

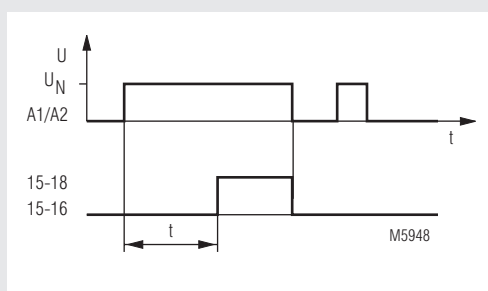
## MINITIMER

Time Relay With Operate Delay  
IK 7813, SK 7813



- According to IEC/EN 61 812-1
- 1 changeover contact
- Delay up to 60 min.
- Repeat accuracy  $\leq 1\%$
- LED indicator for contact position
- **Devices available in 2 enclosure versions:**
  - IK 7813:** depth 58 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43 880
  - SK 7813:** depth 98 mm, with terminals at the top for cabinets with mounting plate and cable ducts
- Width 17.5 mm

### Function Diagram



### Approvals and Marking



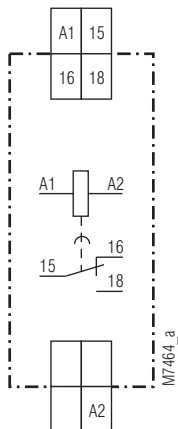
### Application

Time-based control equipment

### Indicator

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

### Circuit Diagram



IK 7813, SK 7813

### Technical Data

#### Time circuit

<b>Time ranges:</b>	0.1 ... 1 s    1 ... 10 min 1 ... 10 s    3 ... 30 min 10 ... 100 s    6 ... 60 min
<b>Time setting:</b>	Infinitely variable, on relative scale
<b>Recovery time</b> tw 50 / 100:	< 60 ms
<b>Repeat accuracy:</b>	0.1 %
<b>Voltage influence:</b>	$\leq 1\%$ at 0.8 ... 1.1 $U_N$
<b>Temperature influence:</b>	0.05 % / K

#### Input

<b>Nominal voltage <math>U_N</math>:</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 $U_N$ with AC and DC 48 % residual ripple 0.9 ... 1.25 $U_N$ in battery operating mode
<b>Release voltage:</b>	15 % $U_N$
<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>	$\pm 5\%$

#### Output

<b>Contacts</b>	IK 7813.81, SK 7813:	1 changeover contact
<b>Release time of the contacts:</b>		< 20 ms
<b>Thermal current <math>I_{th}</math>:</b>		10 A at 45°C ambient temperature
<b>Switching capacity</b>		
to AC 15		
NO contact:	10 A / AC 230 V	IEC/EN 60 947-5-1
NC contact:	5 A / AC 230 V	IEC/EN 60 947-5-1
<b>Glow lamp load:</b>	1200 W	
<b>Electrical life:</b>		IEC/EN 60 947-5-1
to 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

## Technical Data

### Short circuit strength

max. fuse rating: 10 AgL IEC/EN 60 947-5-1

max. line circuit breaker: B16

**Mechanical life:** > 30 x 10<sup>6</sup> switching cycles

## General Data

**Operating mode:** Continuous operation

**Temperature range:** - 20 ... + 60°C

### Clearance and creepage distances

Rated impuls voltage/  
pollution degree: 4 kV / 2 IEC 60 664-1

### EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61 000-4-2

HF irradiation: 10 V/m IEC/EN 61 000-4-3

Fast transients: 4 kV IEC/EN 61 000-4-4

Surge voltage  
between

wires for power supply: 2 kV IEC/EN 61 000-4-5

between wire and ground: 4 kV IEC/EN 61 000-4-5

Interference suppression: Limit value class B EN 55 011

### Degree of protection

Housing: IP 40 IEC/EN 60 529

Terminals: IP 20 IEC/EN 60 529

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

**Vibration resistance:** Amplitude 0.35 mm IEC/EN 60 068-2-6  
frequency 10 ... 55 Hz

**Climate resistance:** 20 / 060 / 04 IEC/EN 60 068-1

**Terminal designation:** EN 50 005

**Wire connection:** 2 x 2.5 mm<sup>2</sup> solid or

2 x 1.5 mm<sup>2</sup> stranded ferruled

DIN 46 228-1/-2/-3/-4

**Wire fixing:** Flat terminals with self-lifting

clamping piece IEC/EN 60 999-1

Mounting: DIN rail IEC/EN 60 715

### Weight:

IK 7813: 75 g

SK 7813: 94 g

## Dimensions

### Width x height x depth:

IK 7813: 17.5 x 90 x 58 mm

SK 7813: 17.5 x 90 x 98 mm

## Standard Type

IK 7813.81 AC 220 ... 240 V 0.1 ... 1 s

Article number: 0033628

• Output: 1 changeover contact

• Nominal voltage U<sub>N</sub>: AC 220 ... 240 V

• Time range: 0.1 ... 1 s

• Width: 17.5 mm

SK 7813.81 AC 220 ... 240 V 0.1 ... 1 s

Article number: 0054738

• Output: 1 changeover contact

• Nominal voltage U<sub>N</sub>: AC 220 ... 240 V

• Time range: 0.1 ... 1 s

• Width: 17.5 mm

## Variant

IK 7813.81/107: with a time of 5 s or 0.4 s  
to be used in 3-phase voltage systems  
changeover control

## Ordering example for variant

IK 7813 .81 AC 220 ... 240 V 50 / 60 Hz 100 s

└─ Time range  
└─ Nominal frequency  
└─ Nominal voltage  
└─ Contacts  
└─ Type