

Product data sheet

Specifications



Optimum industrial timing relay,
Harmony Time, 0.05...0.5 s, type K,
24 V AC/DC, 110...240 V AC, 1 C/O

RE8RB51BUTQ

⚠ Discontinued on: Jan 21, 2021

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Main

Range of Product	Zelio Time
Product or Component Type	Optimum industrial timing relay
Component name	RE8
Time delay type	K
Time delay range	0.05...0.5 s
Sale per indivisible quantity	10

Complementary

Discrete output type	Relay
Contacts material	90/10 silver nickel contacts
Width pitch dimension	0.9 in (22.5 mm)
[Us] rated supply voltage	110...240 V AC 50/60 Hz 24 V AC/DC 50/60 Hz
Voltage range	0.9...1.1 Us
Connections - terminals	Screw terminals, 2 x 1.5 mm ² flexible with cable end Screw terminals, 2 x 2.5 mm ² flexible without cable end
tightening torque	5.3...9.7 lbf.in (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
Maximum [Ie] rated operational current	2 A DC-13 24 V 158 °F (70 °C) IEC 60947-5-1/1991 2 A DC-13 24 V 158 °F (70 °C) VDE 0660 3 A AC-15 24 V 158 °F (70 °C) IEC 60947-5-1/1991 3 A AC-15 24 V 158 °F (70 °C) VDE 0660 0.1 A DC-13 250 V 158 °F (70 °C) IEC 60947-5-1/1991 0.1 A DC-13 250 V 158 °F (70 °C) VDE 0660 0.2 A DC-13 115 V 158 °F (70 °C) IEC 60947-5-1/1991 0.2 A DC-13 115 V 158 °F (70 °C) VDE 0660
Minimum switching capacity	10 mA 12 V

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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

Marking	CE
Overvoltage category	III conforming to IEC 60664-1
[Ui] rated insulation voltage	250 V IEC 300 V CSA
Supply disconnection value	> 0.1 Uc
Operating position	Any position without derating
Surge withstand	2 kV IEC 61000-4-5 level 3
Power consumption in VA	13 VA 240 V 0.9 VA 24 V 2.5 VA 110 V
Maximum power consumption in W	0.5 W 24 V
Terminal description	ALT (15-16-18)OC_ON (A1-B1)CO
Height	3.07 in (78 mm)
Width	0.9 in (22.5 mm)
Depth	3.1 in (80 mm)
Net Weight	0.24 lb(US) (0.11 kg)

Environment

Immunity to microbreaks	3 ms
Standards	EN/IEC 61812-1
Product Certifications	GL UL CSA
Ambient Air Temperature for Storage	-40...185 °F (-40...85 °C)
Ambient Air Temperature for Operation	-4...140 °F (-20...60 °C)
Relative humidity	15...85 % 3K3 IEC 60721-3-3
Vibration resistance	0.35 mm (f= 10...55 Hz) conforming to IEC 60068-2-6
IP degree of protection	IP20 terminals) IP50 casing)
Pollution degree	3 IEC 60664-1
Dielectric test voltage	2.5 kV
Non-dissipating shock wave	4.8 kV
Resistance to electromagnetic fields	9.1 V/m (10 V/m) IEC 61000-4-3 level 3
Resistance to fast transients	2 kV IEC 61000-4-4 level 3
Disturbance radiated/conducted	CISPR 11 group 1 - class A CISPR 22 - class A

Ordering and shipping details

Category	22376-RELAYS-MEASUREMENT(RM4)
Discount Schedule	CP2
GTIN	3389110326840
Returnability	No
Country of origin	ID

Contractual warranty

Warranty (in months)	18
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Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

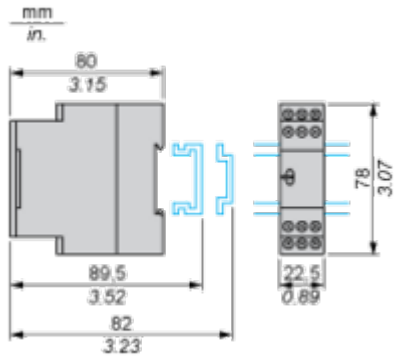
Use Longer

Lifetime extension	
Repair	No

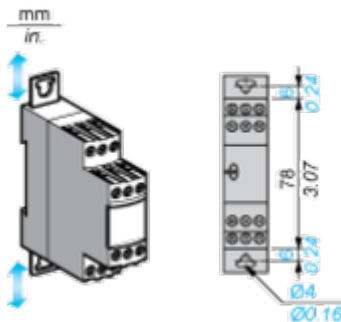
Dimensions Drawings

Width 22.5 mm

Rail Mounting

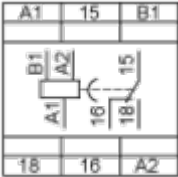


Screw Fixing



Connections and Schema

Internal Wiring Diagram

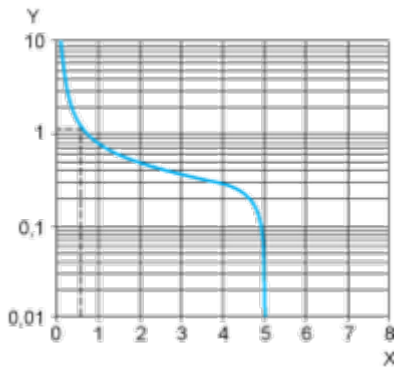


Performance Curves

Performance Curves

A.C. Load Curve 1

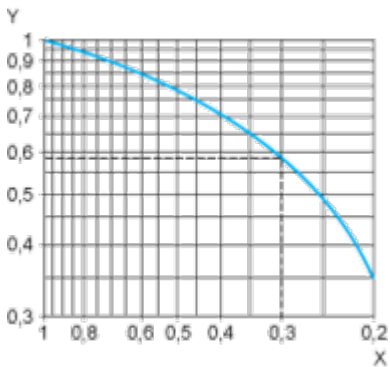
Electrical durability of contacts on resistive loading millions of operating cycles



X Current broken in A
Y Millions of operating cycles

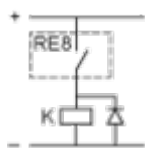
A.C. Load Curve 2

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

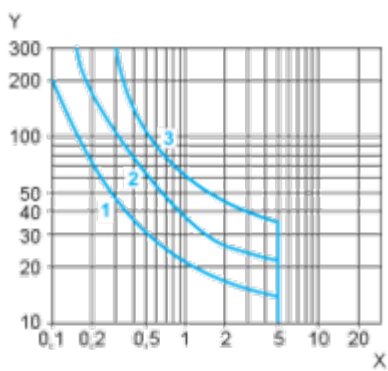


X Power factor on breaking (cos φ)
Y Reduction factor k

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 φ = 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 φ = 0.3: k = 0.6 The electrical durability therefore becomes: 1.5 10⁶ operating cycles x 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

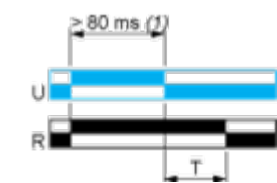
Technical Description

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/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