

Product data sheet

Specifications



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

RE8RA31BTQ

Discontinued on: Jan 29, 2021

Discontinued

Main

Range Of Product	Zelio Time
Product Or Component Type	Optimum industrial timing relay
Component Name	RE8
Time Delay Type	C
Time Delay Range	0.3...30 s
Sale Per Indivisible Quantity	10

Complementary

Discrete Output Type	Relay
Contacts Material	90/10 silver nickel contacts
Width Pitch Dimension	0.89 in (22.5 mm)
[Us] Rated Supply Voltage	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	5.31...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

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

Input Voltage	24 V Y1
Maximum Switching Current	10 mA Y1)
Input Compatibility	2-wire sensors DC with leakage current < 1 mA <164.04 ft (50 m) Y1
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
Maximum Power Consumption In W	0.5 W 24 V
Terminal Description	(Y1)UNUSED (15-16-18)OC_ON (A1-A2)CO
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	GL CSA UL
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	3389110312560

Returnability	No
Country Of Origin	ID

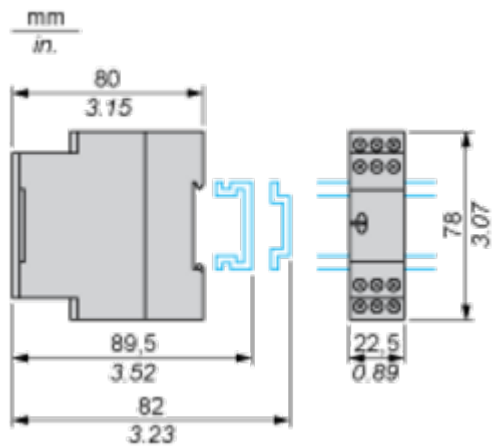
Contractual warranty

Warranty	18 months
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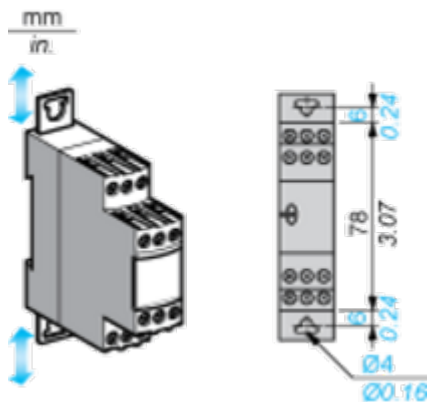
Dimensions Drawings

Width 22.5 mm

Rail Mounting

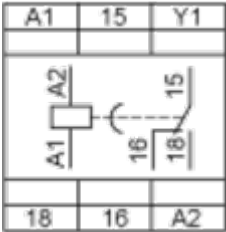


Screw Fixing

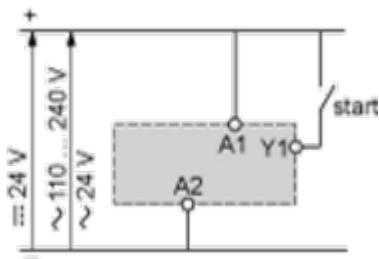


Connections and Schema

Internal Wiring Diagram

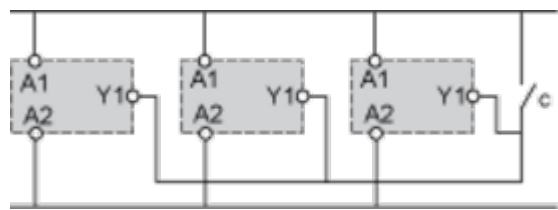


Recommended Application Wiring Diagram



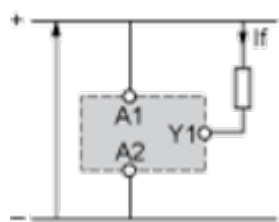
Control of Several Relays

Control of several relays with a single external control contact



The external control contact C may be an electronic control device, for example a true-wire sensor. In this case A1-A2= 24 Vdc and the control device can only control-up to a maximum of 4 relays.

Connection of a 2-Wire Sensor



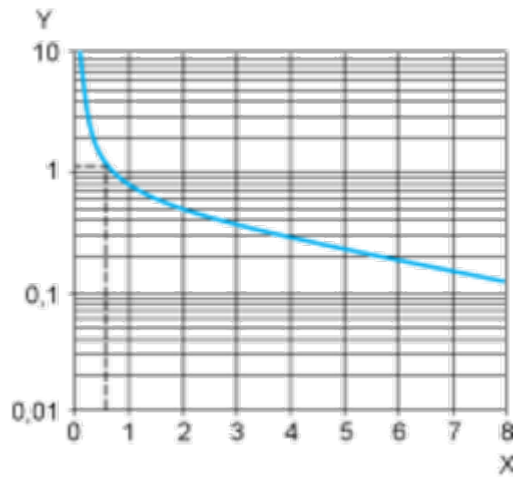
Leakage current (open state) if < 1 mA.

Performance Curves

Performance Curves

A.C. Load Curve 1

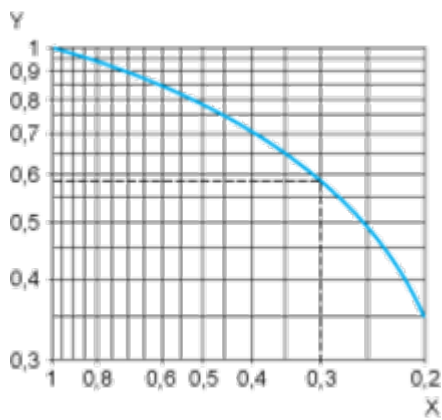
Electrical durability of contacts on resistive loading millions of operating cycles



X Current broken in A
Y Millions of operating cycles

A.C. Load Curve 2

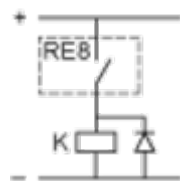
Reduction factor k for inductive loads (applies to values taken from durability curve 1).



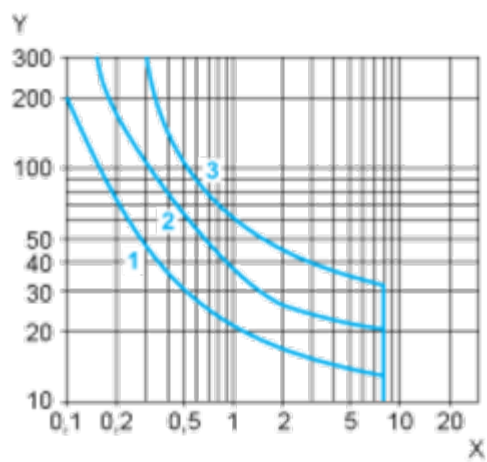
X Power factor on breaking (cos φ)
Y Reduction factor k

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

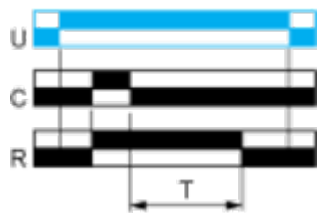
Technical Description

Function C : Off-Delay Relay with Control Signal

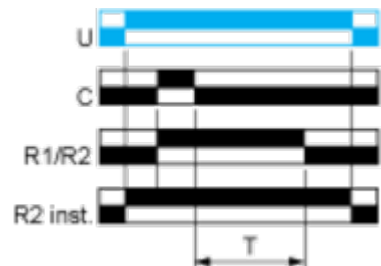
Description

After power-up and closing of the control contact C, the output R closes. When control contact C re-opens, timing T starts. At the end of the timing period, the output(s) R revert(s) to its/their initial state. 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