

# Product data sheet

Specifications



## Optimum industrial timing relay, Harmony Time, 3...300 s, type C, 24 V AC/DC, 1 C/O

RE8RA21B

⚠ Discontinued on: Mar 31, 2022

⚠ 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              | 3...300 s                       |
| Sale per indivisible quantity | 1                               |

### Complementary

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Discrete output type                        | Relay                                                                                                                                                                                                                                                                                                                                                                                            |
| Contacts material                           | Silver nickel contacts                                                                                                                                                                                                                                                                                                                                                                           |
| Width pitch dimension                       | 0.9 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 <sup>2</sup> flexible with cable end<br>Screw terminals, 2 x 2.5 mm <sup>2</sup> flexible without cable end                                                                                                                                                                                                                                                          |
| tightening torque                           | 5.3...9.7 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<br>2 A DC-13 24 V 158 °F (70 °C) VDE 0660<br>3 A AC-15 24 V 158 °F (70 °C) IEC 60947-5-1/1991<br>3 A AC-15 24 V 158 °F (70 °C) VDE 0660<br>0.1 A DC-13 250 V 158 °F (70 °C) IEC 60947-5-1/1991<br>0.1 A DC-13 250 V 158 °F (70 °C) VDE 0660<br>0.2 A DC-13 115 V 158 °F (70 °C) IEC 60947-5-1/1991<br>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 conforming to IEC 60664-1                                      |
| [Ui] rated insulation voltage  | 250 V IEC<br>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<br>(15-16-18)OC_ON<br>(A1-A2)CO                         |
| Height                         | 3.07 in (78 mm)                                                    |
| Width                          | 0.9 in (22.5 mm)                                                   |
| Depth                          | 3.1 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<br>UL<br>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 (f= 10...55 Hz) conforming to IEC 60068-2-6 |
| IP degree of protection               | IP20 terminals)<br>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  | 9.1 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<br>CISPR 11 group 1 - class A    |

## Ordering and shipping details

|                   |                               |
|-------------------|-------------------------------|
| Category          | 22376-RELAYS-MEASUREMENT(RM4) |
| Discount Schedule | CP2                           |
| GTIN              | 3389110312522                 |

|                   |    |
|-------------------|----|
| Returnability     | No |
| Country of origin | ID |

## Packing Units

|                        |                  |
|------------------------|------------------|
| Unit Type of Package 1 | PCE              |
| Nbr. of units in pkg.  | 1                |
| Package 1 Height       | 1.06 in (2.7 cm) |
| Package 1 Width        | 3.2 in (8.2 cm)  |
| Package 1 Length       | 3.3 in (8.5 cm)  |
| Package weight(Lbs)    | 3.2 oz (92 g)    |

## Contractual warranty

|                      |    |
|----------------------|----|
| Warranty (in months) | 18 |
|----------------------|----|



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

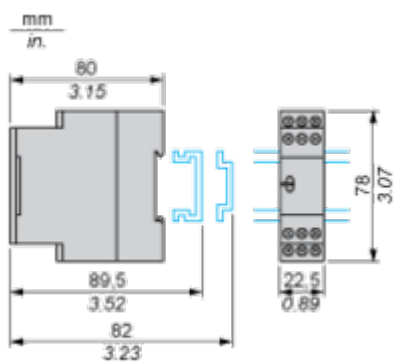
### Use Longer

| Lifetime extension |    |
|--------------------|----|
| Repair             | No |

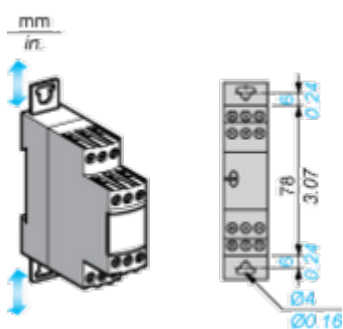
Dimensions Drawings

Width 22.5 mm

Rail Mounting

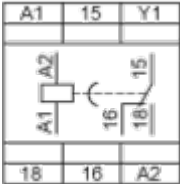


Screw Fixing

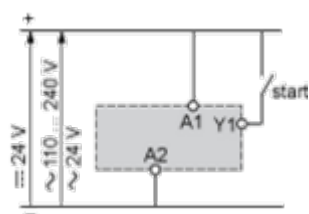


Connections and Schema

Internal Wiring Diagram

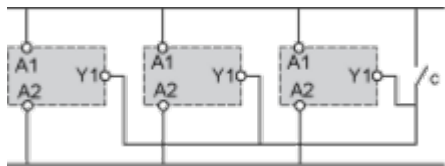


Recommended Application Wiring Diagram



Control of Several Relays

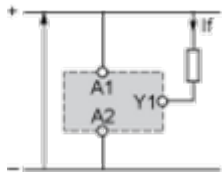
Control of several relays with a single external control contact



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



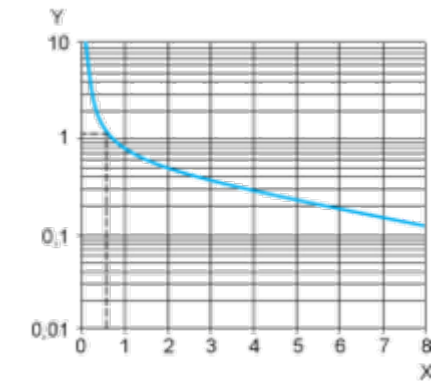
Leakage current (open state) if < 1 mA.

Performance Curves

Performance Curves

A.C. Load Curve 1

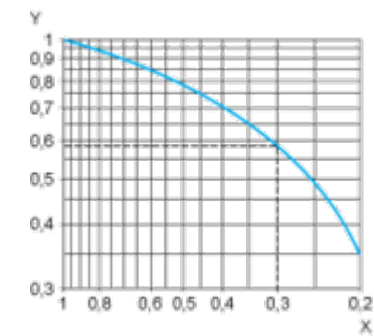
Electrical durability of contacts on resistive loading millions of operating cycles



X Current broken in A  
Y Millions of operating cycles

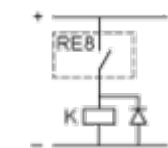
A.C. Load Curve 2

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

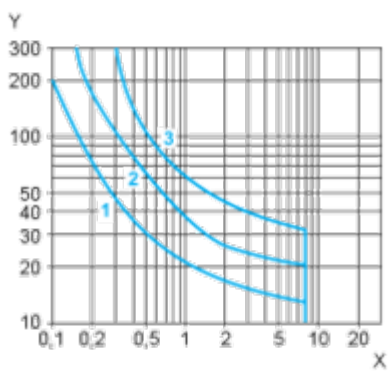


X Power factor on breaking (cos φ)  
Y Reduction factor k

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 10<sup>6</sup> 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

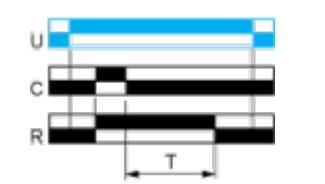
Technical Description

Function C : Off-Delay Relay with Control Signal

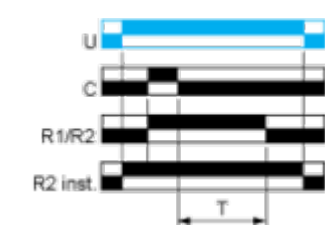
Description

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                                                               |