



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 2.5 mm ² flexible without cable end Screw terminals, clamping capacity: 2 x 1.5 mm ² flexible with 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	<= 3 A AC-15 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 <= 0.1 A DC-13 250 V at 70 °C conforming to IEC 60947-5-1/1991/VDE 0660 <= 2 A DC-13 24 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
Overvoltage category	III conforming to IEC 60664-1
[Ui] rated insulation voltage	300 V between contact circuit and power supply CSA certified 300 V between contact circuit and control inputs CSA certified 250 V between contact circuit and power supply IEC certified 250 V between contact circuit and control inputs IEC certified
Supply disconnection value	> 0.1 Uc
Operating position	Any position without derating
Surge withstand	2 kV conforming to IEC 61000-4-5 level 3
Power consumption in VA	3.2 VA 110 V 2.5 VA 48 V 6 VA 240 V 2 VA 24 V

Power consumption in W	3.2 W 110 V 2 W 240 V 2 W 24 V 1 W 48 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

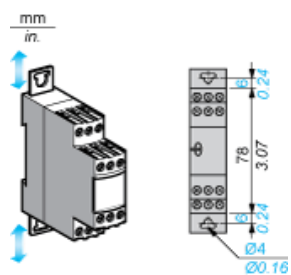
Immunity to microbreaks	3 ms
Standards	EN/IEC 61812-1
Product certifications	CSA GL UL
Ambient air temperature for storage	-40...85 °C
Ambient air temperature for operation	-20...60 °C
Relative humidity	15...85 % (3K3) conforming to IEC 60721-3-3
Vibration resistance	0.35 mm (f = 10...55 Hz) conforming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

Width 22.5 mm

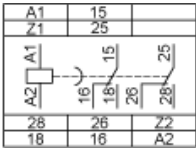
Rail Mounting



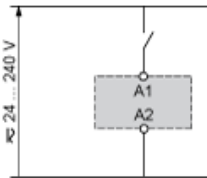
Screw Fixing



Internal Wiring Diagram



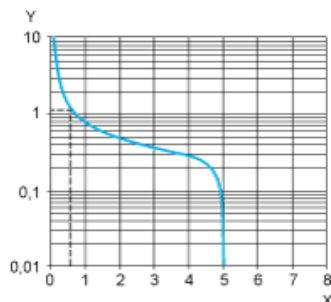
Recommended Application Wiring Diagram



Performance Curves

A.C. Load Curve 1

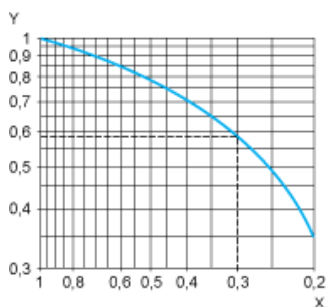
Electrical durability of contacts on resistive loading millions of operating cycles



X Current broken in A
Y Millions of operating cycles

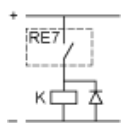
A.C. Load Curve 2

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

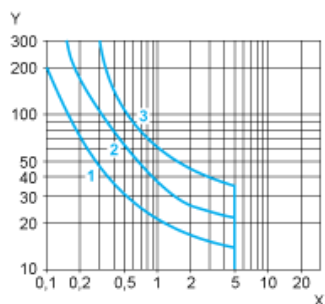


X Power factor on breaking ($\cos \phi$)
Y Reduction factor k

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: 1.5×10^6 operating cycles $\times 0.6 = 900\,000$ operating cycles.



D. C. Load Limit Curve

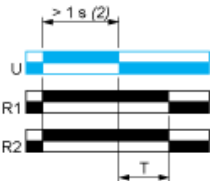


X Current in A
Y Voltage in V
1 $L/R = 20$ ms
2 L/R with load protection diode
3 Resistive load

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

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 only takes 1 second to start the time delay.

 **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.

Legend

- Relay de-energised
- Relay energised
- Output open
- Output closed
- C Control contact
- G Gate
- R Relay or solid state output
- R1/ 2 timed outputs
- R2 The second output is instantaneous if the right position is selected
- inst.
- T Timing period
- Ta Adjustable On-delay
-
- Tr Adjustable Off-delay
-
- U Supply