

# Data sheet

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

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P/N

110310412230

EAN 4250184121268

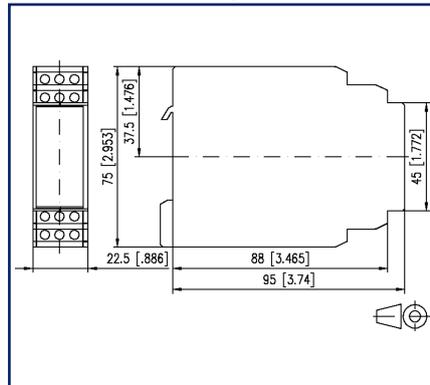
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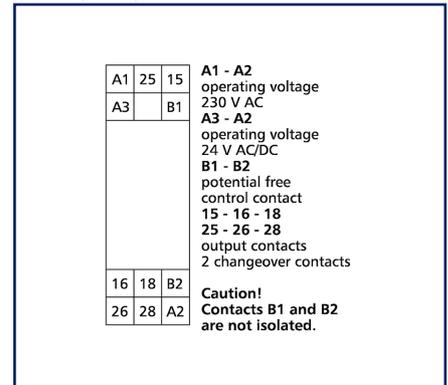
## Illustrations



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	+/- 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

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**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

**Climatic Data**

Operating

Temperature - Operating °C	-10 °C - 55 °C
Temperature - Operating °F	14 °F - 131 °F
Relative humidity	max. 85 % non-condensing

