

# RE8TA31BU

Optimum industrial timing relay, Zelio Time,  
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 Type	Optimum industrial timing relay
Component name	RE8
Time delay type	A
Time delay range	0.3...30 s
Sale per indivisible quantity	1

## Complementary

Discrete output type	Relay
Contacts material	Silver nickel contacts
Width pitch dimension	0.89 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 <sup>2</sup> flexible with cable end Screw terminals, 2 x 2.5 mm <sup>2</sup> flexible without cable end
Tightening torque	5.31...9.74 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
Marking	CE
Overvoltage category	III 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	0.7 VA 24 V 1.8 VA 110 V 8.5 VA 240 V

Maximum power consumption in W	0.5 W 24 V
Terminal description	ALT (A1-B1)CO (15-16-18)OC_OFF
Height	3.07 in (78 mm)
Width	0.89 in (22.5 mm)
Depth	3.15 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	CSA UL GL
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 10...55 Hz)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	9.14 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 22 - class A CISPR 11 group 1 - class A

## Ordering and shipping details

Category	22376-RELAYS-MEASUREMENT(RM4)
Discount Schedule	CP2
GTIN	3389110327113
Nbr. of units in pkg.	1
Package weight(Lbs)	3.53 oz (100.0 g)
Returnability	No
Country of origin	ID

## Packing Units

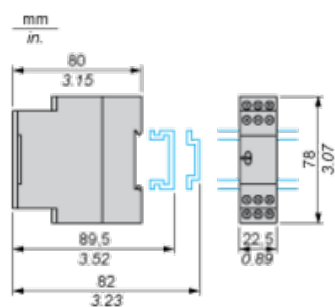
Unit Type of Package 1	PCE
Package 1 Height	1.06 in (2.7 cm)
Package 1 width	3.23 in (8.2 cm)
Package 1 Length	3.35 in (8.5 cm)
Unit Type of Package 2	S02
Number of Units in Package 2	58
Package 2 Weight	13.79 lb(US) (6.255 kg)
Package 2 Height	5.91 in (15 cm)
Package 2 width	11.81 in (30 cm)
Package 2 Length	15.75 in (40 cm)

## Contractual warranty

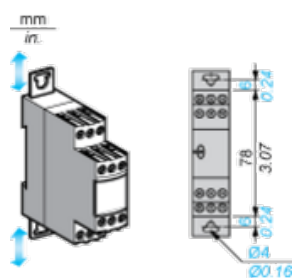
Warranty	18 months
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Width 22.5 mm

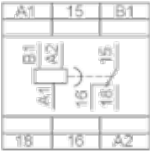
### Rail Mounting



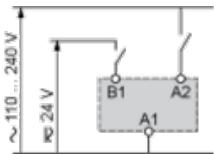
### Screw Fixing



Internal Wiring Diagram



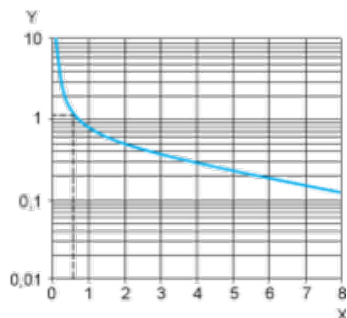
Recommended Application Wiring Diagram



## Performance Curves

### A.C. Load Curve 1

Electrical durability of contacts on resistive loading millions of operating cycles

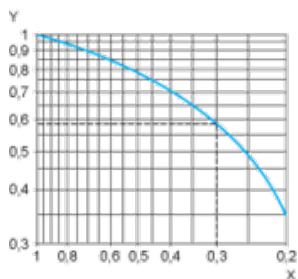


X Current broken in A

Y Millions of operating cycles

### A.C. Load Curve 2

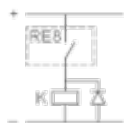
Reduction factor k for inductive loads (applies to values taken from durability curve 1).



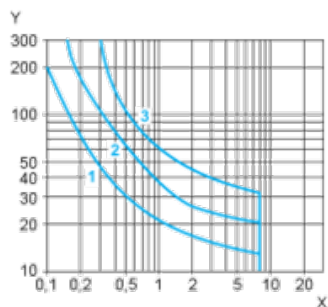
X Power factor on breaking ( $\cos \phi$ )

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



### 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



## Function A : Power on Delay Relay

### 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/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

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