RE8TA31BUTQ

industrial timing relay - 0.3..30 s - type A - 24 V AC/DC, 110..240 V AC - 1 C/O



Main Range of product Zelio Time Product or component Optimum industrial timing relay Component name RE8 Time delay type Α 0.3...30 s Time delay range [Us] rated supply 110...240 V AC, 50/60 Hz voltage 24 V AC/DC, 50/60 Hz Sale per indivisible 10 quantity

Complementary

I	
Discrete output type	Relay
Contacts material	90/10 silver nickel contacts
Width pitch dimension	22.5 mm
Voltage range	0.91.1 Us
Connections - terminals	Screw terminals 2 x 1.5 mm², flexible cablewith cable end Screw terminals 2 x 2.5 mm², flexible cablewithout cable end
Tightening torque	0.61.1 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
[lth] conventional free air thermal current	8 A
[le] 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	0.7 VA at 24 V 1.8 VA at 110 V 8.5 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

Z. T. T. G. T. T. G. T.	
Immunity to microbreaks	3 ms
Standards	EN/IEC 61812-1
Product certifications	CSA
	GL
	UL
Ambient air temperature for storage	-4085 °C
Ambient air temperature for operation	-2060 °C
Relative humidity	1585 % 3K3 conforming to IEC 60721-3-3
Vibration resistance	0.35 mm 1055 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	0623



Product data sheet Technical Description

RE8TA31BUTQ

Function A: Delay on Energisation

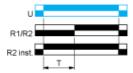
Description

The timing period T begins on energisation. After timing, the output(s) R close(s). The second output can be either timed or instantaneous.

Function: 1 Output



Function: 2 Outputs



2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

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 inct.

T Timing period

Ta Adjustable On-delay

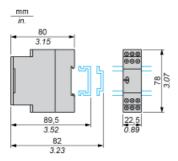
Tr Adjustable Off-delay

U Supply

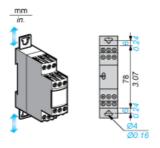
RE8TA31BUTQ

Width 22.5 mm

Rail Mounting



Screw Fixing



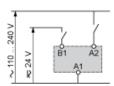
Product data sheet Connections and Schema

RE8TA31BUTQ

Internal Wiring Diagram



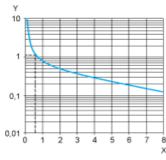
Recommended Application Wiring Diagram



Performance Curves

A.C. Load Curve 1

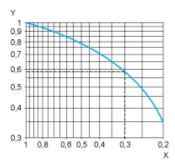
Electrical durability of contacts on resistive loading millions of operating cycles



- Χ Current broken in A
- Millions of operating cycles

A.C. Load Curve 2

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

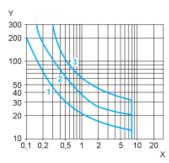


- Х Power factor on breaking (cos φ)
- Reduction factor k

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 $\cos \phi = 0.3$: k = 0.6 The electrical durability therefore becomes: $1.5 \cdot 10^6$ operating cycles x $0.6 = 900 \cdot 000$ operating cycles.



D. C. Load Limit Curve



- X Y Current in A
- Voltage in V
- L/R = 20 ms1
- L/R with load protection diode
- Resistive load

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