

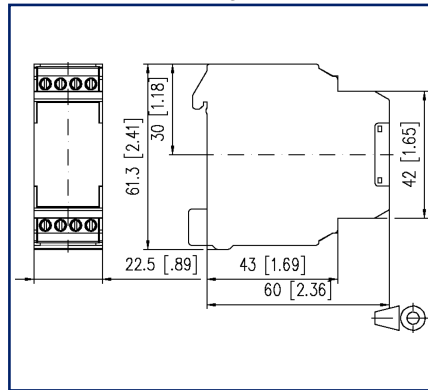
# Data sheet

MFRk-E08 230 V AC, 24 V AC/DC

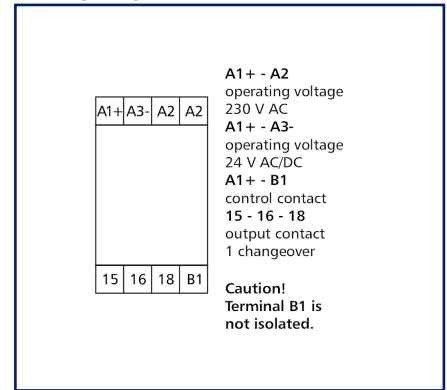
## Illustrations



Dimensional drawing



Wiring diagram



See enlarged drawings at the end of document

## Product specification

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

- Connection with screw type terminal blocks
- Ten adjustable time ranges from 0.05 s to 30 h
- Seven 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
  7. Off-delay with control contact B1 inhibition

### Technical Data

Supply	
Operating voltage	230 V AC / 24 V AC/DC -10% ... +10%
Frequency range	50 ... 60 Hz
Power consumption	
Power consumption 230 V AC	5.2 VA
Power consumption 24 V AC	0.5 VA
Power consumption 24 V DC	0.3 W
Duty cycle relative	100 %
Response time typical	20 ms
Release time typical	20 ms
Fallback voltage range	$\geq 0.15$ UN
Time Ranges	
Time range adjustable	0.05 s - 30 h
Repeatability	$\pm 0.01$ %
Repeatability in the smallest time range (max.)	$\pm 0.1$ %
Inputs	
Minimum switch-on duration	
Minimum switch-on duration (control contact)	$\geq 5$ ms
Minimum switch-on duration DC	$\geq 0.2$ s
Minimum switch-on duration AC	$\geq 0.3$ s
Outputs	
Contacts	1 changeover contact
Contact material	AgSnO <sub>2</sub>
Switching voltage (max.)	250 V AC
Continuous Current	6 A
Protection	6 A
Switching frequency	1200 switching cycles/h
Mechanical life	1x10 <sup>7</sup> switching cycles
Electrical life	1x10 <sup>5</sup> switching cycles

### Technical Data

Outputs	
Recovery time	
Recovery time (control contact)	>= 10 ms
Recovery time 24 V AC	60 ms
Recovery time 24 V DC	50 ms
Recovery time 230 V AC	100 ms
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
Housing	
Dimensions	
Dimension (W x H x D)	22.5 mm x 61.3 mm x 60 mm
Dimension (W x H x D)	0.886 in. x 2.413 in. x 2.362 in.
Weight	70 g
Mounting style	Standard rail TH35
Mounting position	any
Apposition	without distance
Connection type	Screw type terminal blocks
Terminal blocks	
Wire cross section solid	0.34 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

