

## Data sheet

MFRk-E12, 230 V AC / 24 V AC/DC, 0,15-800 s

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P/N

110310412230

EAN 4250184121268

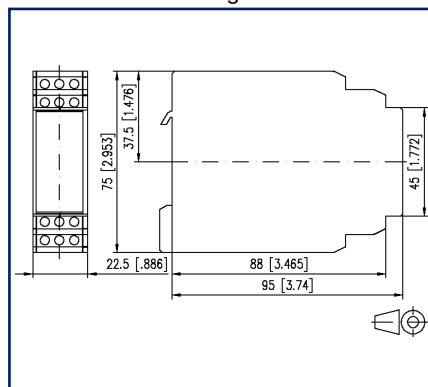
2023/06/20

Version: E

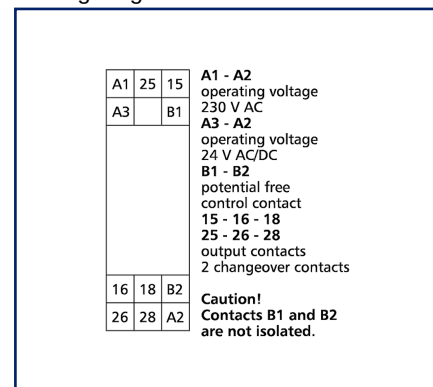
## Illustrations



Dimensional drawing



Wiring diagram



See enlarged drawings at the end of document

## Product specification

Multi-functional timer relay with incorporated coding switches to set functions. The time is set by means of a linear potentiometer on a relative scale.

- Four adjustable time ranges for each device
- 0.15 to 800 s
- Six selectable functions
- 1. On-delayed
- 2. Making-pulse interval
- 3. Off-delay
- 4. Breaking-pulse interval
- 5. Flashing for pause start
- 6. Flashing for pulse start



## Technical Data

### Supply

|                        |                                     |
|------------------------|-------------------------------------|
| Operating voltage      | 230 V AC / 24 V AC/DC -10% ... +10% |
| Frequency range        | 50 ... 60 Hz                        |
| Duty cycle relative    | 100 %                               |
| Response time typical  | 20 ms                               |
| Release time typical   | 20 ms                               |
| Fallback voltage range | $\geq 0.15$ UN                      |
| Recovery time          | $\geq 250$ ms                       |
| Time Ranges            |                                     |
| Time range adjustable  | 0.15 s - 800 s                      |
| Repeatability          | $\pm 0.01$ %                        |

### Inputs

|                                              |              |
|----------------------------------------------|--------------|
| Minimum switch-on duration                   |              |
| Minimum switch-on duration (control contact) | $\geq 0.2$ s |

### Outputs

|                          |                                  |
|--------------------------|----------------------------------|
| Contacts                 | 2 changeover contacts            |
| Contact material         | AgNi                             |
| Switching voltage (max.) | 250 V                            |
| Continuous Current       | 6 A                              |
| Switching frequency      | 1200 switching cycles/h          |
| Mechanical life          | $1 \times 10^7$ switching cycles |
| Electrical life          | $1 \times 10^5$ switching cycles |
| Indicator                | green and red LED                |

### Insulation coil - contact set

|                                            |                                          |
|--------------------------------------------|------------------------------------------|
| Nominal voltage of the power supply system | 230 / 400 V AC                           |
| Overvoltage category                       | III   II                                 |
| Degree of pollution                        | 2   2                                    |
| Rated test voltage                         | 4 kV   2.5 kV                            |
| Type of insulation                         | basic insulation   reinforced insulation |



## Technical Data

### Housing

#### Dimensions

|                       |                                  |
|-----------------------|----------------------------------|
| Dimension (W x H x D) | 22.5 mm x 75 mm x 95 mm          |
| Dimension (W x H x D) | 0.886 in. x 2.953 in. x 3.74 in. |
| Weight                | 150 g                            |
| Mounting style        | Standard rail TH35               |
| Mounting position     | any                              |
| Apposition            | without distance                 |
| Connection type       | Screw type terminal blocks       |

