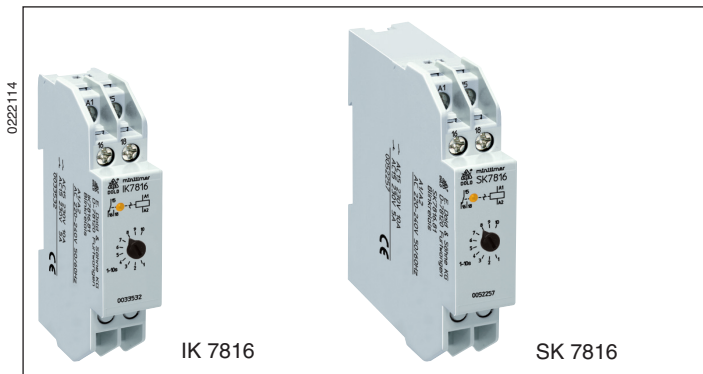


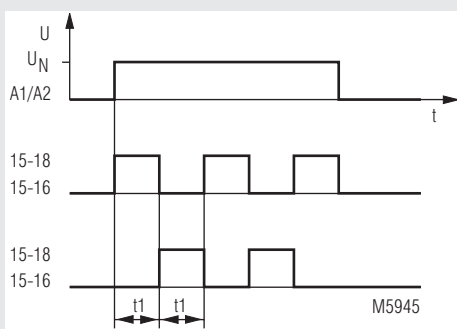
## MINITIMER Flasher Relay IK 7816, SK 7816

Translation  
of the original instructions



- According to IEC/EN 61812-1
- Pulse time up to 100 s
- Adjustable flashing time
- Repeat accuracy  $\leq 1\%$
- Start with a pulse
- LED indicator for contact position
- 1 changeover contact
- Devices available in 2 enclosure versions:
  - IK 7816: Depth 58 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43880
  - SK 7816: Depth 98 mm, with terminals at the top for cabinets with mounting plate and cable ducts
- Width 17.5 mm

### Function Diagram



### Approvals and Markings



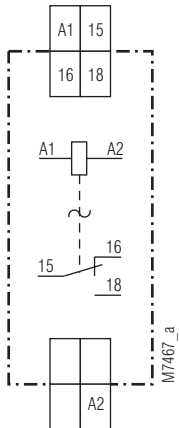
### Application

Time-based control equipment

### Indicator

LED: On when the output relay is activated (contact 15 - 18 is closed)

### Circuit Diagram



### Notes

A change of the time setting is directly valid.  
If a time is changed during time elaps, the output relay may energise unintended.

### Connection Terminals

Terminal designation	Signal description
A1	L / +
A2	N / -
15, 16, 18	Changeover contact

## Technical Data

### Time circuit

<b>Time range:</b>	0.1 ... 1 s = 300 ... 30 pulses/min
	0.3 ... 3 s
	1 ... 10 s
	3 ... 30 s
	10 ... 100 s
	1 ... 10 min
	3 ... 30 min
	6 ... 60 min

**Pulse duty factor:** 1 : 1  
**Setting:** Infinitely variable, on relative scale

**Recovery time**  
 tw 50 / 100: < 60 ms

**Repeat accuracy:** 0.1 %

**Voltage influence:** ≤ 1 % at 0.8 ... 1.1 U<sub>N</sub>

**Temperature influence:** 0.05 % / K

### Input

<b>Nominal voltage U<sub>N</sub>:</b>	AC/DC 12 V, AC/DC 24 V, AC 110 ... 127 V, AC 220 ... 240 V
<b>Voltage range:</b>	0.8 ... 1.1 U <sub>N</sub> with AC and DC 48 % residual ripple 0.9 ... 1.25 U <sub>N</sub> in battery operating mode
<b>Release voltage:</b>	15 % U <sub>N</sub>
<b>Nominal consumption:</b>	AC/DC 24 V 0.6 W AC 230 V 50 Hz 3.5 VA
<b>Nominal frequency:</b>	50 / 60 Hz
<b>Frequency range:</b>	± 5 %

### Output

<b>Contacts:</b>	1 changeover contact
<b>Contact material:</b>	AgSnO <sub>2</sub>
<b>Measured nominal voltage:</b>	AC 250 V
<b>Thermal current I<sub>th</sub>:</b>	Max. 10 A (See quadratic total current limit curve)

### Switching capacity

To AC 15		
NO contact:	10 A / AC 230 V	IEC/EN 60947-5-1
NC contact:	5 A / AC 230 V	IEC/EN 60947-5-1
<b>Glow lamp load:</b>	1200 W	
<b>Electrical life:</b>		IEC/EN 60947-5-1
AC 15 at 3 A, AC 230 V:	5 x 10 <sup>5</sup> switching cycles	
<b>Permissible switching frequency:</b>	6000 switching cycles/h	
<b>Short circuit strength</b>		
Max. fuse rating:	10 A gG / gL	IEC/EN 60947-5-1
Max. line circuit breaker:	B16	IEC/EN 60947-5-1
<b>Mechanical life:</b>	> 30 x 10 <sup>6</sup> switching cycles	

