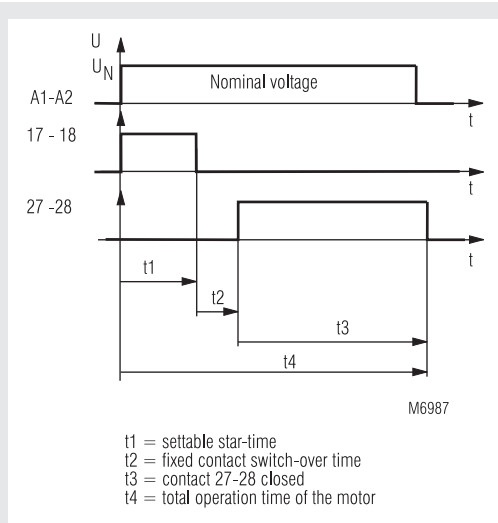
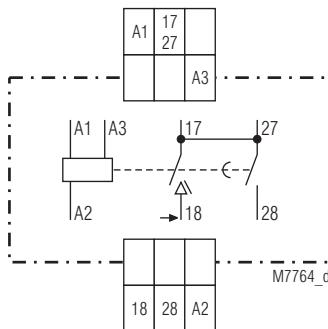


- According to IEC/EN 61 812-1
- Time delay up to 100 s
- Repeat accuracy <math>\pm 0.5\%</math>
- Dual-voltage version
- Available with UL-approval
- Width 22.5 mm

## Function Diagram



## Circuit Diagram



MK 7853/024

## Approvals and Marking



\* see variant

## Applications

Star-delta-starting circuit for squirrel cage motors

## Function

The MK 7853/024 is a static star-delta-timer with 2 separate output relays. As soon as the operating voltage is applied, relay 1 will be energized and falls back after time delay. After elapse of the contact changeover time, the second relay switches on and remains in active position, as long as the star-delta-timer is energized.

## Technical Data

### Time circuit

**Time ranges:** 0.5 ... 10 s    1.5 ... 30 s  
3.0 ... 60 s    5.0 ... 100 s

**Contact changeover time:** approx. 100 ms  
approx. 35 ms  
please state when ordering  
stepless on absolute scale

### Time setting:

#### Recovery time

tw 50 / 100: 40 ms

#### Repeat accuracy:

$\leq \pm 0.5\%$  of the max. scale value

#### Voltage influence:

$\leq 1\%$

#### Temperature influence:

0.1 % / K

## Input

### Nominal voltage $U_N$ :

AC/DC 24 V<sup>1)</sup> + AC/DC 42 V<sup>2)</sup>  
AC/DC 24 V<sup>1)</sup> + AC 110 ... 127 V<sup>2)</sup>  
AC/DC 24 V<sup>1)</sup> + AC 220 ... 240 V<sup>2)</sup>  
AC/DC 24 V<sup>1)</sup> + AC 400 V<sup>2)</sup>

<sup>1)</sup> at terminals A3-A2

<sup>2)</sup> at terminals A1-A2

### Voltage range:

0.8 ... 1.1  $U_N$   
**Nominal consumption:** AC 230 V    AC/DC 24 V  
7 VA    0.6 W

### Nominal frequency:

50 / 60 Hz

### Frequency range:

$\pm 5\%$   $f_N$

## Technical Data

### Output

<b>Contacts:</b>	1 fleeting on make 1 NO contact delay on	
<b>Release time:</b>	40 ms	
<b>Thermal current <math>I_{th}</math>:</b>	5 A	
<b>Switching capacity</b> to AC 15:		
NO contact:	3 A / AC 230 V	IEC/EN 60 947-5-1
NC contact:	2 A / AC 230 V	IEC/EN 60 947-5-1
<b>Electrical life</b> to AC 15 at 3 A, AC 230 V:	5 x 10 <sup>5</sup> switching cycles	
<b>Permissible switching frequency:</b>	6 000 switching cycles / h	
<b>Short-circuit strength</b> <b>max. fuse rating:</b>	4 A gL IEC/EN 60 947-5-1	
<b>Mechanical life:</b>	20 x 10 <sup>6</sup> 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 60 664-1
<b>EMC</b>		
Electrostatic discharge:	8 kV (air)	IEC/EN 61 000-4-2
HF irradiation:	10 V/m	IEC/EN 61 000-4-3
Fast transients:	2 kV	IEC/EN 61 000-4-4
Surge voltages between wires for power supply: between wire and ground: HF-wire guided: Interference suppression:	1 kV 2 kV 10 V Limit value class B	IEC/EN 61 000-4-5 IEC/EN 61 000-4-5 IEC/EN 61 000-4-6 EN 55 011
<b>Degree of protection</b>		
Housing:	IP 40	IEC/EN 60 529
Terminals:	IP 20	IEC/EN 60 529
<b>Housing:</b>	Thermoplastic with V0 behaviour according with UL Subj. 94	
<b>Vibration resistance:</b>	Amplitude 0.35 mm frequency 10 ... 55 Hz IEC/EN 60 068-2-6	
<b>Climate resistance:</b>	20 / 060 / 04 IEC/EN 60 068-1	
<b>Terminal designation:</b>	EN 50 005	
<b>Wire connection:</b>	2 x 1.5 mm <sup>2</sup> solid or 2 x 1.0 mm <sup>2</sup> stranded wire with sleeve DIN 46 228-1/-2/-3/-4	
<b>Wire fixing:</b>	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1	
<b>Mounting:</b>	DIN rail IEC/EN 60 715	
<b>Weight:</b>	130 g	

### Dimensions

**Width x height x depth:** 22.5 x 82 x 99 mm

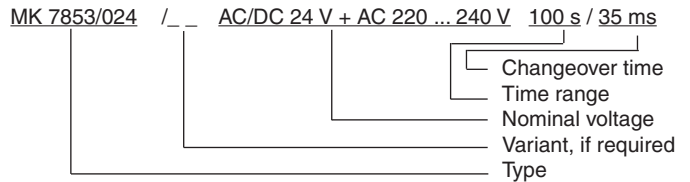
## Standard Type

MK 7853/024	AC/DC 24 V + AC 220 ... 240 V	30 s / 35 ms	
Article number:	0030847		stock item
• Output:	1 fleeting on make 1 NO contact delay on		
• Nominal voltage $U_N$ :	AC/DC 24 V + AC 220 ... 240 V		
• Time range / changeover time:	1.5 ... 30 s / 35 ms		
• Width:	22.5 mm		

### Variant

MK 7853/024/61: with UL-approval

### Ordering example for variants



### Accessories

ET 4752-143: Marking plate  
Article number: 0043203

### Connection Example

