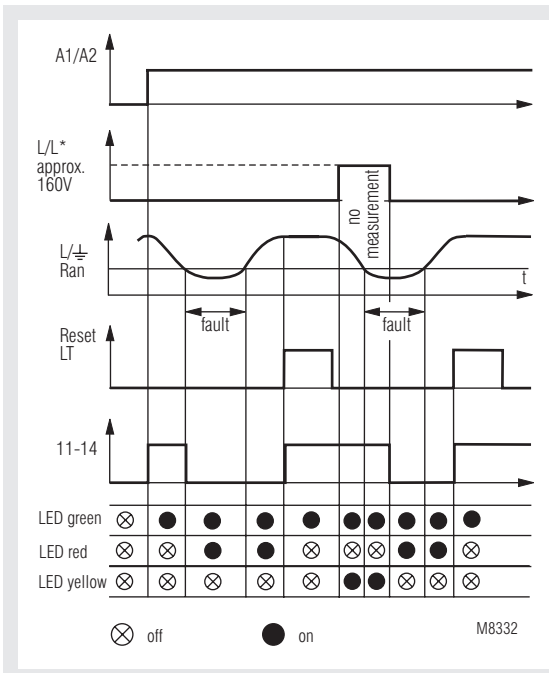




- According to IEC/EN 61557
- Setting range 200 kΩ to 2 MΩ
- LED indicators
- Output: 1 NO contact
- De-energized on trip
- Test button for function check
- Reset button
- Input for voltage detection
- Manual reset available by bridge
- Width 45 mm

Function Diagram



Approvals and Markings



Applications

Monitors the insulation of motors including connection wires during stand-by. E.g. for submerged pumps or smoke exhaust fans according to the French standard NFS 61.937 page 13 Add.A. The motor is monitored in disconnected state.

Indicators

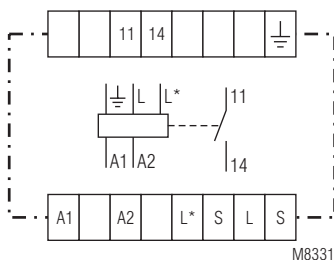
Green LED: Auxiliary supply connected
Red LED: Insulation resistance to low
Yellow LED: Measurement disabled

Notes

As the fault detection can only be active in voltage free state, the unit has an additional voltage detection. If on input L/L* the voltage rises above AC 160 V the measuring input is disconnected and the detection is inactive (yellow LED).

An insulation failure on input L / ≍ is stored and can be reset with button LT or by disconnecting the power. With an external bridge the function can be altered between manual or automatic reset. A fault can be simulated with button PT.

Circuit Diagram



M8331

BD 5877.01/241

Technical Data

Auxiliary Circuit

Auxiliary voltage U_H : AC 400 V
(other voltages on request)
Voltage range: 0,8 ... 1,1 U_N
Nominal consumption: Approx. 2,5 VA
Frequency range: 40 ... 60 Hz

Measuring Circuit

Setting range: 200 kΩ ... 2 MΩ
Setting R_{AN} : Infinite on relative scale
Hysteresis: > 10 %
Voltage detection: 160 V (at 400 V-model)
Test resistance: 150 kΩ
Internal AC resistance: > 300 kΩ
Internal DC resistance: > 30 kΩ
Measuring voltage: DC 15 V
Max. measuring current ($R_E = 0$): < 0,5 mA
Max. permitted DC voltage: DC 250 V
Operate delay
 R_E from ∞ to 0,9 R_{AN} : Approx. 3 s
 R_E from ∞ to 0 kΩ: < 0,3 s

Technical Data

Output

Contacts

BD 5877.01/241: 1 NO contact
Thermal current I_{th} : 6 A (see continuous current limit curve)

Switching capacity

To AC 15
 NO contact: 3 A / AC 230 V IEC/EN 60947-5-1

Electrical life

To AC 15 at 1 A, AC 230 V: $1,5 \times 10^5$ switching cycles IEC/EN 60947-5-1

Short circuit strength

max. fuse rating: 6 A gG / gL IEC/EN 60947-5-1

Mechanical life: 30×10^6 switching cycles

General Data

Operating mode: Continuous operation
Temperature range: -30 ... +60°C
 ... +70°C for max. 1 h

Clearance and creepage distances

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

EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61000-4-2
 Fast transients: 1 kV IEC/EN 61000-4-4

Surge voltages

Between wires for power supply: 2 kV IEC/EN 61000-4-5
 Between wire and ground: 4 kV IEC/EN 61000-4-5
 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 according to UL subject 94

Vibration resistance: Amplitude 0,35 mm IEC/EN 60068-2-6
 frequency 10 ... 55 Hz

Climate resistance: 30 / 060 / 04 IEC/EN 60068-1

Terminal designation:

EN 50005
Wire connection: 1 x 4 mm² solid or
 2 x 1,5 mm² stranded ferruled
 DIN 46228-1/-2/-3/-4

Wire fixing:

Flat terminals with self-lifting clamping piece IEC/EN 60999-1

Mounting:

DIN rail IEC/EN 60715

Weight:

450 g

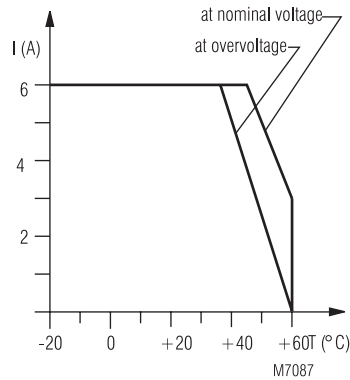
Dimensions

Width x height x depth: 45 x 74 x 131 mm

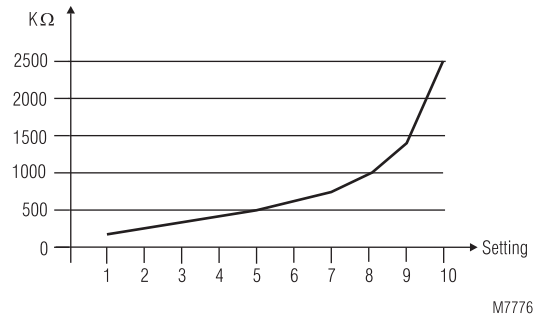
Standard Type

BD 5877.01/241 AC 400 V 200 kΩ ... 2 MΩ
 Article number: 0051266
 • Output: 1 NO contact
 • Auxiliary voltage U_H : AC 400 V
 • Width: 45 mm

Characteristics



Continuous current limit curve



Setting diagram

Application Example