Storage

Temperature - Storage °C	-25 °C - 70 °C
Temperature - Storage °F	-13 °F - 158 °F

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### Classifications

ETIM 7.0	EC001439
ETIM 8.0	EC001439
ETIM 9.0	EC001439
ETIM 10.0	EC001439

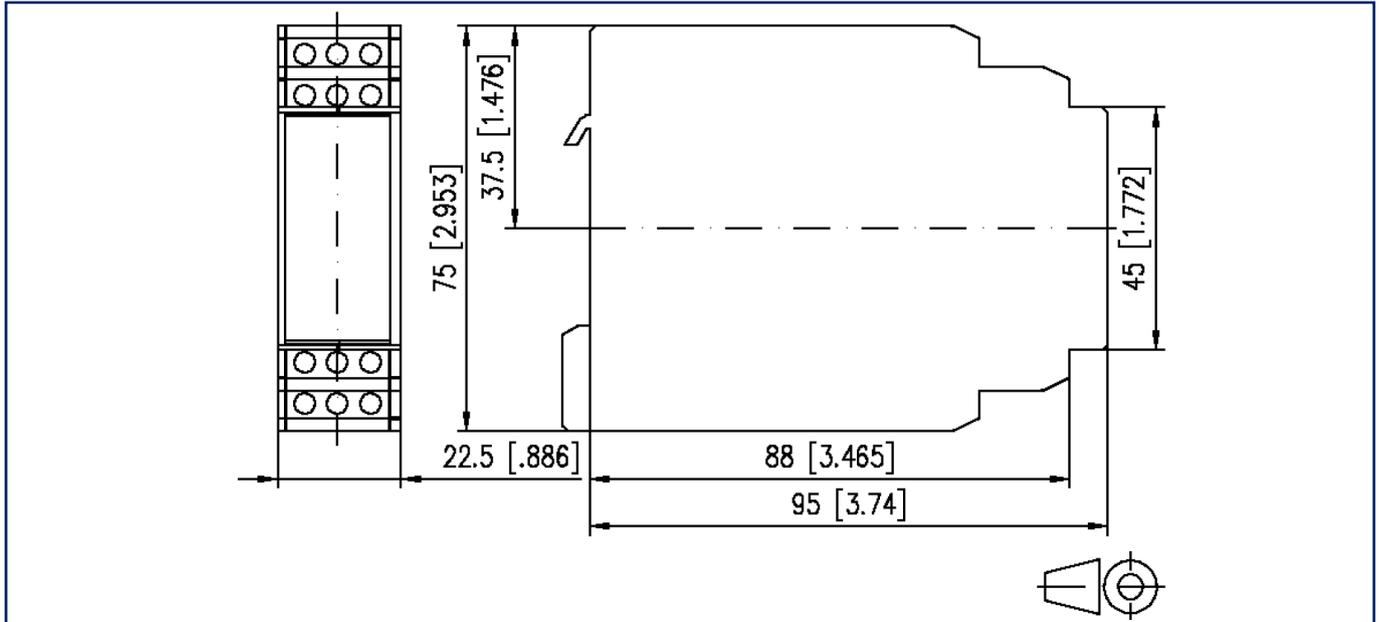
### Application note

This product is a standard product of METZ CONNECT. METZ CONNECT is not aware of the specific intended use of the goods by the Customer or any customers of the Customer. The Customer guarantees that it has fully and sufficiently tested the use of the goods and any product modifications, product changes or product enhancements with regard to the specific intended use in accordance with the state of the art or in any other way. At METZ CONNECT's request, the Customer shall submit and make available meaningful evidence (e.g. test and laboratory protocols, certifications, etc.).



## Illustrations

### Dimensional drawing



### Wiring diagram

A1	25	15	<b>A1 - A2</b> operating voltage 230 V AC <b>A3 - A2</b> operating voltage 24 V AC/DC <b>B1 - B2</b> potential free control contact <b>15 - 16 - 18</b> <b>25 - 26 - 28</b> output contacts 2 changeover contacts
A3		B1	
16	18	B2	<b>Caution!</b> <b>Contacts B1 and B2</b> <b>are not isolated.</b>
26	28	A2	

