



# adjustable on-delay timing relay - 0.05..1 s - 24 V AC DC - 2 OC

RE7TP13BU

- ! Discontinued on: 24 June 2016
- ! End-of-service on: 11 Dec 2020

# ! Discontinued

# Main

Range of product	Zelio Time
Product or component type	Industrial timing relay
Contacts type and composition	2 C/O
Component name	RE7
Time delay type	A
Time delay range	0.05 s300 h

# Complementary

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Discrete output type	Relay
Contacts material	90/10 silver nickel contacts
Width pitch dimension	22.5 mm
[Us] rated supply voltage	110240 V AC 50/60 Hz 24 V AC/DC 50/60 Hz 4248 V AC/DC 50/60 Hz
Voltage range	0.851.1 Us
Connections - terminals	Screw terminals, 2 x 1.5 mm² flexible with cable end Screw terminals, 2 x 2.5 mm² flexible without cable end
Tightening torque	0.61.1 N.m
Setting accuracy of time delay	+/- 10 % of full scale
Repeat accuracy	+/- 0.2 %
Temperature drift	< 0.07 %/°C
Voltage drift	< 0.2 %/V
Minimum pulse duration	20 ms
Reset time	50 ms
Maximum switching voltage	250 V AC/DC
Mechanical durability	20000000 cycles
[Ith] conventional free air thermal current	8 A
Maximum [le] rated operational current	2 A DC-13 24 V at 70 °C conforming to IEC 60947-5-1/1991/VDE 0660 0.1 A DC-13 250 V at 70 °C conforming to IEC 60947-5-1/1991/VDE 0660 0.2 A DC-13 115 V at 70 °C conforming to IEC 60947-5-1/1991/VDE 0660 3 A AC-15 at 70 °C conforming to IEC 60947-5-1/1991/VDE 0660
Minimum switching capacity	at 12 V 10 mA
Potentiometer characteristic	Linear 47 kOhm (+/- 20 %), 0.2 W, cable length <25 m Z1Z2 terminal(s)

Marking	CE
Overvoltage category	III conforming to IEC 60664-1
[Ui] rated insulation voltage	250 V between contact circuit and control inputs IEC certified 250 V between contact circuit and power supply IEC certified 300 V between contact circuit and control inputs CSA certified 300 V between contact circuit and power supply CSA certified
Supply disconnection value	> 0.1 Uc
Operating position	Any position without derating
Surge withstand	2 kV conforming to IEC 61000-4-5 level 3
Power consumption in VA	2 VA at 48 V 1.2 VA at 24 V 12.5 VA at 240 V 2.8 VA at 110 V
Maximum power consumption in W	0.8 W at 24 V 1.6 W at 48 V
Terminal description	(B1-A2)CO (Z2)UNUSED (15-16-18)OC_OFF (Z1)UNUSED ALT (25-26-28)OC_ON
Height	78 mm
Width	22.5 mm
Depth	80 mm
Net weight	0.15 kg
Environment	
Immunity to microbreaks	3 ms
Standards	EN/IEC 61812-1
Product certifications	GL CSA UL
Ambient air temperature for storage	-4085 °C

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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 (f= 1055 Hz) conforming to IEC 60068-2-6
Shock resistance	15 gn for 11 ms conforming to IEC 60068-2-27
IP degree of protection	IP20 (terminals) IP50 (housing)
Pollution degree	3 conforming to IEC 60664-1
Dielectric strength	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	CISPR 11 group 1 - class A CISPR 22 - class A

# **Packing Units**

Unit Type of Package 1	PCE
Number of Units in Package 1	1

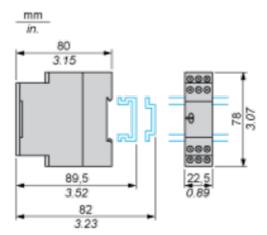
# **Contractual warranty**

Warranty 18 months

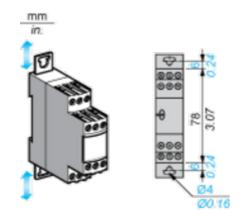
**Dimensions Drawings** 

# Width 22.5 mm

# **Rail Mounting**



# **Screw Fixing**

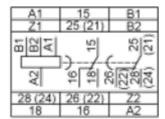


# **Product datasheet**

# RE7TP13BU

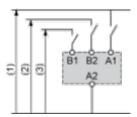
Connections and Schema

# **Internal Wiring Diagram**



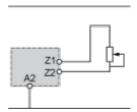
# **Recommended Application Wiring Diagram**

# Start on Energisation



- **1** Supply **2** 12...48 V
- **3** 24 V

# **Connection of Potentiometer**



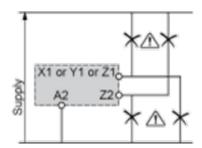
# **Connection Precautions**



# **UNEXPECTED EQUIPMENT OPERATION**

No galvanic isolation between supply terminals and control inputs.

Failure to follow these instructions can result in death, serious injury, or equipment damage.



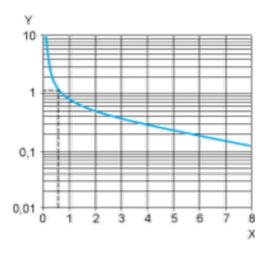
# RE7TP13BU

### Performance Curves

# **Performance Curves**

### A.C. Load Curve 1

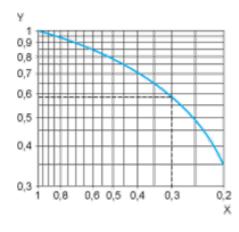
Electrical durability of contacts on resistive loading millions of operating cycles



# 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).



### $\boldsymbol{X}$ Power factor on breaking (cos $\boldsymbol{\varphi}$ )

### Y Reduction factor k

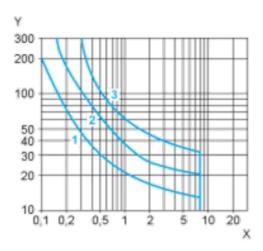
Example: An LC1-F185 contactor supplied with 115 V/50 Hz for a consumption of 55 VA or a current consumption equal to 0.1 A and  $\cos \phi = 0.3$ . For 0.1 A, curve 1 indicates a durability of approximately 1.5 million operating cycles. As the load is inductive, it is necessary to apply a reduction 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  $10^6$  operating cycles x 0.6 = 900 000 operating cycles.



### D. C. Load Limit Curve

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- X Current in A
- Y Voltage in V
- **1** L/R = 20 ms
- 2 L/R with load protection diode
- 3 Resistive load

23 Oct 2024

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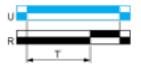
# **Technical Description**

# Function A : Power on Delay Relay

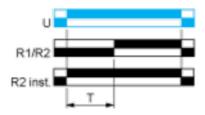
# Description

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

