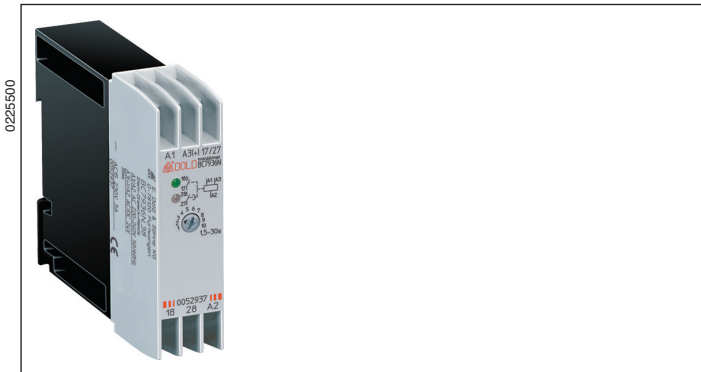
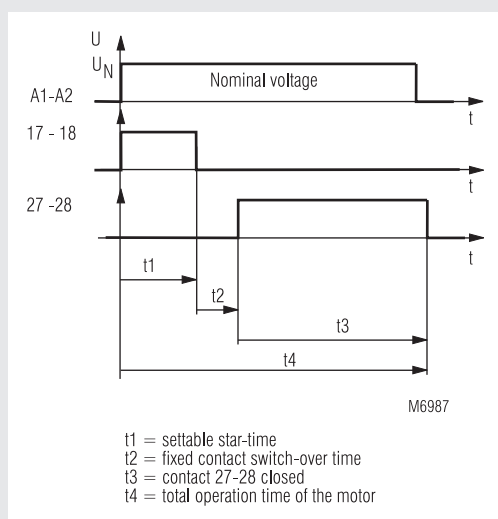


MINITIMER Star-Delta-Timer BC 7936N

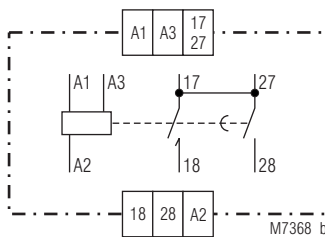


- According to IEC/EN 61 812-1
- Time ranges up to 100 s
- Repeat accuracy $\leq 0.5\% + 10\text{ ms}$
- 2-voltage design
- LED indicators for contact position
- 1 NO contact fleeting make
1 NO contact operate delayed
- Wire connection: also 2 x 1.5 mm² stranded ferruled (isolated), DIN 46 228-1/-2/-3/-4 or 2 x 2.5 mm² stranded ferruled DIN 46 228-1/-2/-3
- Width 22.5 mm

Function Diagram



Circuit Diagram



Approvals and Marking



Application

Star-Delta starting of 3-phase motors

Indicators

upper LED: on, when output relay activated (contacts 17-18 are closed)
lower LED: on, when output relay activated (contacts 27-28 are closed)

Technical Data

Time circuit

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

Time setting: infinitely variable 1 : 20

Contact switch-over time: 35 ms
80 ms
100 ms

Recovery time: $\leq 100\text{ ms}$

Repeat accuracy: $\leq 0.5\% + 10\text{ ms}$

Voltage influence: $\leq 1\%$

Temperature influence: 0.25 % / K

Input

Nominal voltage U_N : AC/DC 24 V¹⁾ + AC/DC 42 ... 48 V²⁾
AC/DC 24 V¹⁾ + AC 110 ... 127 V²⁾
AC/DC 24 V¹⁾ + AC 220 ... 240 V²⁾

¹⁾ on terminals A3-A2

²⁾ on terminals A1-A2

Voltage range: AC 0.8 ... 1.1 U_N
DC 0.9 ... 1.25 U_N

Nominal consumption: AC 230 V: 3.6 VA
DC 24 V: 0.35 W

Nominal frequency: 50 / 60 Hz

Release voltage: $\geq 15\% U_N$

Output

Contacts: 1 NO contact fleeting on make
1 NO contact operate delayed

Thermal current I_{th} : 4 A

Switching capacity
to AC 15: 3 A / AC 230 V IEC/EN 60 947-5-1

Electrical life
to AC 15 at 1 A, AC 230 V: 5 x 10⁵ switching cycles IEC/EN 60 947-5-1

Technical Data

Short-circuit strength
max. fuse rating: 4 AgL IEC/EN 60 947-5-1
Mechanical life: 10⁸ 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 (contact) 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
 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
 to UL subject 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:
 1 x 4 mm² solid or
 1 x 2.5 mm² stranded ferruled (isolated)
 or
 2 x 1.5 mm² stranded ferruled (isolated)
 DIN 46 228-1/-2/-3/-4 or
 2 x 2.5 mm² stranded ferruled
 DIN 46 228-1/-2/-3

Wire fixing: Terminal screws M 3.5

Box terminal with wire protection

Mounting: DIN rail IEC/EN 60 715
Weight: 85 g

Dimensions

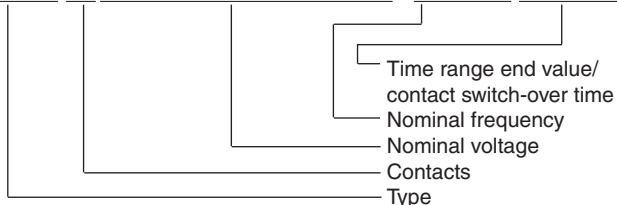
Width x height x depth: 22.5 x 84 x 97 mm

Standard Type

BC 7936N.38 AC/DC 24 V + AC 220 V ... 240 V 50/60 Hz 30 s 35 ms
 Article number: 0052779
 • Front colour grey, with box terminals
 • Nominal voltage U_N: AC/DC 24 V + AC 220 V ... 240 V,
 50/60 Hz
 • Time range: 1.5 ... 30 s
 • Contact switch-over time: 35 ms
 • Width: 22.5 mm

Ordering Example

BC 7936N .38 AC/DC 24 V + AC 220 ... 240 V 50 / 60 Hz 100 s / 35 ms



Connection Example

