display window above the selector switch.

Setting of the operating time

Use the time selecting wheel (ratio 0 – 12) to set the desired operating time.

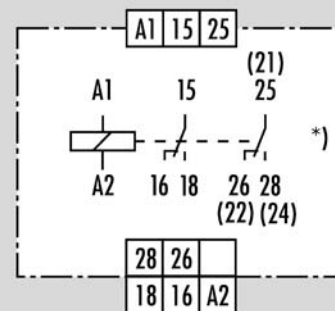
Setting of the contact assignment

The function of the contacts for the model KZL 72 can be selected through a switch located at the bottom of the housing: 2 timed change-over contacts or 1 instantaneous and 1 timed change-over contact.

Circuit diagram

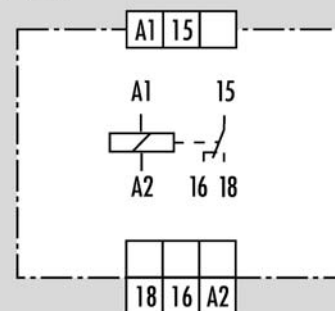
KZL 72

KS 0328/4



KZL 71

KS 0328/3



*) Instantaneous contacts have other terminal designations (e.g. 21 instead of 25)

Timer and switching relays

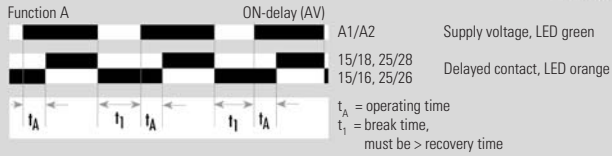
Multi-function KZL 72, KZL 71

interface face

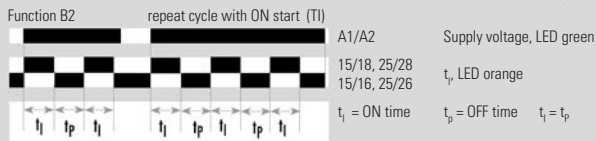
Function diagrams

KZL 72 (2 timed change-over contacts)

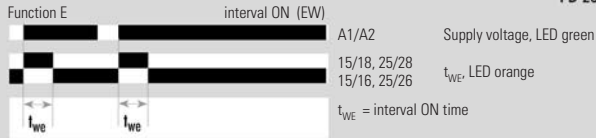
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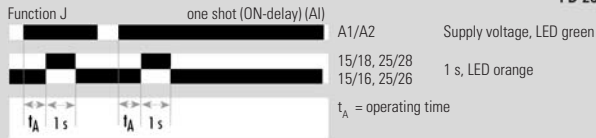
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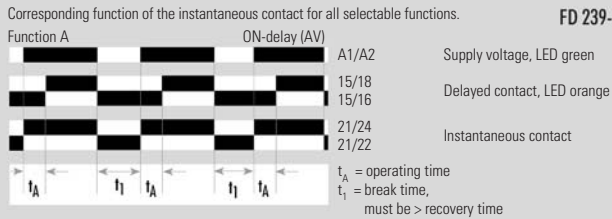


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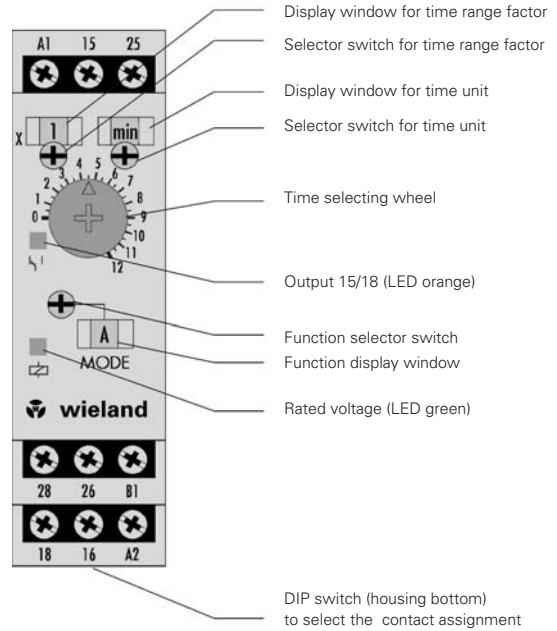
KZL 72 (1 timed and 1 instantaneous change-over contact)