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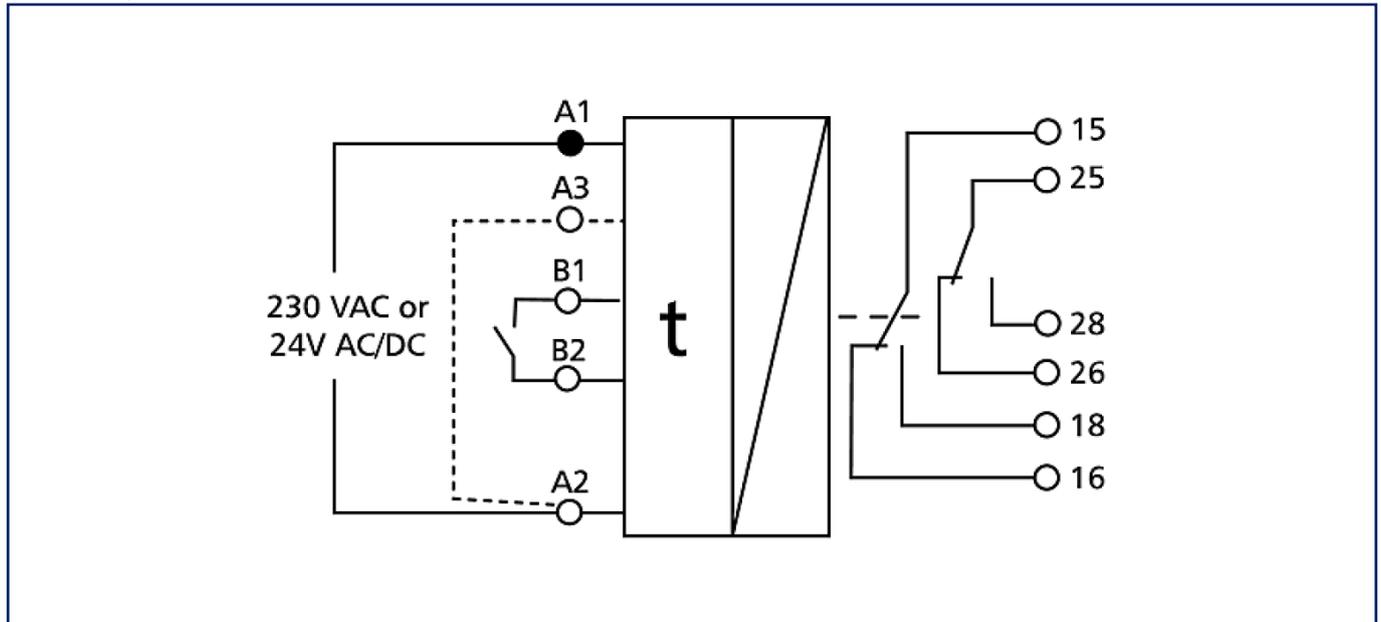
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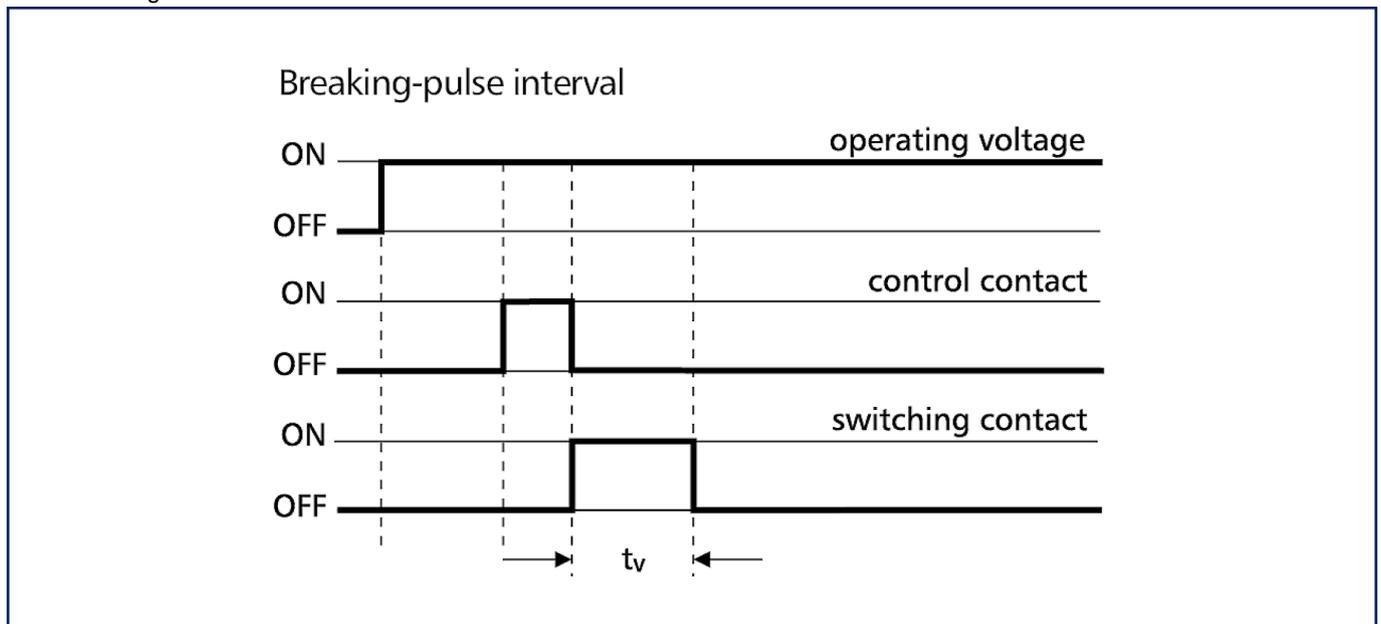
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## Illustrations

