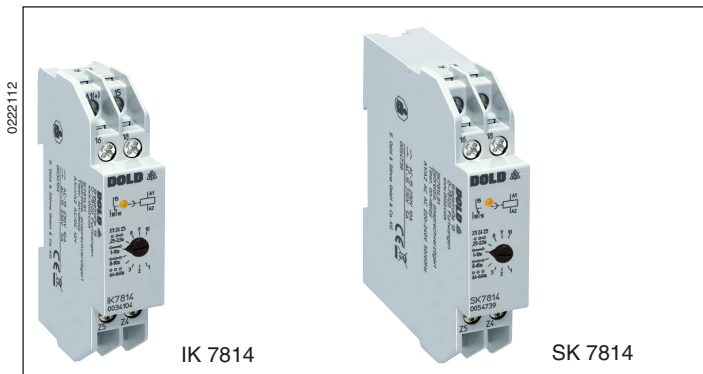


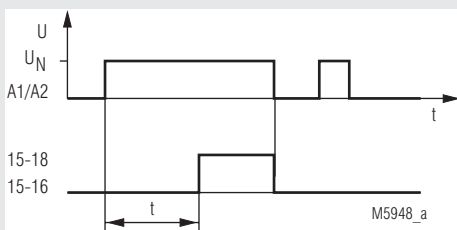
## MINITIMER Timer, On-delay IK 7814, SK 7814

Translation  
of the original instructions



- Power ON-delay relay according to EN 61812-1
- 4 time ranges up to 640 min.
- Repeat accuracy  $\leq 1\%$
- LED indicator for contact position
- 1 changeover contact
- Devices available in 2 enclosure versions:
  - IK 7814: Depth 58 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43880
  - SK 7814: Depth 98 mm, with terminals at the top for cabinets with mounting plate and cable ducts
- Width 17.5 mm

### Function Diagram



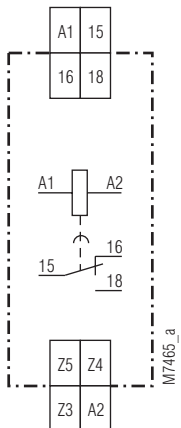
### Approvals and Markings



### Application

Time-based control equipment

### Circuit Diagram



### Indicator

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

### Notes

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

The terminals Z3, Z4, Z5 are not galvanically separated to the terminals A1/A2!

### Connection Terminals

Terminal designation	Signal description
A1	L / +
A2	N / -
Z3, Z4, Z5	Control inputs for programming of the time ranges
15, 16, 18	Changeover contact

## Technical Data

### Time circuit

**Time ranges:** 4 time ranges can be programmed externally via the terminals Z3 - Z4 - Z5

Bridge Z3 Z4 Z5	Unit with second ranges	Unit with minute ranges
0 0—0	0.25 - 2.5 s	0.25 - 2.5 min
0—0	1 - 10 s	1 - 10 min
0—0—0	8 - 80 s	8 - 80 min
0 0 0	64 - 640 s	6 - 640 min

**Time 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

**Nominal voltage U<sub>N</sub>:** AC/DC 12 V, AC/DC 24 V, AC 110 ... 127 V, AC 220 ... 240 V  
**Voltage range:** 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  
**Release voltage:** 15 % U<sub>N</sub>  
**Nominal consumption:** AC/DC 24 V 0.6 W  
 AC 230 V 50 Hz 3.5 VA  
 AC 240 V 50 Hz 4 VA  
**Nominal frequency:** 50 / 60 Hz  
**Frequency range:** ± 5 %

