



### Main

Range of product	Zelio Time
Product or component type	Industrial timing relay
Contacts type and composition	2 C/O
Component name	RE7
Time delay type	K
Time delay range	0.05 s...10 min

### Complementary

Discrete output type	Relay
Contacts material	Silver with gold flashed contacts
Width pitch dimension	22.5 mm
[Us] rated supply voltage	24...240 V AC/DC at 50/60 Hz
Voltage range	0.85...1.1 Us
Connections - terminals	Screw terminals, clamping capacity: 2 x 1.5 mm <sup>2</sup> flexible with cable end Screw terminals, clamping capacity: 2 x 2.5 mm <sup>2</sup> flexible without cable end
Tightening torque	0.6...1.1 N.m
Setting accuracy of time delay	+/- 10 % of full scale
Repeat accuracy	+/- 0.2 %
Temperature drift	< 0.07 %/°C
Voltage drift	< 0.2 %/V
Minimum pulse duration	1 s
Reset time	50 ms
Maximum switching voltage	250 V AC/DC
Mechanical durability	20000000 cycles
[Ith] conventional free air thermal current	5 A
[Ie] rated operational current	<= 2 A DC-13 24 V at 70 °C conforming to IEC 60947-5-1/1991/VDE 0660 <= 3 A AC-15 at 70 °C conforming to IEC 60947-5-1/1991/VDE 0660 <= 0.1 A DC-13 250 V at 70 °C conforming to IEC 60947-5-1/1991/VDE 0660 <= 0.2 A DC-13 115 V at 70 °C conforming to IEC 60947-5-1/1991/VDE 0660
Minimum switching capacity	12 V / 10 mA
Potentiometer characteristic	Linear 47 kOhm (+/- 20 %), 0.2 W, cable length: 25 m Z1Z2terminal(s)
Marking	CE

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Overvoltage category	III conforming to IEC 60664-1
[Ui] rated insulation voltage	250 V between contact circuit and control inputs IEC certified 250 V between contact circuit and power supply IEC certified 300 V between contact circuit and control inputs CSA certified 300 V between contact circuit and power supply CSA certified
Supply disconnection value	> 0.1 U <sub>c</sub>
Operating position	Any position without derating
Surge withstand	2 kV conforming to IEC 61000-4-5 level 3
Power consumption in VA	2 VA 24 V 6 VA 240 V 2.5 VA 48 V 3.2 VA 110 V
Power consumption in W	1 W 48 V 2 W 24 V 2 W 240 V 3.2 W 110 V
Peak current	0.001 kA for 30 s on energisation
Terminal description	(15-16-18)OC_OFF (25-26-28)OC_OFF (A1-A2)CO (Z1)UNUSED (Z2)UNUSED
Height	78 mm
Width	22.5 mm
Depth	80 mm
Product weight	0.15 kg

## Environment

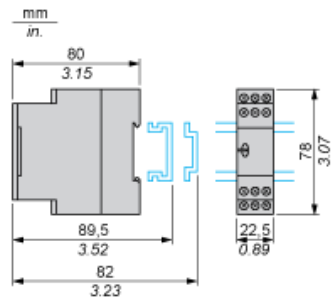
Immunity to microbreaks	3 ms
Standards	EN/IEC 61812-1
Product certifications	CSA GL UL
Ambient air temperature for storage	-40...85 °C
Ambient air temperature for operation	-20...60 °C
Relative humidity	15...85 % (3K3) conforming to IEC 60721-3-3
Vibration resistance	0.35 mm (f = 10...55 Hz) conforming to IEC 60068-2-6
Shock resistance	15 gn for 11 ms conforming to IEC 60068-2-27
IP degree of protection	IP20 (terminals) IP50 (housing)
Pollution degree	3 conforming to IEC 60664-1
Dielectric strength	2.5 kV
Non-dissipating shock wave	4.8 kV
Resistance to electrostatic discharge	6 kV (in contact) conforming to IEC 61000-4-2 level 3 8 kV (in air) conforming to IEC 61000-4-2 level 3
Resistance to electromagnetic fields	10 V/m conforming to IEC 61000-4-3 level 3
Resistance to fast transients	2 kV conforming to IEC 61000-4-4 level 3
Disturbance radiated/conducted	CISPR 11 group 1 - class A CISPR 22 - class A