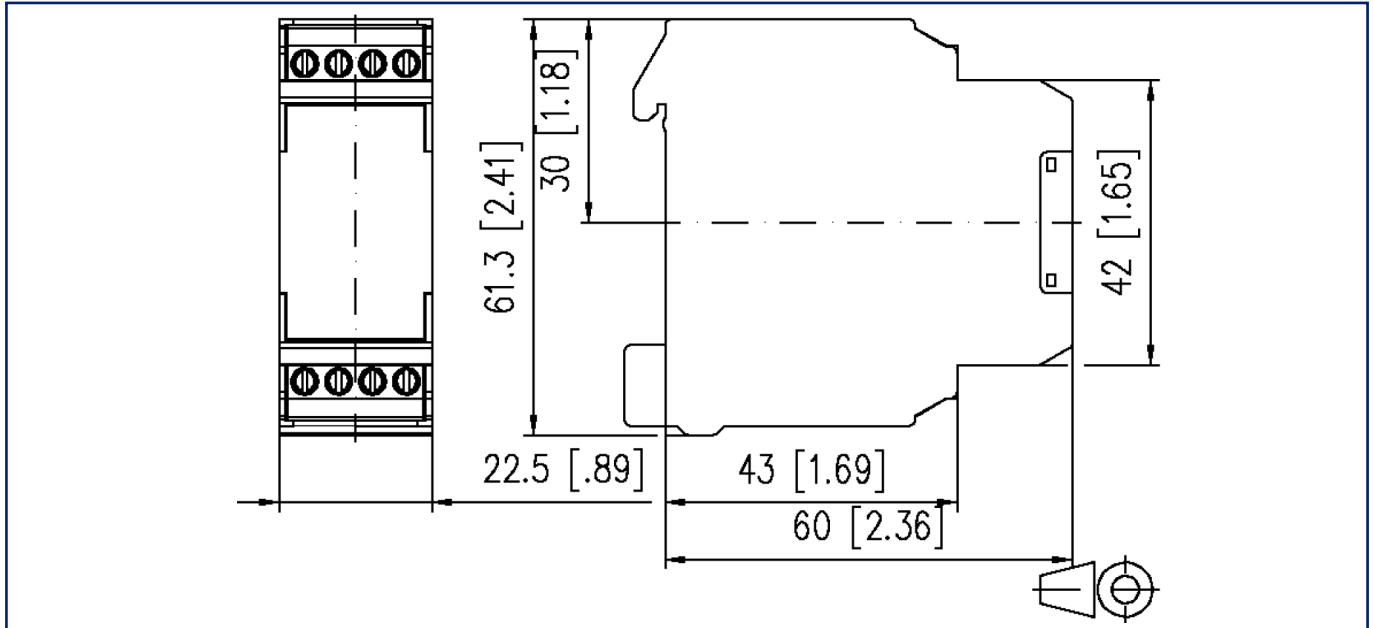
### Technical Data

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
Power loss	
Power loss (typical)	1 W
Classifications	
ETIM 7.0	EC001439
ETIM 8.0	EC001439
ETIM 9.0	EC001439