Circuit diagram

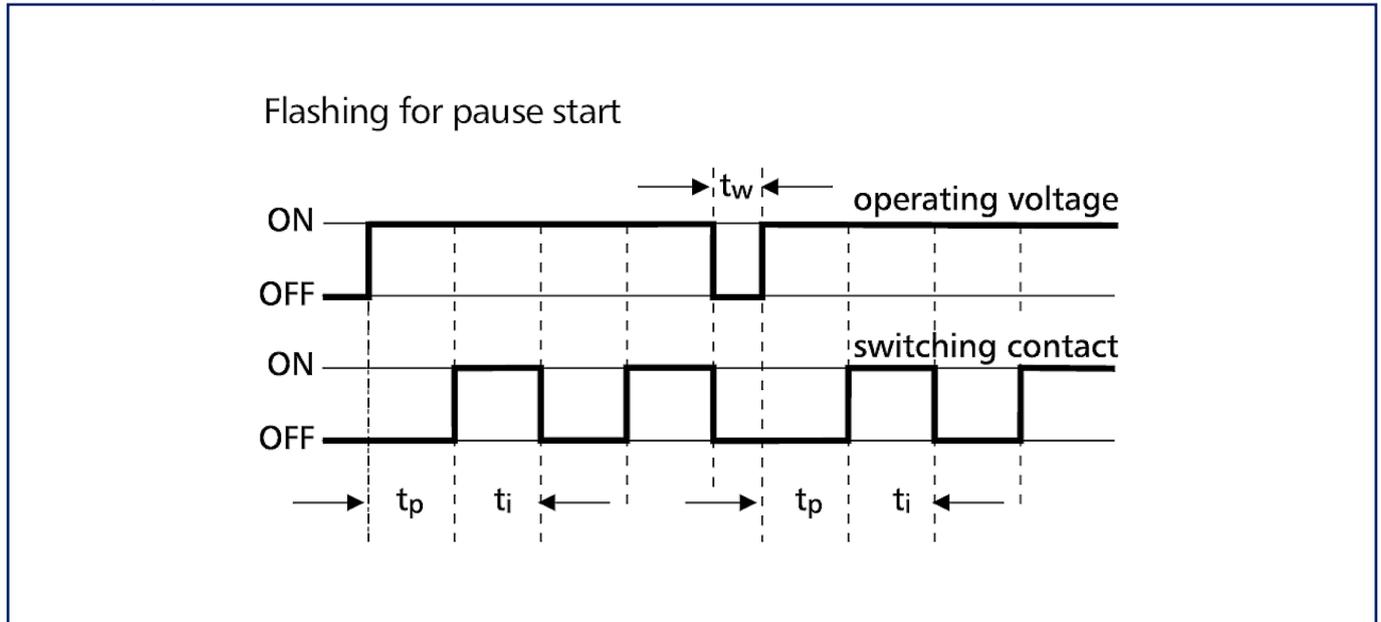


Function diagram

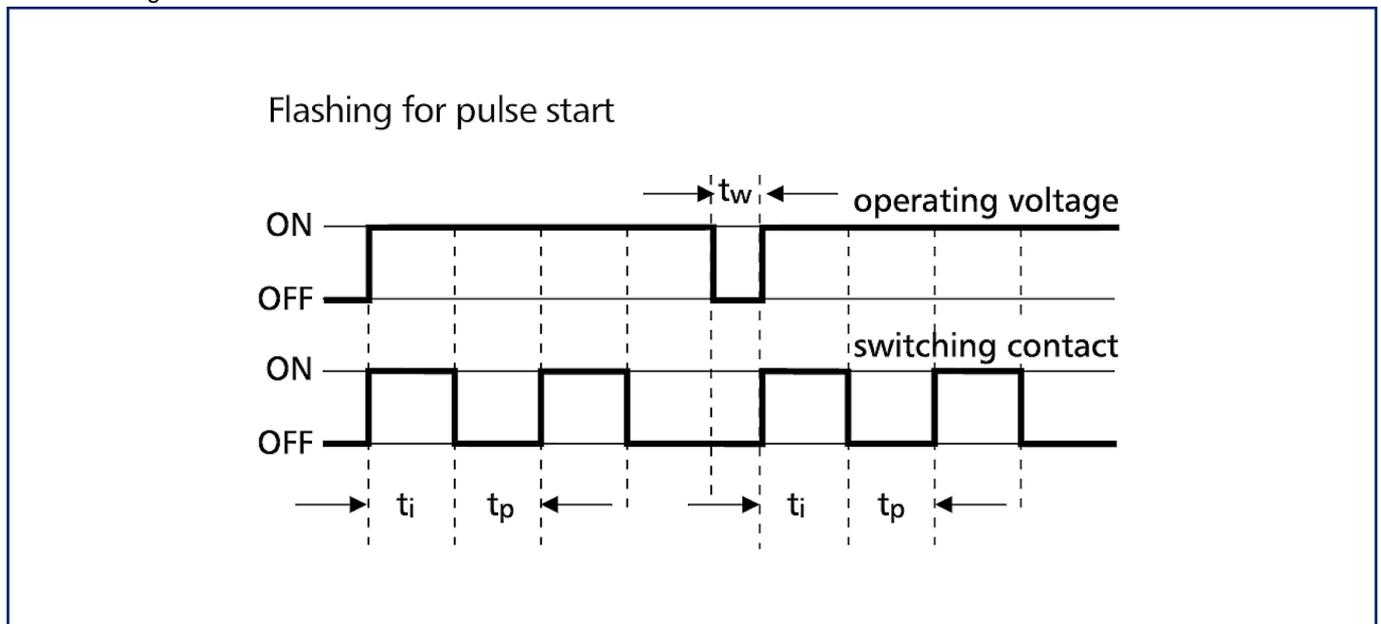