## Contractual warranty

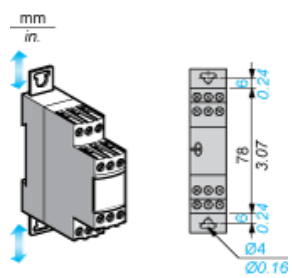
Warranty period	18 months
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Width 22.5 mm

Rail Mounting



Screw Fixing



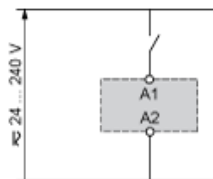
Internal Wiring Diagram



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Recommended Application Wiring Diagram

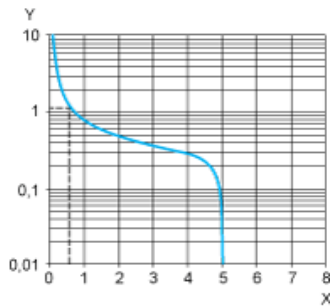
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Performance Curves

A.C. Load Curve 1

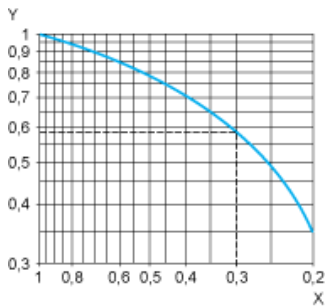
Electrical durability of contacts on resistive loading millions of operating cycles



X Current broken in A  
Y Millions of operating cycles

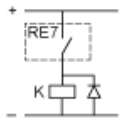
A.C. Load Curve 2

Reduction factor k for inductive loads (applies to values taken from durability curve 1).

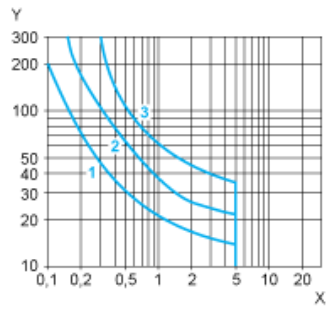


X Power factor on breaking (cos φ)  
Y Reduction factor k

Example: An LC1-F185 contactor supplied with 115 V/50 Hz for a consumption of 55 VA or a current consumption equal to 0.1 A and  $\cos \phi = 0.3$ . For 0.1 A, curve 1 indicates a durability of approximately 1.5 million operating cycles. As the load is inductive, it is necessary to apply a reduction coefficient k to this number of cycles as indicated by curve 2. For  $\cos \phi = 0.3$ :  $k = 0.6$ . The electrical durability therefore becomes:  $1.5 \cdot 10^6$  operating cycles  $\times 0.6 = 900\,000$  operating cycles.



## D. C. Load Limit Curve



- X Current in A
- Y Voltage in V
- 1 L/R = 20 ms
- 2 L/R with load protection diode
- 3 Resistive load

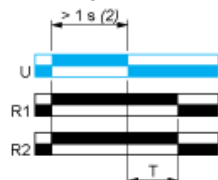
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Function K: Delay on De-Energisation (Without Auxiliary Supply)

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Description

On energisation, the output(s) R close(s). On de-energisation, timing period T starts and, at the end of this period, the output(s) R revert(s) to its/their initial state.



2 If the device has been stored, de-energised, for more than a month, it must be energised for about 15 seconds in order to activate it. Subsequently, it or

**WARNING**

**UNEXPECTED EQUIPMENT OPERATION**

If the time is not complied with, the relay remains energised indefinitely.

Failure to follow these instructions can result in death, serious injury, or equipment damage.



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Legend

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Relay de-energised

Relay energised

Output open

Output closed

C Control contact

G Gate

R Relay or solid state output

R1/R2 2 timed outputs

R2 inst. The second output is instantaneous if the right position is selected

T Timing period

Ta - Adjustable On-delay

Tr - Adjustable Off-delay

U Supply

RE7RB13MW is replaced by:

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Relay Output RE22R2KMR

Off-delay Timing Relay - 0.05s...10min - 24...240V AC/DC - 2C/O

Qty 1

Reason for Substitution: End of life | Substitution date: 18 August 2016

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