### Terminal blocks

|                                      |                                                        |
|--------------------------------------|--------------------------------------------------------|
| Wire cross section solid             | 0.2 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12  |
| Wire cross section multi             | 0.25 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12 |
| Wire cross section with wire ferrule | 0.25 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12 |
| Screw torque (max.)                  | 0.5 Nm                                                 |
| Stripping length (min.)              | 8 mm                                                   |

### Material

|                           |                 |
|---------------------------|-----------------|
| Material - Housing        | Polyamid 6.6 V0 |
| Color                     | gray            |
| Material - Terminal block | Polyamid 6.6 V0 |
| Material - Covers         | Polyamid 6.6 V0 |

### Protection category according to IEC 60529

|                                                           |      |
|-----------------------------------------------------------|------|
| Protection category - housing (acc. to IEC 60529)         | IP40 |
| Protection category - terminal blocks (acc. to IEC 60529) | IP20 |

### Temperature range

|                            |                 |
|----------------------------|-----------------|
| Operating                  |                 |
| Temperature - Operating °C | -10 °C - 55 °C  |
| Temperature - Operating °F | 14 °F - 131 °F  |
| Storage                    |                 |
| Temperature - Storage °C   | -25 °C - 70 °C  |
| Temperature - Storage °F   | -13 °F - 158 °F |



# C | Logline

Data sheet

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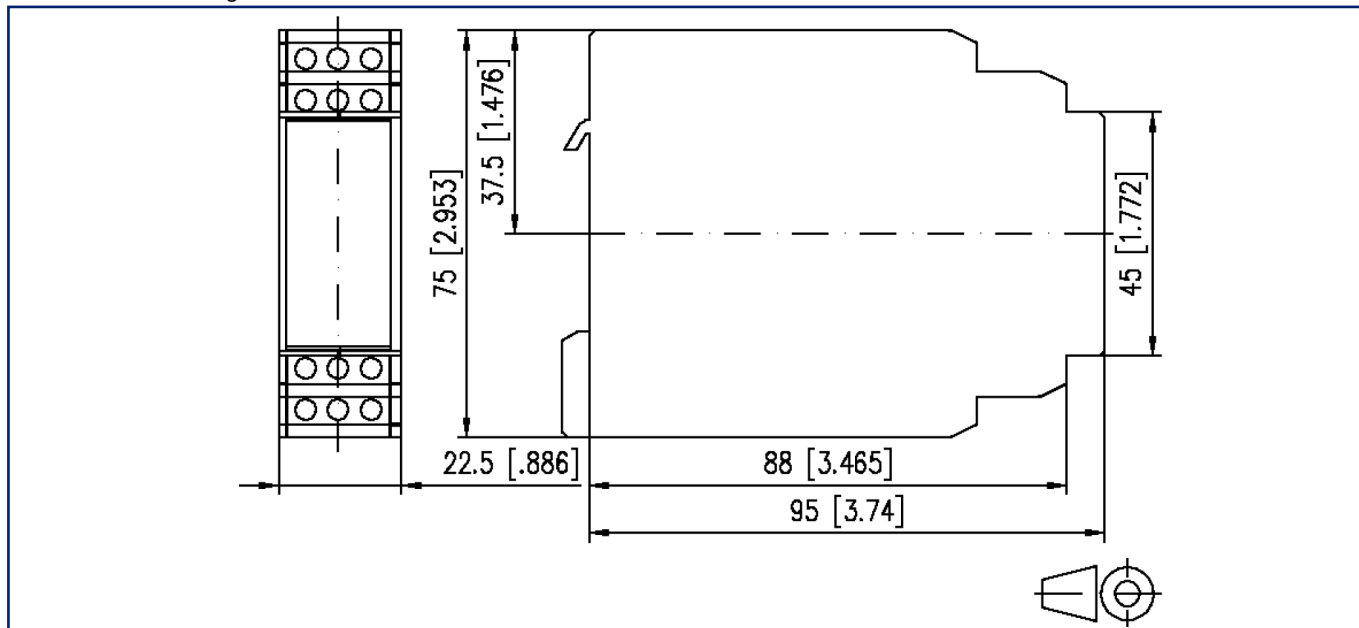
### Classifications

|          |          |
|----------|----------|
| ETIM 7.0 | EC001439 |
| ETIM 8.0 | EC001439 |
| ETIM 9.0 | EC001439 |



## Illustrations

### Dimensional drawing



### Wiring diagram

|    |    |    |
|----|----|----|
| A1 | 25 | 15 |
| A3 |    | B1 |
|    |    |    |
|    |    |    |
| 16 | 18 | B2 |
| 26 | 28 | A2 |

