



Main

Range of product	Zelio Time
Product or component type	Optimum industrial timing relay
Component name	RE8
Time delay type	Qc
Time delay range	3...300 s
Sale per indivisible quantity	10

Complementary

Discrete output type	Relay
Contacts material	90/10 silver nickel contacts
Width pitch dimension	22.5 mm
[Us] rated supply voltage	24 V AC/DC at 50/60 Hz 110...240 V AC at 50/60 Hz
Voltage range	0.9...1.1 Us
Connections - terminals	Screw terminals 2 x 2.5 mm ² , flexible cable without cable end Screw terminals 2 x 1.5 mm ² , flexible cable with cable end
Tightening torque	0.6...1.1 N.m
Setting accuracy of time delay	+/- 20 % of full scale
Repeat accuracy	< 1 %
Voltage drift	< 2.5 %/V
Temperature drift	< 0.2 %/°C
Minimum pulse duration	60 ms
Reset time	50 ms
Maximum switching voltage	250 V
Mechanical durability	20000000 cycles
[Ith] conventional free air thermal current	8 A
[Ie] rated operational current	<= 0.2 A at 115 V, DC-13 for 70 °C conforming to VDE 0660 <= 0.2 A at 115 V, DC-13 for 70 °C conforming to IEC 60947-5-1/1991 <= 0.1 A at 250 V, DC-13 for 70 °C conforming to VDE 0660 <= 0.1 A at 250 V, DC-13 for 70 °C conforming to IEC 60947-5-1/1991 <= 3 A at 24 V, AC-15 for 70 °C conforming to VDE 0660 <= 3 A at 24 V, AC-15 for 70 °C conforming to IEC 60947-5-1/1991 <= 2 A at 24 V, DC-13 for 70 °C conforming to VDE 0660 <= 2 A at 24 V, DC-13 for 70 °C conforming to IEC 60947-5-1/1991
Minimum switching capacity	10 mA at 12 V
Marking	CE
Overvoltage category	III conforming to IEC 60664-1
[Ui] rated insulation voltage	300 V conforming to CSA 250 V conforming to IEC
Supply disconnection value	> 0.1 Uc
Operating position	Any position without derating factor
Surge withstand	2 kV conforming to IEC 61000-4-5 level 3
Power consumption in VA	2.5 VA at 110 V 0.9 VA at 24 V 13 VA at 240 V
Power consumption in W	0.5 W at 24 V

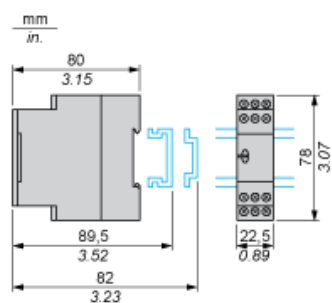
Terminal description	(15-16-18)OC_OFF (A1-B1)CO ALT
Height	78 mm
Width	22.5 mm
Depth	80 mm
Product weight	0.11 kg

Environment

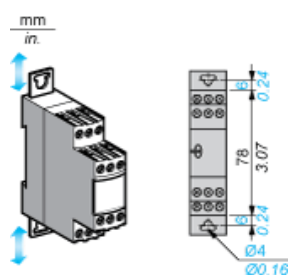
Immunity to microbreaks	3 ms
Standards	EN/IEC 61812-1
Product certifications	CSA GL UL
Ambient air temperature for storage	-40...85 °C
Ambient air temperature for operation	-20...60 °C
Relative humidity	15...85 % 3K3 conforming to IEC 60721-3-3
Vibration resistance	0.35 mm 10...55 Hz conforming to IEC 60068-2-6
IP degree of protection	IP50 (casing) IP20 (terminals)
Pollution degree	3 conforming to IEC 60664-1
Dielectric test voltage	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

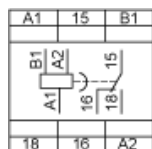
Rail Mounting



Screw Fixing

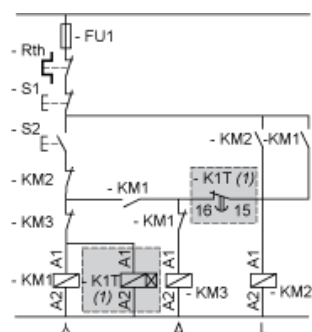


Internal Wiring Diagram



Recommended Application Wiring Diagram

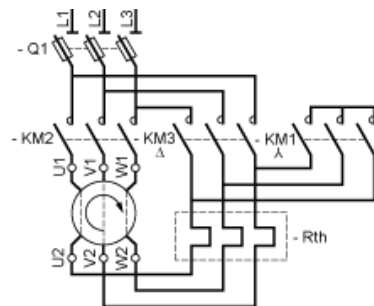
Control



K1T Timing relay for star-delta starters.

NOTE: Correct operation of the star-delta starter associated with the relay is only possible if the wiring diagram is strictly complied with.

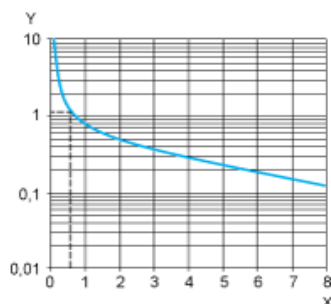
Power



Performance Curves

A.C. Load Curve 1

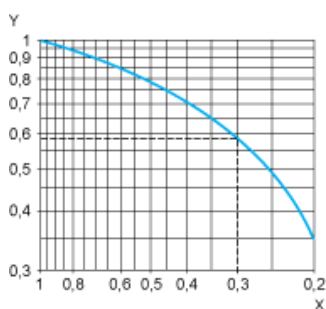
Electrical durability of contacts on resistive loading millions of operating cycles



X Current broken in A
Y Millions of operating cycles

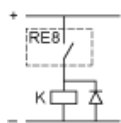
A.C. Load Curve 2

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

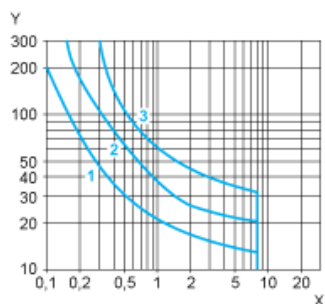


X Power factor on breaking ($\cos \phi$)
Y Reduction factor k

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: $1.5 \cdot 10^6$ 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

Function Qc: Star-Delta Timing

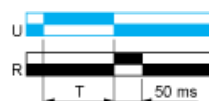
Description

On energisation, the star contact closes instantaneously and timing starts.

At the end of the timing period, the star contact opens.

After a 50 ms pause, the delta contact closes and remains in this position.

Function: 1 Output



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