### Output

**Contacts:** 1 changeover contact  
**Contact material:** AgSnO<sub>2</sub>  
**Measured nominal voltage:** AC 250 V  
**Thermal current I<sub>th</sub>:** Max. 10 A  
 (See quadratic total current limit curve)  
**Switching capacity**  
 At 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  
**Glow lamp load:** 1200 W  
**Electrical life:** IEC/EN 60947-5-1  
 AC 15 at 3 A, AC 230 V: 5 x 10<sup>5</sup> switching cycles  
**Permissible switching frequency:** 6000 switching cycles/h  
**Short circuit strength**  
 Max. fuse rating: 10 A gG / gL IEC/EN 60947-5-1  
 Max. line circuit breaker: B16  
**Mechanical life:** > 30 x 10<sup>6</sup> switching cycles

### General Data

**Nominal operating mode:** Continuous operation  
**Temperature range:**  
 Operation: - 20 ... + 60 °C  
 Storage: - 25 ... + 70 °C  
**Relative air humidity:** 95 % at 40 °C  
**Altitude:** ≤ 2000 m  
**Clearance and creepage distances**  
 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  
**EMC**  
 Electrostatic discharge: 8 kV (air) IEC/EN 61000-4-3  
 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  
 20 / 060 / 04 IEC/EN 60068-1  
 EN 50005

### Climate resistance:

### Terminal designation:

**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:

### Wire fixing:

10 mm  
 Flat terminals with self-lifting  
 clamping piece IEC/EN 60999-1  
 0.8 Nm IEC/EN 60999-1  
 DIN rail IEC/EN 60715

### Fixing torque:

### Mounting:

### Weight

IK 7814: 75 g  
 SK 7814: 94 g

### Dimensions

### Width x height x depth:

IK 7814: 17.5 x 90 x 58 mm  
 SK 7814: 17.5 x 90 x 98 mm

### Standard type

IK 7814.81 AC 220 ... 240 V 0.25 ... 640 s  
 Article number: 0031959  
 • Output: 1 changeover contact  
 • Nominal voltage U<sub>N</sub>: AC 220 ... 240 V  
 • Time range: 0.25 ... 640 s  
 • Width: 17.5 mm

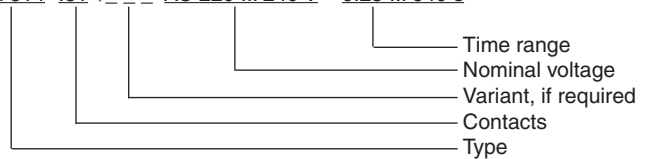
SK 7814.81 AC 220 ... 240 V 0.25 ... 640 s  
 Article number: 0054739  
 • Output: 1 changeover contact  
 • Nominal voltage U<sub>N</sub>: AC 220 ... 240 V  
 • Time range: 0.25 ... 640 s  
 • Width: 17.5 mm

### Variante

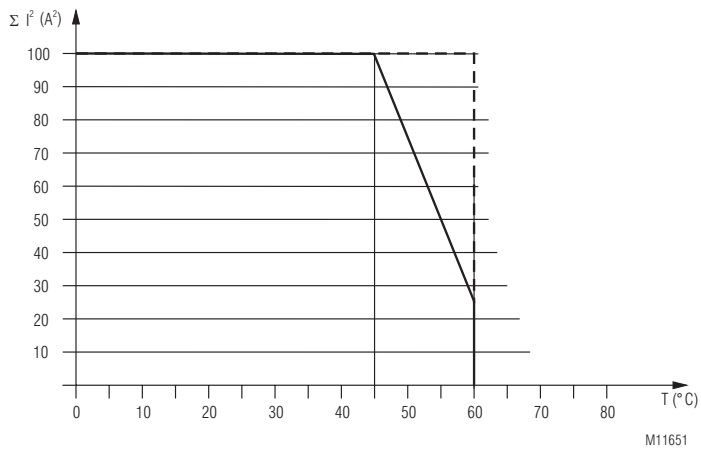
IK 7814.81/107: To be used in 3-phase voltage systems  
 changeover control

### Ordering example for variant

IK 7814 .81 / \_ \_ \_ AC 220 ... 240 V 0.25 ... 640 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

