

## MINITIMER

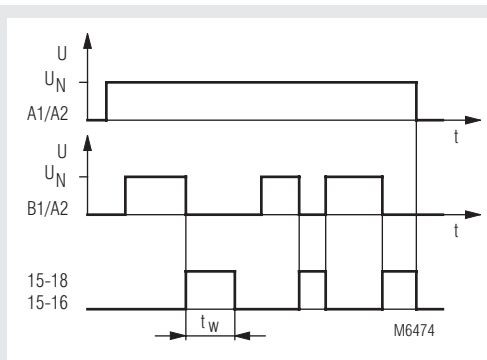
Fleeting Action Relay, Fleeting On Brake  
IK 7820, SK 7820

Translation  
of the original instructions



- According to IEC/EN 61812-1
- With 4 time ranges from 0.25 ... 640 s
- Adjustable
- With auxiliary voltage
- For wide voltage range AC 50/60 Hz 110 ... 240 V
- Control input operated with nominal voltage; no voltage free contact necessary
- LED indicator for status of contact
- 1 changeover contact
- Devices available in 2 enclosure versions:
  - IK 7820: Depth 59 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43880
  - SK 7820: Depth 98 mm, with terminals at the top for cabinets with mounting plate and cable duct
- Width: 17.5 mm

### Function Diagram



### Approvals and Marking



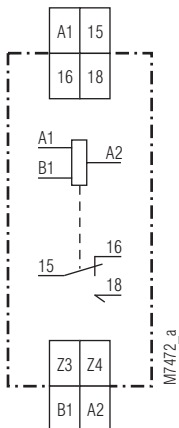
### Applications

Time-dependent controllers

### Indicators

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

### Circuit Diagram



IK 7820.73, SK 7820.73

### Notes

The control input B1 relative to A2 has the same voltage range as A1-A2. In a 3-phase system B1 can also be connected to a different phase than A1 if the neutral is connected to A2. As the control input is operated with voltage, the control contact can also switch additional loads, e.g. contactors (see connection Diagram).

### Technical Data

#### Time circuit

Time ranges:	4 different time ranges programmable via terminals:
Time range	Bridge
0.25 ... 2.5 s	Z4----- A2
1 ... 10 s	Z3----- A2
8 ... 80 s	Z3---- Z4---- A2
64 ... 640 s	(without)

<b>Tolerance of the max. scale value:</b>	- 5 ... + 25 %
<b>Time setting:</b>	Infinitely variable 1:10 on relative scale
<b>Min. closing time (Control input B1):</b>	≥ 20 ms
<b>Repeat accuracy (Control input B1):</b>	≤ 40 ms
<b>Repeat accuracy:</b>	≤ 0.5 % + 20 ms
<b>Voltage influence:</b>	≤ 1 %
<b>Temperature influence:</b>	≤ 0.25 % / K

## Technical Data

### Input

<b>Nominal voltage <math>U_N</math>:</b>	AC 110 ... 240 V, AC/DC 24 V
<b>Voltage range:</b>	0.8 ... 1.1 $U_N$
<b>Nominal consumption (A1-A2):</b>	AC 230 V: Approx. 8 VA AC 24 V: Approx. 1.5 VA DC 24 V: Approx. 0.7 W
<b>Nominal frequency:</b>	50 / 60 Hz
<b>Reset voltage:</b>	15 % $U_N$
<b>Input current B1:</b>	Approx. 0.3 mA

### Output

<b>Contacts:</b>	1 changeover contact (fleeting on brake)
<b>Thermal current <math>I_{th}</math>:</b>	10 A up to 45°C (See continuous current limit curve)
<b>Switching capacity</b>	
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>Electrical life</b>	
To AC 15 at 3 A, AC 230 V:	$\geq 5 \times 10^5$ switch. cycl. IEC/EN 60947-5-1
<b>Short circuit strength</b>	
<b>Max. fuse rating:</b>	10 A gG / gL IEC/EN 60947-5-1
<b>Mechanical life:</b>	$\geq 30 \times 10^6$ switching cycles

