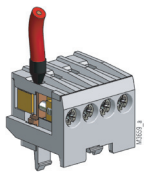


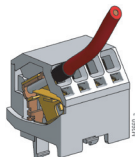


- According to IEC/EN 61 812-1
- Time delay up to 100 s
- Repeat accuracy $< \pm 0.5 \%$
- Wire connection: also 2 x 1.5 mm² stranded ferruled, or 2 x 2.5 mm² solid DIN 46 228-1/-2/-3/-4
- As option with pluggable terminal blocks for easy exchange of devices
 - with screw terminals
 - or with cage clamp terminals
- Width 22.5 mm

Options with Pluggable Terminal Blocks



Screw terminal
(PS/plugin screw)

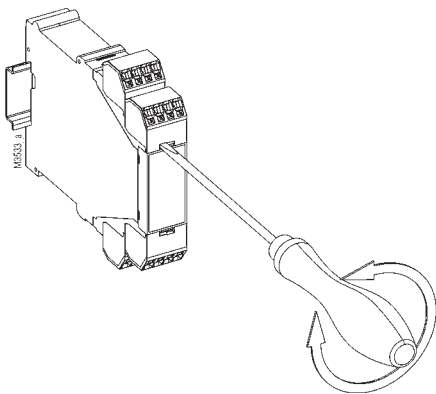


Cage clamp
(PC/plugin cage clamp)

Notes

Removing the terminal blocks with cage clamp terminals

1. The unit has to be disconnected.
2. Insert a screwdriver in the side recess of the front plate.
3. Turn the screwdriver to the right and left.
4. Please note that the terminal blocks have to be mounted on the belonging plug in terminations.



Approvals and Marking



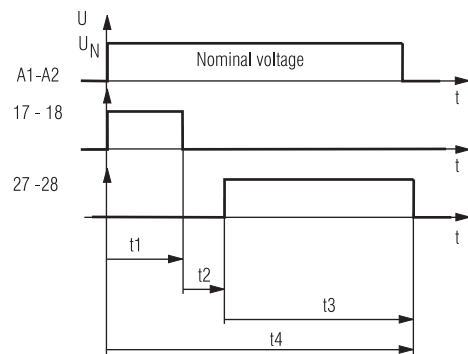
Applications

Star-delta-starting circuit for squirrel cage motors

Function

The MK 7853N 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.

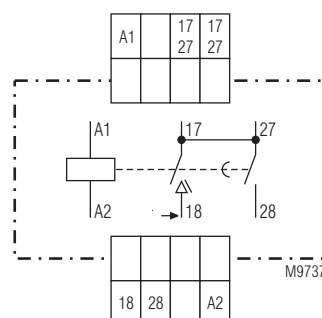
Function Diagram



M6987

- t1 = settable star-time
t2 = fixed contact switch-over time
t3 = contact 27-28 closed
t4 = total operation time of the motor

Circuit Diagram



M9737

Indicators

1 yellow LED each: on, when Y-Rel1 e.g. Δ-Rel2 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; AC/DC 42 V; AC/DC 48 V
AC 110 ... 127 V; AC 220 ... 240 V;
AC 380 ... 400 V

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: $\pm 5\% f_N$

Output

Contacts: 1 fleeting on make
1 NO contact delay on

Release time: 40 ms

Thermal current I_{th} : 5 A

Switching capacity
to AC 15:
NO contact: 3 A / AC 230 V IEC/EN 60 947-5-1
NC contact: 1 A / AC 230 V IEC/EN 60 947-5-1

Electrical life
to AC 15 at 3 A, AC 230 V: 5 x 10⁵ switching cycles

Permissible switching frequency: 6 000 switching cycles / h

Short-circuit strength
max. fuse rating: 6 A gL IEC/EN 60 947-5-1

Mechanical life: 20 x 10⁶ 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: 2 kV IEC/EN 61 000-4-4
Surge voltages
between
wires for power supply: 1 kV IEC/EN 61 000-4-5
between wire and ground: 2 kV IEC/EN 61 000-4-5
HF-wire guided: 10 V IEC/EN 61 000-4-6
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 with UL Subj. 94

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

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

Terminal designation: EN 50 005

Technical Data

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

Screw terminals (integrated): 1 x 4 mm² solid or
1 x 2.5 mm² stranded ferruled or
2 x 1.5 mm² stranded ferruled or
2 x 2.5 mm² solid

Insulation of wires
or sleeve length: 8 mm

Plug in with screw terminals
max. cross section
for connection: 1 x 2.5 mm² solid or
1 x 2.5 mm² stranded ferruled

Insulation of wires
or sleeve length: 8 mm

Plug in with cage clamp terminals
max. cross section
for connection: 1 x 4 mm² solid or
1 x 2.5 mm² stranded ferruled

min. cross section
for connection: 0.5 mm²

Insulation of wires
or sleeve length: 12 ± 0.5 mm

Wire fixing: Plus-minus terminal screws M 3.5
box terminals with wire protection or
cage clamp terminals

Mounting: DIN rail IEC/EN 60 715

Weight: 140 g

Dimensions

Width x height x depth:

MK 7853N: 22.5 x 90 x 97 mm
MK 7853N PC: 22.5 x 111 x 97 mm
MK 7853N PS: 22.5 x 104 x 97 mm

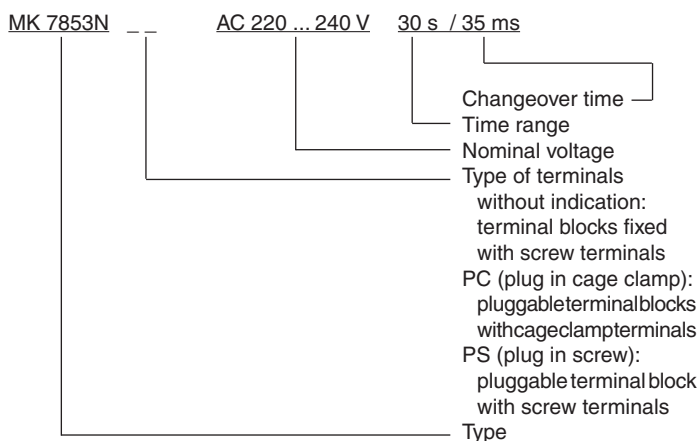
Standard Type

MK 7853N AC 220 ... 240 V 30 s / 35 ms

Article number:

- Output: 1 fleeting on make
1 NO contact delay on
- Nominal voltage U_N : AC 220 ... 240 V
- Time range / changeover time: 1.5 ... 30 s / 35 ms
- Width: 22.5 mm

Ordering Example



Connection Example