## Illustrations

Dimensional drawing



Wiring diagram

A1+	A3-	A2	A2
15	16	18	B1

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

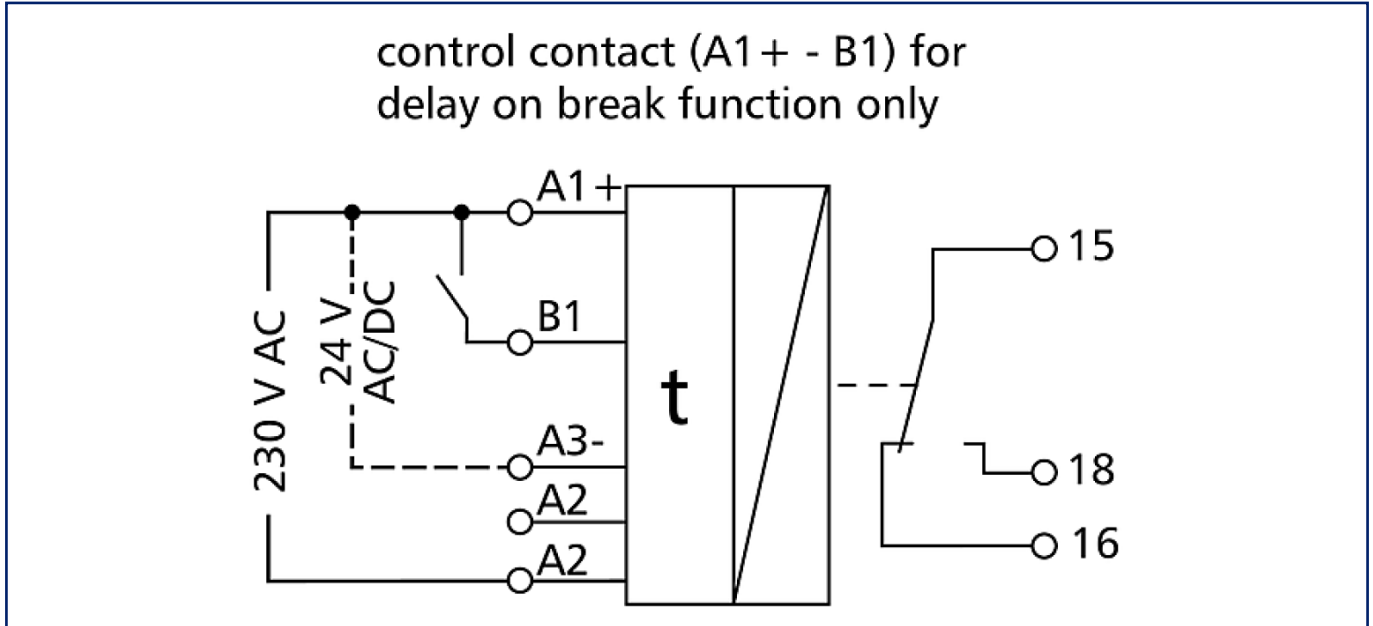
**A1+ - A3-**  
operating voltage  
24 V AC/DC

**A1+ - B1**  
control contact  
**15 - 16 - 18**  
output contact  
1 changeover

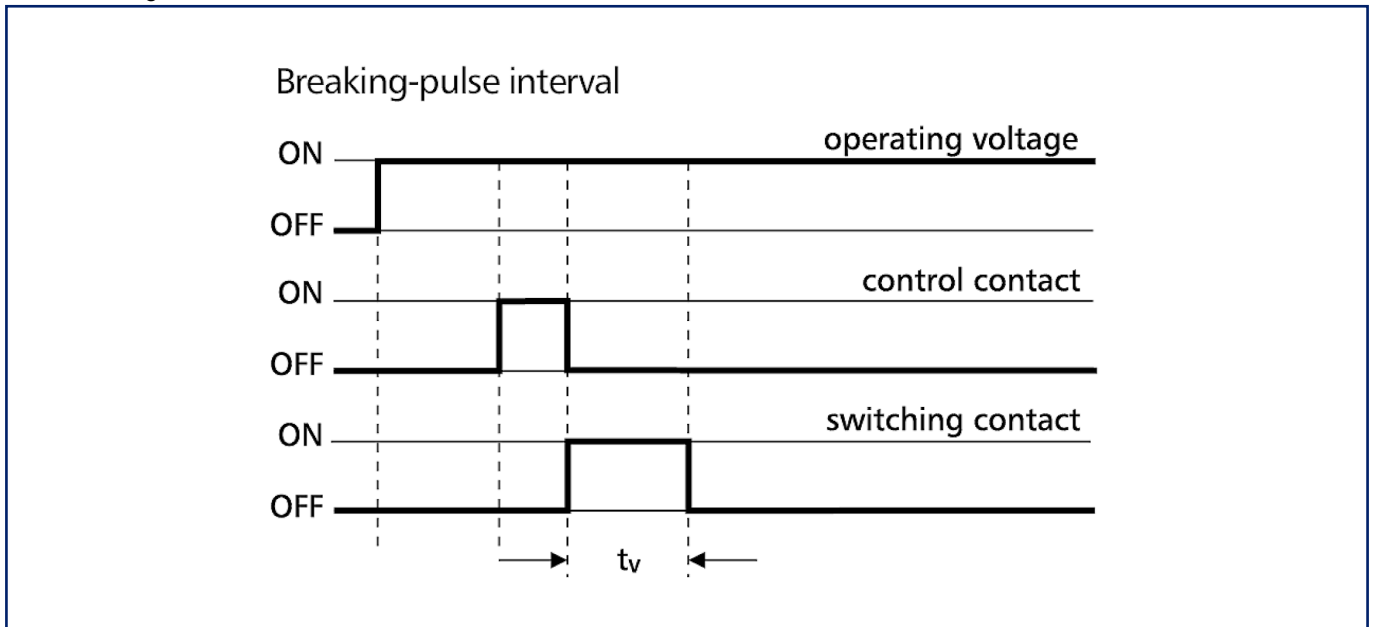
**Caution!**  
**Terminal B1 is not isolated.**