**A1 - A2**  
operating voltage  
230 V AC

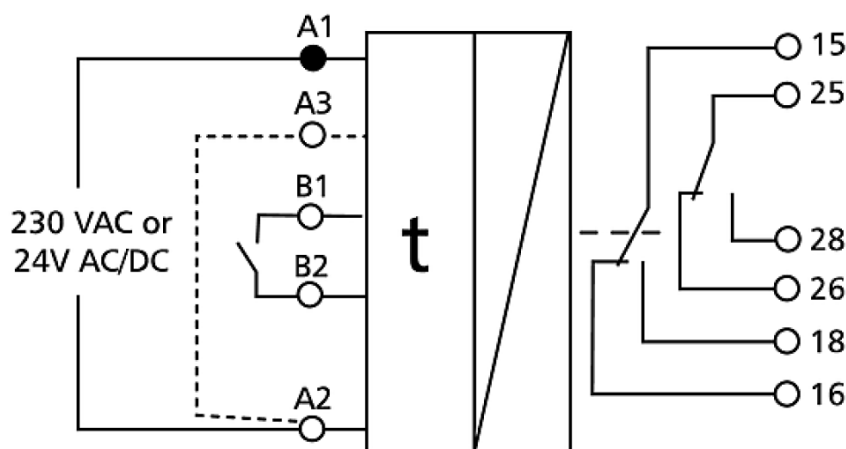
**A3 - A2**  
operating voltage  
24 V AC/DC

**B1 - B2**  
potential free  
control contact  
15 - 16 - 18  
25 - 26 - 28  
output contacts  
2 changeover contacts

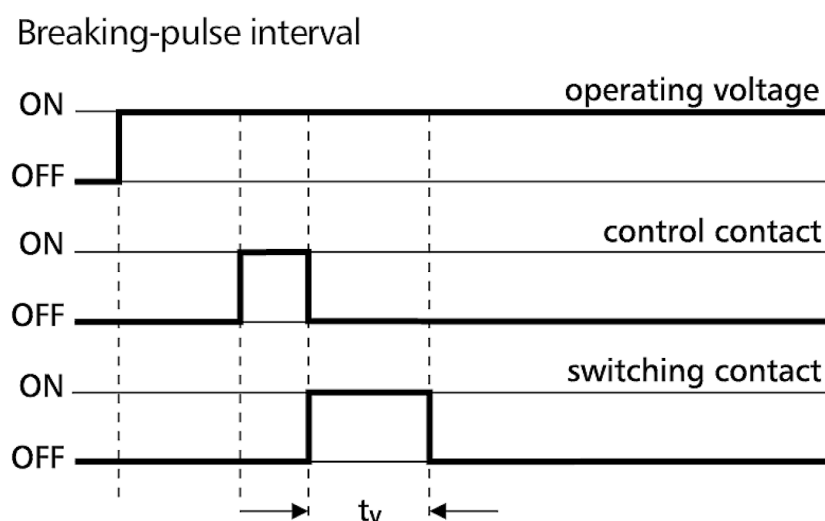
**Caution!**  
**Contacts B1 and B2**  
**are not isolated.**