### General Data

<b>Operating mode:</b>	Continuous operation	
<b>Temperature range:</b>		
Operation:	- 20 ... + 60 °C	
Storage:	- 25 ... + 70 °C	
<b>Relative air humidity:</b>	95 % at 40 °C	
<b>Altitude:</b>	< 2000 m	
<b>Clearance and creepage distances</b>		
Rated impulse voltage/ pollution degree:	4 kV / 2 (base insulation)	IEC 60664-1
Overvoltage category:	III	
Insulation test voltage, type test:	2.5 kV; 1 min	
<b>EMC</b>		
Electrostatic discharge:	8 kV (air)	IEC/EN 61000-4-2
HF irradiation		
80 MHz ... 1 GHz:	10 V / m	IEC/EN 61000-4-3
1 GHz ... 2.5 GHz:	3 V / m	IEC/EN 61000-4-3
2.5 GHz ... 2.7 GHz:	1 V / m	IEC/EN 61000-4-3
Fast transients:	4 kV	IEC/EN 61000-4-4
Surge voltages		
Between		
wires for power supply:	2 kV	IEC/EN 61000-4-5
Between wire and ground:	4 kV	IEC/EN 61000-4-5
HF-wire guided:	20 V	IEC/EN 61000-4-6
Interference suppression:	Limit value class B	EN 55011

## Technical Data

### Degree of protection

Housing:	IP 40	IEC/EN 60529
Terminals:	IP 20	IEC/EN 60529

**Housing:** Thermoplastic with V0 behaviour according to UL Subj. 94

**Vibration resistance:** Amplitude 0.35 mm  
frequency 10 ... 55 Hz, IEC/EN 60068-2-6

**Climate resistance:** 20 / 060 / 04 IEC/EN 60068-1

**Terminal designation:** EN 50005

**Wire connection:** DIN 46228-1/-2/-3/-4  
**Cross section:** 2 x 2,5 mm<sup>2</sup> solid or  
2 x 1,5 mm<sup>2</sup> stranded ferruled

Stripping length: 10 mm

**Wire fixing:** Flat terminals with self-lifting clamping piece IEC/EN 60999-1

**Fixing torque:** 0.8 Nm IEC/EN 60999-1

**Mounting:** DIN rail IEC/EN 60715

<b>Weight</b>	
IK 7816:	75 g
SK 7816:	94 g

### Dimensions

#### Width x height x depth

IK 7816:	17.5 x 90 x 58 mm
SK 7816:	17.5 x 90 x 98 mm

### Standard Type

IK 7816.81 AC 220 ... 240 V	1 ... 10 s
Article number:	0033532
• Output:	1 changeover contact
• Nominal voltage U <sub>N</sub> :	AC 220 ... 240 V
• Time range:	1 ... 10 s
• Width:	17.5 mm

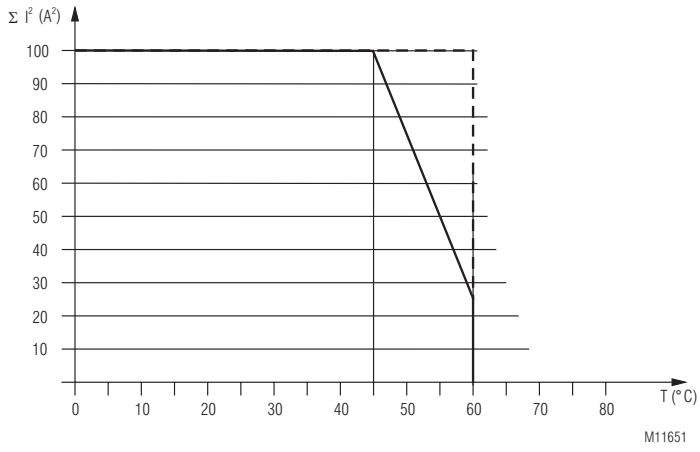
SK 7816.81 AC 220 ... 240 V	1 ... 10 s
Article number:	0052257
• Output:	1 changeover contact
• Nominal voltage U <sub>N</sub> :	AC 220 ... 240 V
• Time range:	1 ... 10 s
• Width:	17.5 mm

### Ordering Example

IK 7816 .81 AC 220 ... 240 V 1 ... 10 s



## Characteristic



--- device mounted away from heat generation components.

— device mounted without distance heated by devices with same load.

Quadratic total current limit curve

## Connection Example