**Illustrations**

Circuit diagram

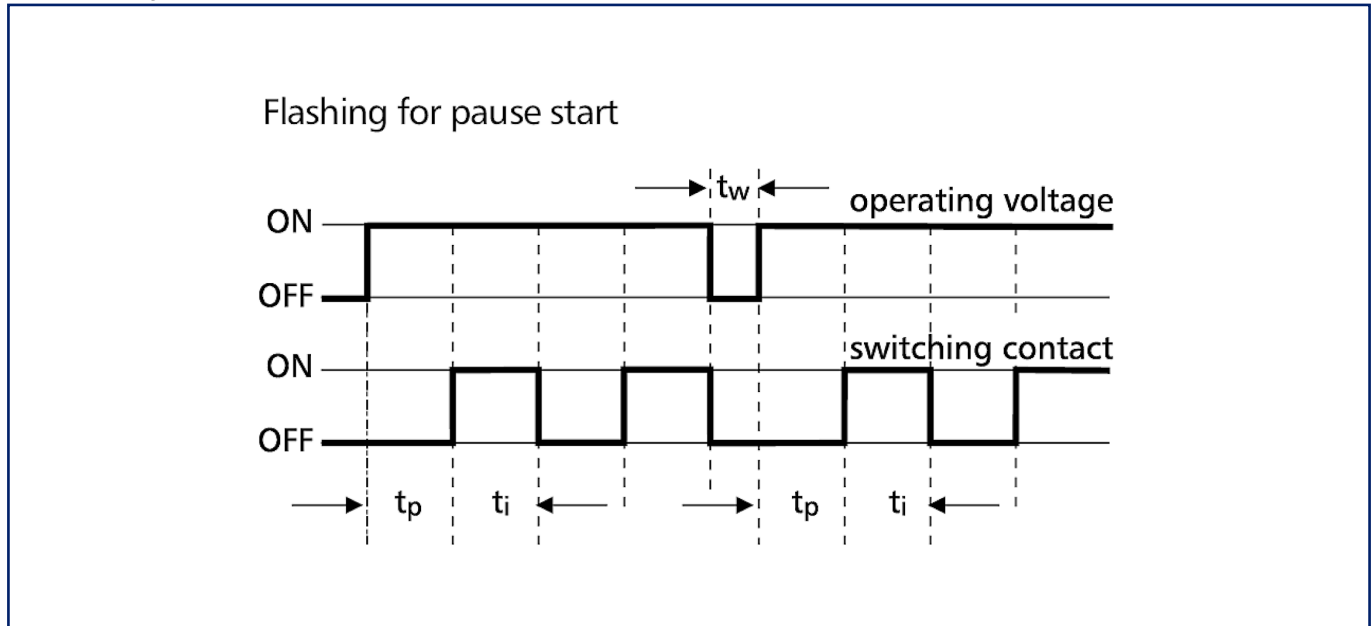


Function diagram

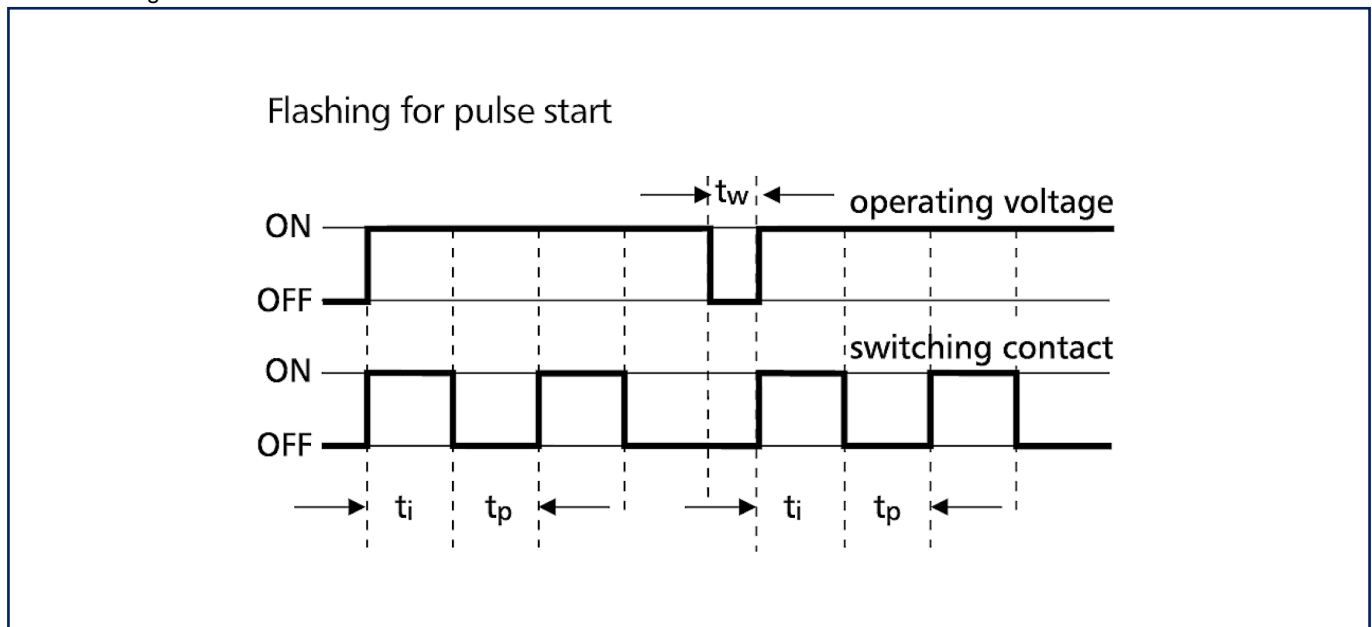