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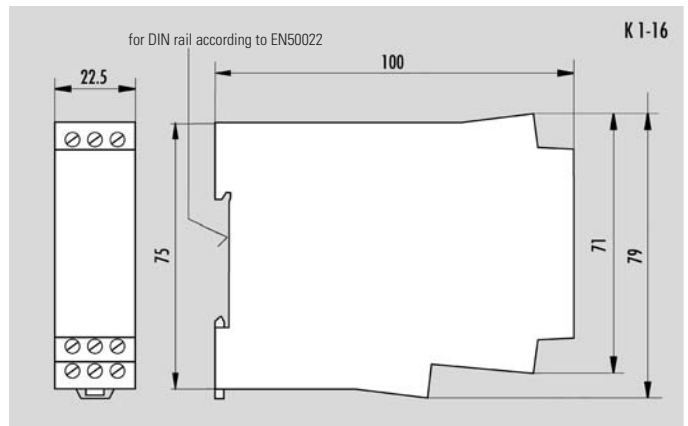


Displays and operating components

Example: KZL 72




Dimension diagram



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interface

Technical data		KZL 72	KZL 71	
Function type according to IEC 60050 (445)		Multi-function relay with 4 functions for multi-voltage – ON-delay timer relay – Interval ON relay – Repeat cycle starting with ON – One shot (ON-delay) relay		
Function display		1 LED green, 1 LED orange		
Function diagram		FD 239-4/10 – 14		
Power supply circuit				
Rated voltage U_N		AC/DC 24 – 230 V		
Rated consumption at 50 Hz and U_N 24 V AC		1.1 VA / 0.9 W	0.7 VA / 0.6 W	
Rated consumption at U_N 24 V DC		0.9 W	0.6 W	
Rated consumption at 50 Hz and U_N 230 V AC		2.7 VA / 1.7 W	2.3 VA / 1.4 W	
Rated consumption at U_N 230 V DC		1.4 W	1.4 W	
Starting current inrush A1/A2 at 24 V DC		ca. 250 mA		
Rated frequency		50 – 60 Hz		
Operating voltage range		0.85 – 1.1 x U_N		
Release value of the excitation voltage A1/A2		< 8 V AC/DC		
Time circuit				
Time setting / number of time ranges		analog / 7		
Possible setting range		See table "Time ranges"		
Recovery time		≥ 100 ms		
Repeatability		± 1% + ± 10 ms average value of all measured values		
Setting tolerance		± 10% + ± 50 ms		
Influence of the energizing quantity or supply voltage		± 0.5% + ± 10 ms		
Influence of the ambient temperature		± 2% + ± 10 ms		
Output circuit				
Contact assignment		1 instantaneous and 1 timed change-over contact or 2 timed change-over contacts	1 timed change-over contact	
Contact material		AgNi gold-flashed		
Rated operating voltage U_n		230/125 V AC/DC		
Max. continuous current I_n		5 A		
Application category according to EN 60947-5-1:1991		AC-13: U_e 250 V AC, I_e 5 A DC-13: U_e 24 V DC, I_e 0.1 A AC-15: U_e 250 V AC, I_e 3 A		
Permissible switching frequency		≤ 3600 switching cycles/h		
Mechanical life		10 x 10 ⁶ switching cycles		
Electrical life		80 x 10 ⁴ switching cycles at AC 5 A, 250 V, 360 switching cycles/h		
General information				
Creepage distances and clearances between the circuits		according to DIN VDE 0110-1:04.97		
Rated impulse voltage		4 kV		
Overvoltage category		III		
Degree of pollution		3 outside, 2 inside		
Rated voltage		250 V AC		
Test voltage U_{eff} 50 Hz according to DIN VDE 0110-1, table A.1		2.21 kV		
Protection degree housing/terminals according to DIN VDE 0470 sec. 1:11.92		IP 30 / IP 20		
Noise immunity according to IEC 61000-4		Test severity 3		
Ambient temperature, operating range		–10 – +55°C		
Dimension diagram		K1-16		
Circuit diagram		KS 0328/4	KS 0328/3	
Weight		0.12 kg		
Accessories		–		
Approvals				
Overview of devices / Part numbers				
Type	Rated voltage	ON-delay time	Part No.	Std. Pack
KZL 71	AC/DC 24 – 230 V 50 – 60 Hz	See table "Time ranges"	R2.066.0010.0	1
KZL 72	AC/DC 24 – 230 V 50 – 60 Hz	See table "Time ranges"	R2.066.0020.0	1