

# Product data sheet

## Characteristics

### RE8RA11FU

industrial timing relay - 0.1..10 s - type C -  
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	C
Time delay range	0.1..10 s
Sale per indivisible quantity	1

#### Complementary

Discrete output type	Relay
Contacts material	Silver nickel contacts
Width pitch dimension	22.5 mm
[Us] rated supply voltage	110..240 V AC at 50/60 Hz
Voltage range	0.9...1.1 Us
Connections - terminals	Screw terminals 2 x 2.5 mm <sup>2</sup> , flexible cable without cable end Screw terminals 2 x 1.5 mm <sup>2</sup> , flexible cable with cable end
Tightening torque	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
[Ie] rated operational current	<= 0.2 A at 115 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 <= 0.1 A at 250 V, DC-13 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 <= 3 A at 24 V, AC-15 for 70 °C conforming to VDE 0660 <= 3 A at 24 V, AC-15 for 70 °C conforming to IEC 60947-5-1/1991 <= 2 A at 24 V, DC-13 for 70 °C conforming to VDE 0660 <= 2 A at 24 V, DC-13 for 70 °C conforming to IEC 60947-5-1/1991
Minimum switching capacity	10 mA at 12 V
Input voltage	110..240 V (Y1)
Maximum switching current	10 mA (Y1)
Input compatibility	2-wire sensors DC with leakage current < 1 mA, cable length: <= 50 m (Y1)
Marking	CE
Overvoltage category	III conforming to IEC 60664-1
[Ui] rated insulation voltage	300 V conforming to CSA 250 V conforming to IEC
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	8.5 VA at 240 V 1.8 VA at 110 V

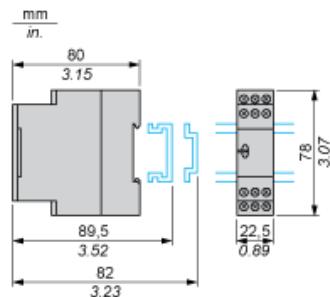
Terminal description	(15-16-18)OC_ON (A1-A2)CO (Y1)UNUSED
Height	78 mm
Width	22.5 mm
Depth	80 mm
Product weight	0.11 kg

## Environment

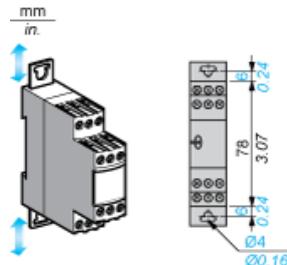
Immunity to microbreaks	3 ms
Standards	EN/IEC 61812-1
Product certifications	CSA GL UL
Ambient air temperature for storage	-40...85 °C
Ambient air temperature for operation	-20...60 °C
Relative humidity	15...85 % 3K3 conforming to IEC 60721-3-3
Vibration resistance	0.35 mm 10...55 Hz conforming to IEC 60068-2-6
IP degree of protection	IP50 (casing) IP20 (terminals)
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	8 kV in air conforming to IEC 61000-4-2 level 3 6 kV in contact 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

Width 22.5 mm

Rail Mounting



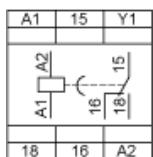
Screw Fixing



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### Internal Wiring Diagram

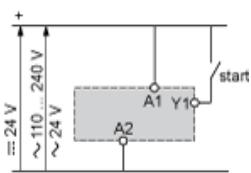
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### Recommended Application Wiring Diagram

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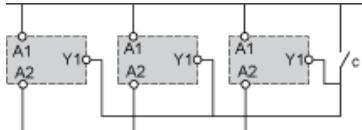


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### Control of Several Relays

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Control of several relays with a single external control contact

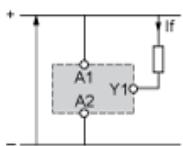


The external control contact C may be an electronic control device, for example a true-wire sensor. In this case A1-A2= 24 Vdc and the control device can only control-up to a maximum of 4 relays.

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### Connection of a 2-Wire Sensor

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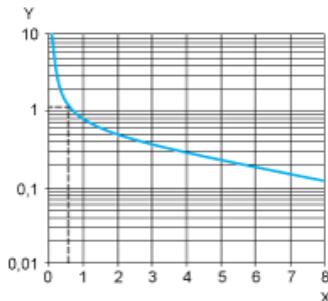


Leakage current (open state) If < 1 mA.

## Performance Curves

### A.C. Load Curve 1

Electrical durability of contacts on resistive loading millions of operating cycles

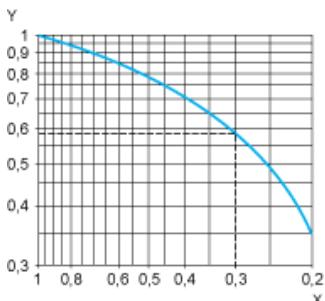


X Current broken in A

Y Millions of operating cycles

### A.C. Load Curve 2

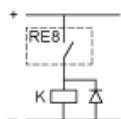
Reduction factor k for inductive loads (applies to values taken from durability curve 1).



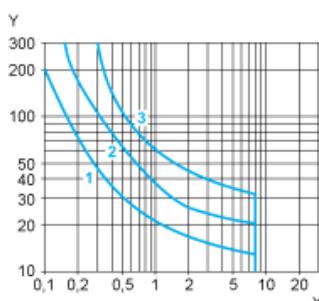
X Power factor on breaking (cos  $\phi$ )

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:  $1.5 \cdot 10^6$  operating cycles  $\times 0.6 = 900,000$  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

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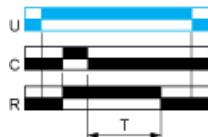
### Function C : Off-Delay Relay with Control Signal

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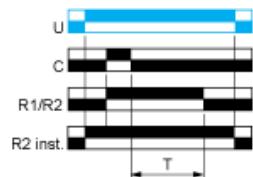
#### Description

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.)

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#### Legend

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	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 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