**Illustrations**

Function diagram



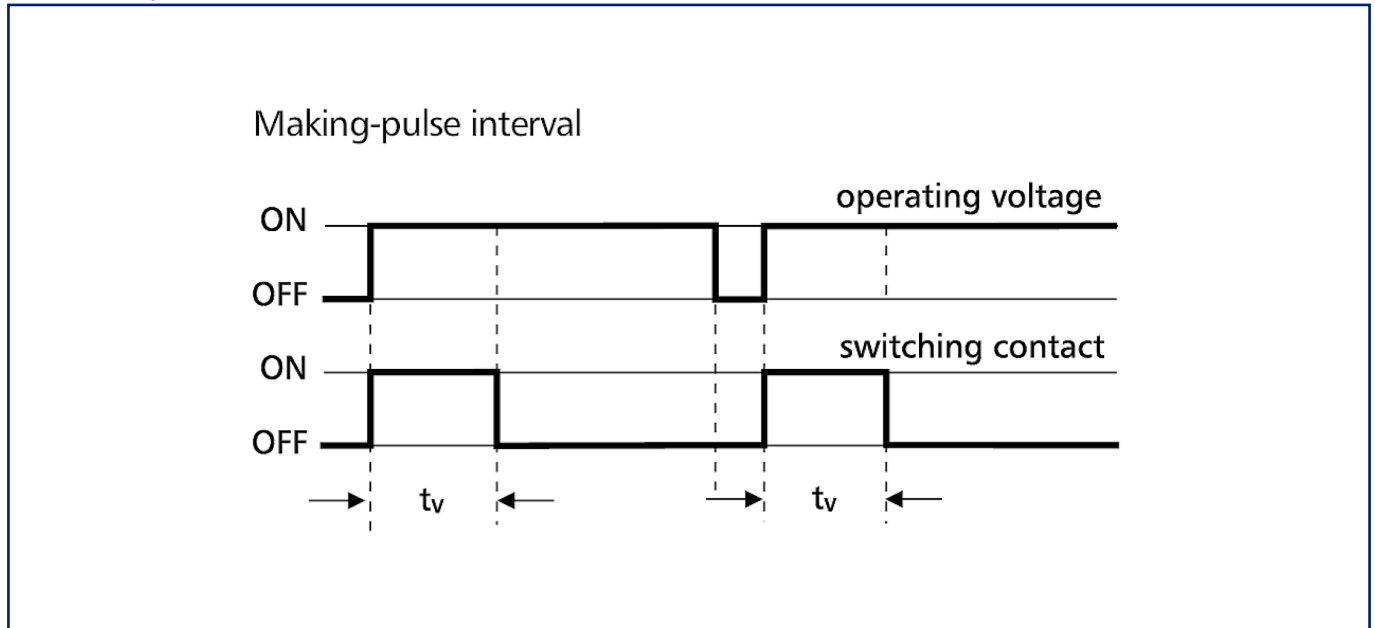
Function diagram



