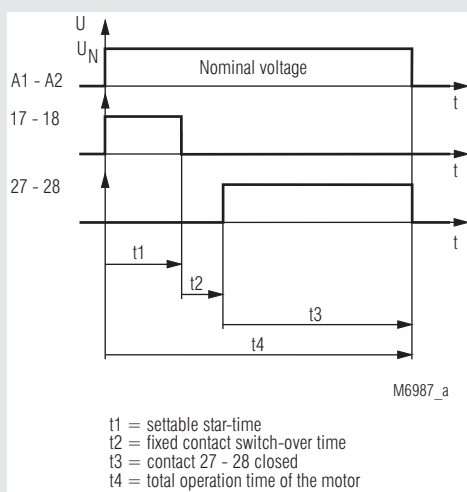


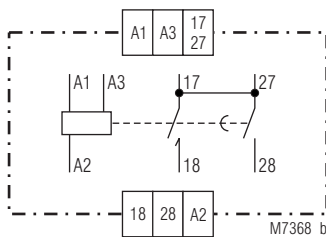


- Star-delta relay according to IEC/DIN EN 61812-1
- Time ranges up to 100 s
- Repeat accuracy $\leq 0.5\% + 10\text{ ms}$
- 2-voltage design
- LED indicators for contact position
- 1 NO contact fleeting make
1 NO contact operate delayed
- Wire connection: Also 2 x 1.5 mm² stranded ferruled (isolated), DIN 46228-1/-2/-3/-4 or
2 x 2.5 mm² stranded ferruled DIN 46228-1/-2/-3
- Width 22.5 mm

Function Diagram



Circuit Diagram



Connection Terminals

Terminal designation	Signal description
A1, A2, A3	Operating voltage
17, 18	1 NO contact fleeting on make
27, 28	1 NO contact operate delayed

Approvals and Markings



Applications

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:** $\geq 15\% U_N$

Technical Data

Output

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

Thermal current I_{th} : Switching capacity

To AC 15: 3 A / AC 230 V IEC/EN 60947-5-1
Electrical life IEC/EN 60947-5-1
To AC 15 at 1 A, AC 230 V: 5 x 10⁵ switching cycles

Short-circuit strength

Max. fuse rating: 4 A gG / gL IEC/EN 60947-5-1
Mechanical life: 10⁸ switching cycles

General Data

Operating mode: Continuous operation

Temperature range

Operation: - 20 ... + 60°C

Storage: - 40 ... + 70°C

Altitude: ≤ 2000 m

Clearance and creepage distances

Rated impulse voltage / pollution degree: 4 kV / 2 IEC 60664-1

EMC

Electrostatic discharge: 8 kV (contact) IEC/EN 61000-4-2

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: 2 kV IEC/EN 61000-4-4

Surge voltages

Between

wires for power supply: 1 kV IEC/EN 61000-4-5

Between wire and ground: 2 kV IEC/EN 61000-4-5

HF wire guided

150 kHz ... 80 MHz: 10 V / m IEC/EN 61000-4-6

Interference suppression: Limit value class B EN 55011

Degree of protection

Housing: IP 40 IEC/EN 60529

Terminals: IP 20 IEC/EN 60529

Housing: Thermoplastic with V0 behaviour to UL subject 94

Vibration resistance: Amplitude 0.35 mm IEC/EN 60068-2-6
frequency 10 ... 55 Hz

Climate resistance: 20 / 060 / 04 IEC/EN 60068-1

Terminal designation: EN 50005

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 46228-1/-2/-3/-4 or
2 x 2.5 mm² stranded ferruled
DIN 46228-1/-2/-3

Wire fixing: Terminal screws M 3.5
Box terminal with wire protection

Fixing torque: 0.8 Nm

Mounting: DIN rail IEC/EN 60715

Weight: 85 g

Dimensions

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

Standard Type

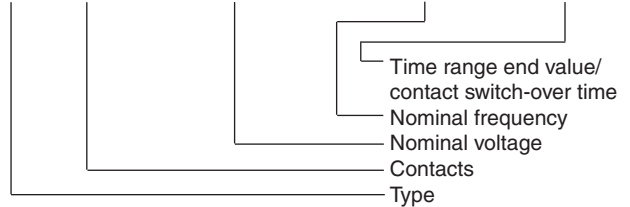
BC 7936N.38 AC/DC 24 V + AC 220 V ... 240 V 50/60 Hz 30 s 35 ms

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 Examples