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Function diagram

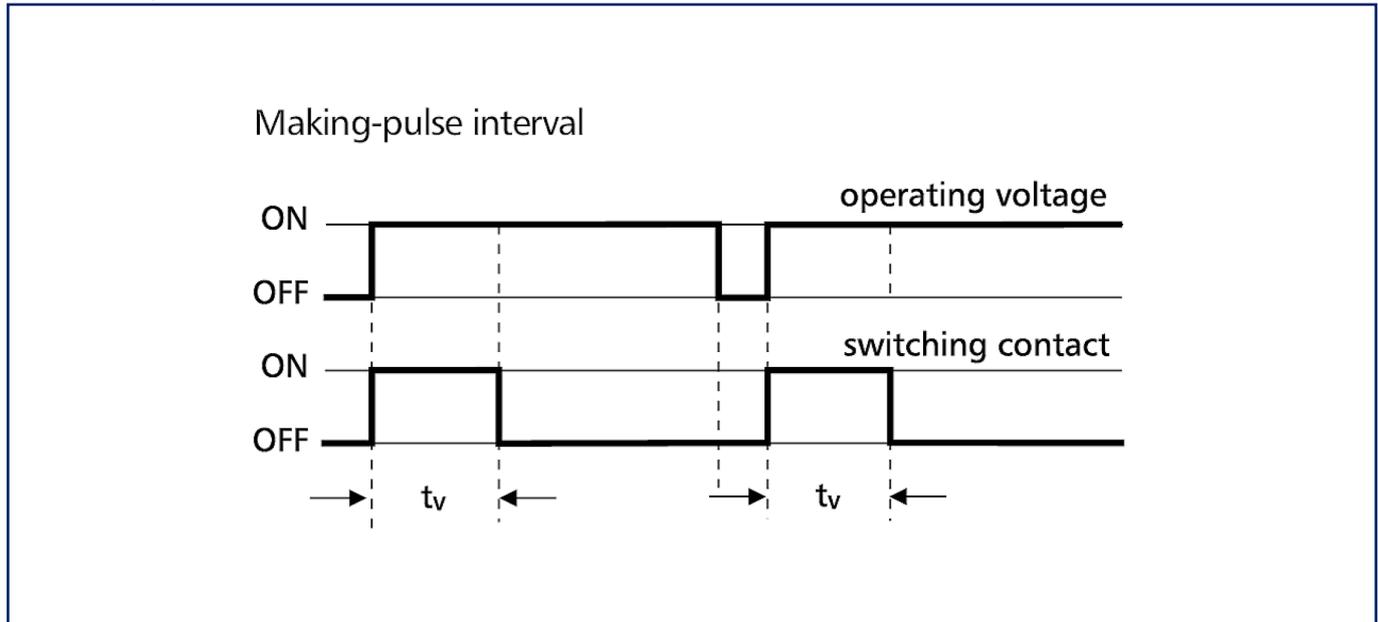


Function diagram

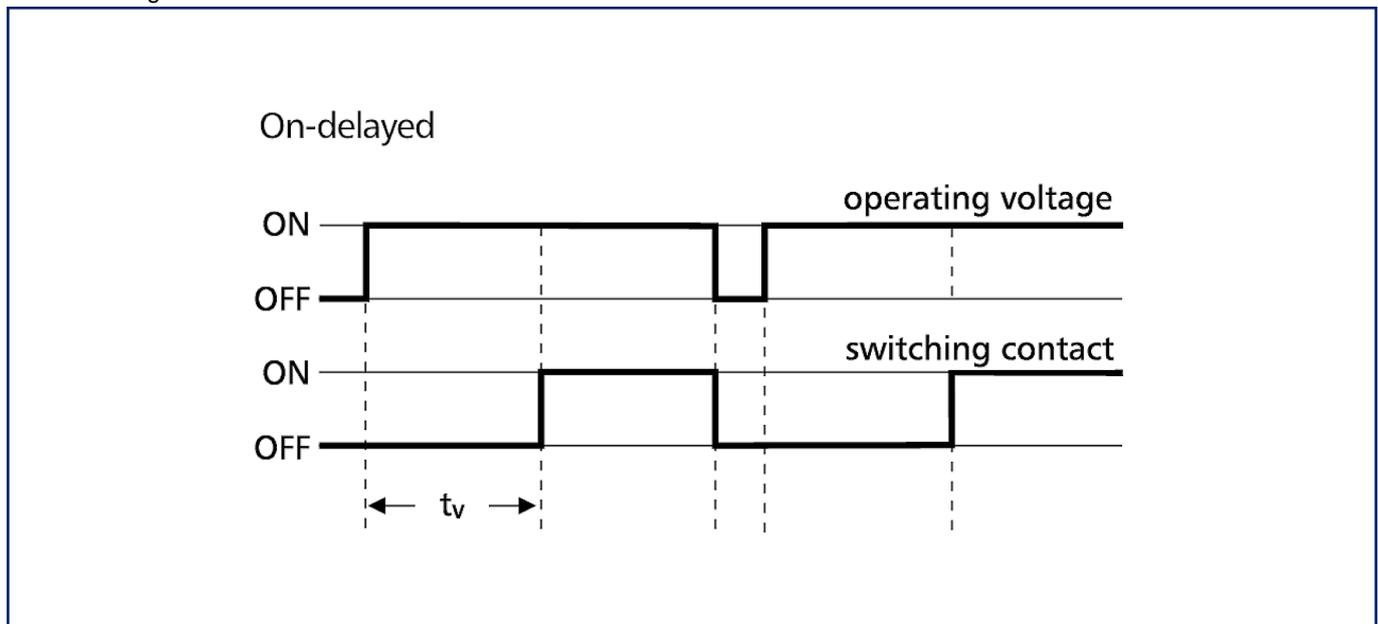


## Illustrations

Function diagram



Function diagram



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### Function diagram