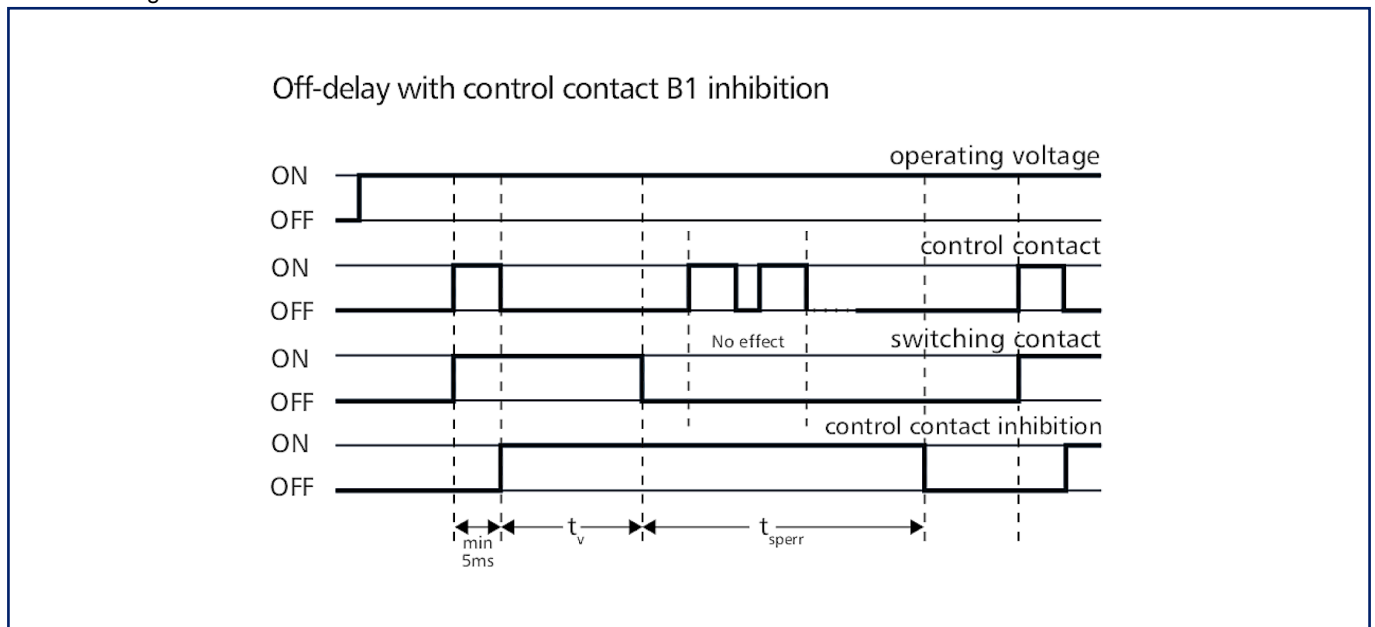
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**Illustrations**