## Illustrations

Circuit diagram



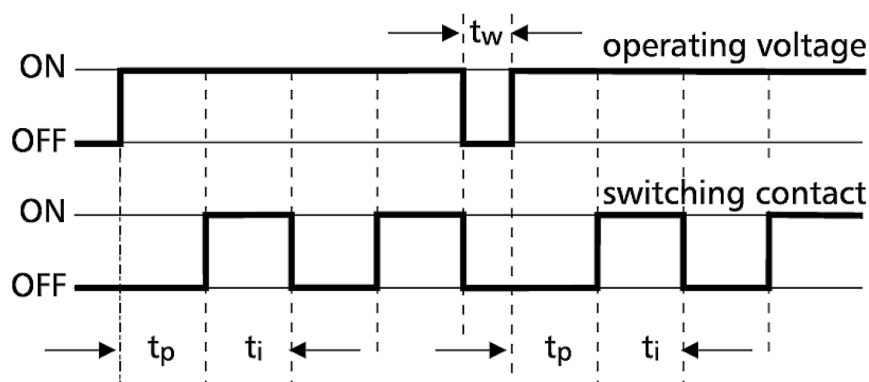
Function diagram



## Illustrations

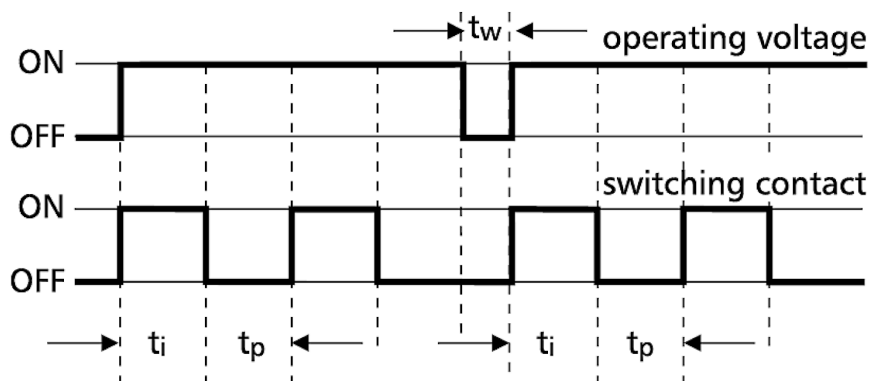
### Function diagram

#### Flashing for pause start



### Function diagram

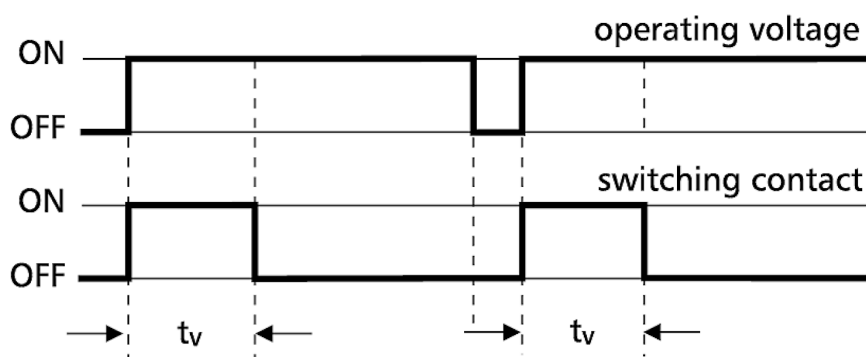
#### Flashing for pulse start



## Illustrations

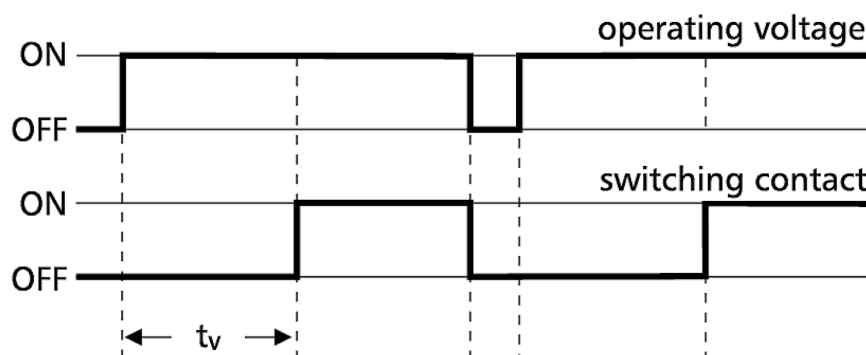
Function diagram

Making-pulse interval



Function diagram

On-delayed



## Illustrations

### Function diagram

