

# RE8RB11BUTQ

industrial timing relay - 0.1..10 s - type K - 24 V  
AC/DC, 110..240 V AC - 1 C/O



## Main

Range of product	Zelio Time
Product or component type	Optimum industrial timing relay
Component name	RE8
Time delay type	K
Time delay range	0.1...10 s
[Us] rated supply voltage	110...240 V AC, 50/60 Hz 24 V AC/DC, 50/60 Hz
Sale per indivisible quantity	10

## Complementary

Discrete output type	Relay
Contacts material	90/10 silver nickel contacts
Width pitch dimension	22.5 mm
Voltage range	0.9...1.1 Us
Connections - terminals	Screw terminals 2 x 1.5 mm <sup>2</sup> , flexible cablewith cable end Screw terminals 2 x 2.5 mm <sup>2</sup> , flexible cablewithout 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	26 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	<= 2 A at 24 V, DC-13 for 70 °C conforming to IEC 60947-5-1/1991 <= 2 A at 24 V, DC-13 for 70 °C conforming to VDE 0660 <= 3 A at 24 V, AC-15 for 70 °C conforming to IEC 60947-5-1/1991 <= 3 A at 24 V, AC-15 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 <= 0.1 A at 250 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 <= 0.2 A at 115 V, DC-13 for 70 °C conforming to VDE 0660
Minimum switching capacity	10 mA at 12 V
Marking	CE
Overvoltage category	III conforming to IEC 60664-1
[Ui] rated insulation voltage	250 V conforming to IEC 300 V conforming to CSA
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	13 VA at 240 V 0.9 VA at 24 V 2.5 VA at 110 V
Power consumption in W	0.5 W at 24 V
Terminal description	(15-16-18)OC_ON (A1-B1)CO ALT

Height	78 mm
Width	22.5 mm
Depth	80 mm
Product weight	0.11 kg

## Environment

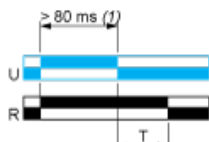
Immunity to microbreaks	3 ms
Standards	EN/IEC 61812-1
Product certifications	CSA GL UL
Ambient air temperature for storage	-40...85 °C
Ambient air temperature for operation	-20...60 °C
Relative humidity	15...85 % 3K3 conforming to IEC 60721-3-3
Vibration resistance	0.35 mm 10...55 Hz conforming to IEC 60068-2-6
Shock resistance	15 gn (duration = 11 ms conforming to IEC 60068-2-27)
IP degree of protection	IP20 (terminals) IP50 (casing)
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	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	CISPR11 group 1- class A CISPR22 - class A
RoHS EUR status	Compliant
RoHS EUR conformity date	0625

## 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.

### Function: 1 Output



- 1 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 80 ms 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

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

T Timing period

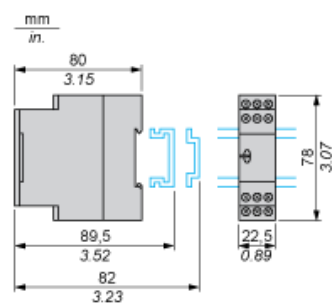
Ta Adjustable On-delay

Tr Adjustable Off-delay

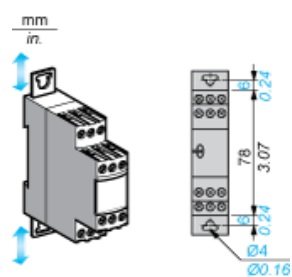
U Supply

Width 22.5 mm

### Rail Mounting



### Screw Fixing

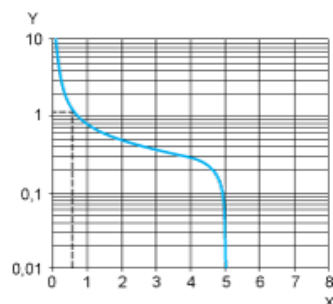


A1	15	B1
18	16	A2

## Performance Curves

### A.C. Load Curve 1

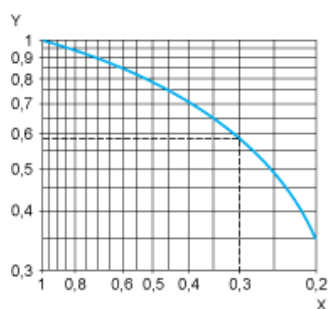
Electrical durability of contacts on resistive loading millions of operating cycles



X Current broken in A  
Y Millions of operating cycles

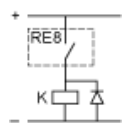
### A.C. Load Curve 2

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

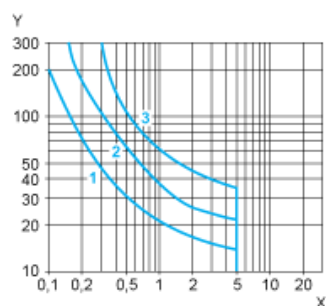


X Power factor on breaking ( $\cos \phi$ )  
Y Reduction factor k

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:  $1.5 \times 10^6$  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