Function diagram



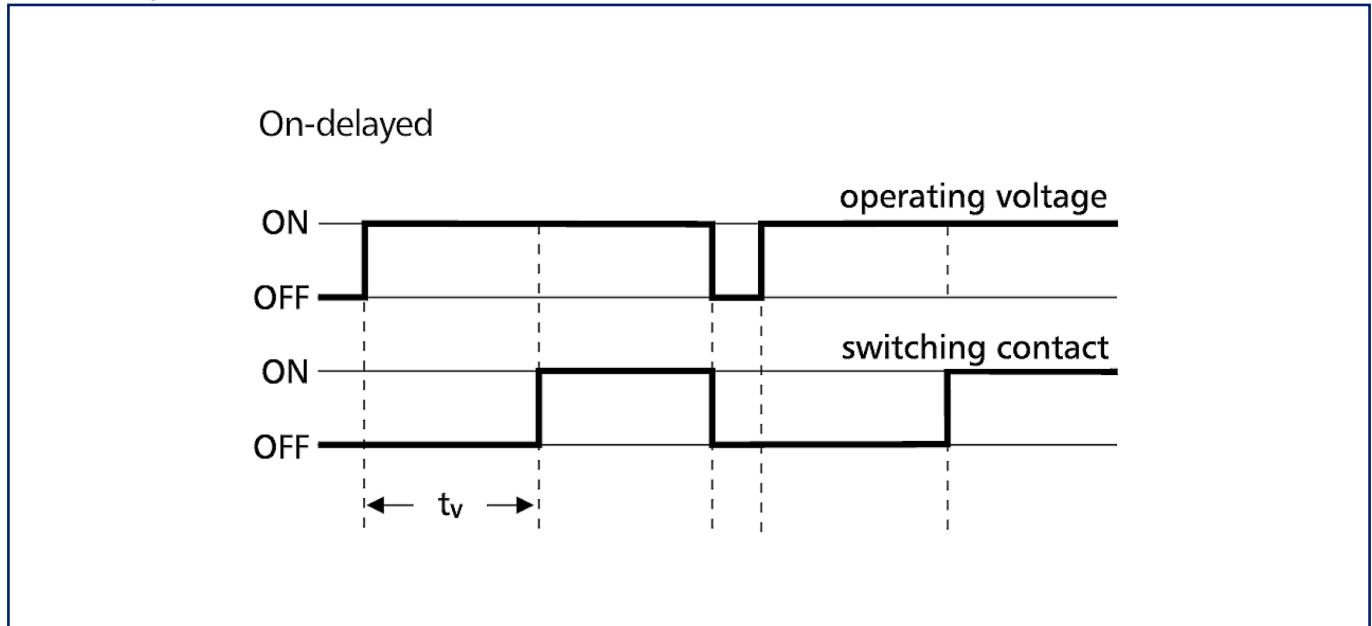
Function diagram





**Illustrations**

Function diagram



Function diagram