### General Data

<b>Operating mode:</b>	Continuous operation
<b>Temperature range:</b>	-20 ... +60 °C
<b>Clearance and creepage distances</b>	
Rated impuls voltage / pollution degree:	4 kV / 2 IEC 60664-1
<b>EMC</b>	
Electrostatic discharge:	6 kV (air) IEC/EN 61000-4-2
HF-irradiation:	10 V/m IEC/EN 61000-4-3
Fast transients:	4 kV IEC/EN 61000-4-4
Surge voltages	
Between wires for power supply:	1 kV IEC/EN 61000-4-5 (0.5 kV at AC/DC 24 V)
Between wire and ground:	2 kV IEC/EN 61000-4-5
Interference suppression:	Limit value class B EN 55011
<b>Degree of protection</b>	
Housing:	IP 40 IEC/EN 60529
Terminals:	IP 20 IEC/EN 60529
<b>Housing:</b>	Thermoplastic with Vo behaviour according to UL subject 94
<b>Vibration resistance:</b>	Amplitude 0.35 mm frequency 10 ... 55 Hz, IEC/EN 60068-2-6
<b>Climate resistance:</b>	20 / 060 / 04 IEC/EN 60068-1
<b>Terminal designation:</b>	EN 50005
<b>Wire connection:</b>	2 x 2.5 mm <sup>2</sup> solid or 2 x 1.5 mm <sup>2</sup> stranded wire with sleeve DIN 46228-1/-2/-3/-4
<b>Wire fixing:</b>	Flat terminals with self-lifting clamping piece IEC/EN 60999-1 DIN rail IEC/EN 60715
<b>Mounting:</b>	
<b>Weight</b>	
IK 7820:	70 g
SK 7820:	89 g

### Dimensions

<b>Width x height x depth</b>	
IK 7820:	17.5 x 90 x 59 mm
SK 7820:	17.5 x 90 x 98 mm

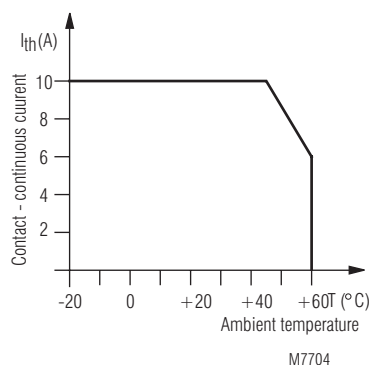
## Standard Type

IK 7820.73 AC 110 ... 240 V	0,25 ... 640 s
Article number:	0047159
• Nominal voltage $U_N$ :	AC 110 ... 240 V
• Time range:	0.25 ... 640 s adjustable
• Width:	17.5 mm
SK 7820.73 AC 110 ... 240 V	0,25 ... 640 s
Article number:	0054754
• Nominal voltage $U_N$ :	AC 110 ... 240 V
• Time range:	0.25 ... 640 s adjustable
• Width:	17.5 mm

## Ordering Example

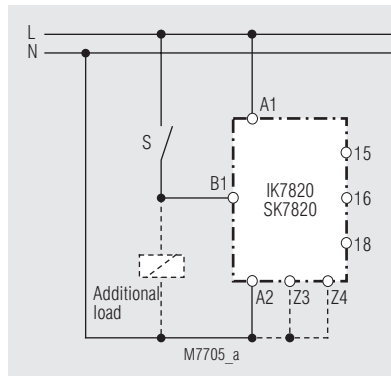
IK 7820 .73 AC 110 ... 240 V	50 / 60 Hz	0,25 ... 640 s
		Time range
		Nominal frequency
		Contacts
		Type

## Characteristics



Continuous current limit curve

## Connection Example



### Remarks:

Z3, Z4... Programming of time range  
S... Control contact for function  
Contact S can also switch additional load connected in parallel to our relay