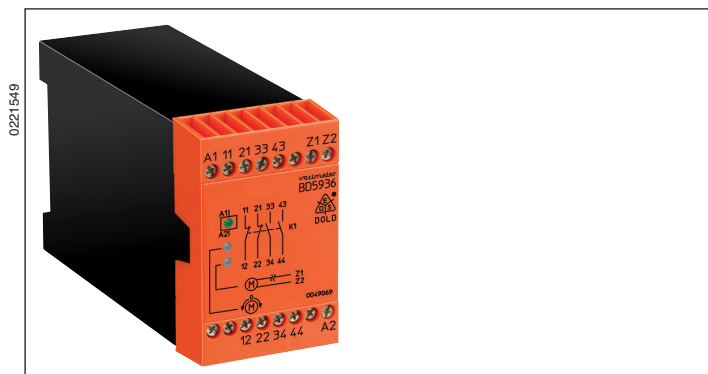


VARIMETER Standstill Monitor BD 5936



Your Advantage

- Standstill monitoring without sensor

Features

- According to IEC/EN 60255-1, IEC/EN 60255-26
- For standstill monitoring of 3- and 1-phase asynchronous motors
- Line breakage detection in the measurement circuit
- Forcibly guided output contacts:
2 NO, 2 NC contacts for 250 V AC
- LED indicators for motor standstill, line breakage, and operating voltage
- 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 45 mm

Product Description

The BD 5936 detecting standstills of 3- and 1-phase asynchronous motors. At 2 terminals of the stator winding the BD 5936 measures the voltage of the slowing motor which has been induced.. If the induction voltage approaches 0 this indicates that the device is at a standstill and the output relay is activated.

Additional the monitor detects strand breaks between measurement inputs Z1 / Z2.. If a line breakage is detected, the output relay goes into the normal position (as when the motor is running). This state is saved and can only be cleared by (briefly) switching off the auxiliary voltage.

Approvals and Markings

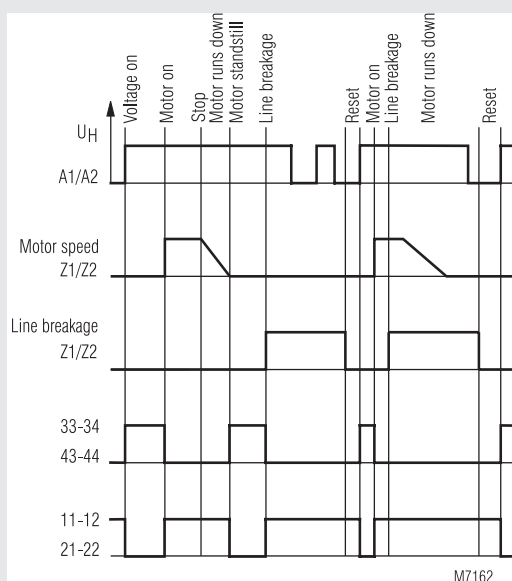


* see variants

Applications

For detecting standstills of 3- and 1-phase asynchronous motors, for example, for releasing protective door interlocks of machine tools or for activating stopping brakes.

Function Diagram



Notes

In the case on the motor wires the Z1 / Z2 connection wire should be installed separately from the motor supply and connected directly to the motor terminals. For longer distances please use twisted pair wires.

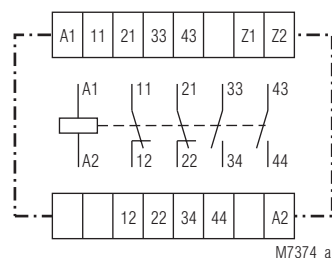
Indicators

- 1st green LED: comes on when operating voltage present
- 2nd green LED: comes on when motor at a standstill
- Red LED: comes on in event of line breakage between Z1 and Z2

Connection Terminals

Terminal designation	Signal designation
A1, A2	Auxiliary voltage U_H
Z1, Z2	Measuring input (connection on motor)
11, 12, 21, 22	Forcibly guided NC contacts
33, 34, 43, 44	Forcibly guided NO contacts

Circuit Diagrams



Technical Data

Input

- Auxiliary voltage U_H :** AC 24, 48, 110, 120, 230 V, AC/DC 24 ... 60 V, 110 ... 230 V (other voltages on request)
- Voltage range:** 0.8 ... 1.1 U_N
- Nominal consumption:** approx. 3 VA, 3 W
- Nominal frequency:** 50 / 60 Hz
- Measurement/motor voltage:** AC 690 V
- Response value:** approx. 20 mV
- Release value:** approx. 40 mV

Technical Data	
Output	
Contacts	
BD 5936.17:	2 NO, 2 NC contacts
Contact type:	relay, forcibly guided
Output rated voltage:	250 V AC
Thermal current I_{th}:	5 A
Switching capacity	IEC/EN 60 947-5-1
to AC 15:	
NO contact:	3 A / AC 230 V
NC contact:	2 A / AC 230 V
Electrical life	IEC/EN 60 947-5-1
to AC 15 at 2 A, AC 230 V:	10 ⁵ switching cycles
Short circuit strength	
max. fuse rating:	6 A gL IEC/EN 60 947-5-1
Mechanical life:	10 x 10 ⁶ switching cycles

General Data

Operating mode:	Continuous operation
Temperature range:	- 15 ... + 55 °C at max. 90 % air humidity

Clearance and creepage distances

rated impulse voltage / pollution degree,		IEC 60 664-1
Terminals Z1/Z2:		
at AC-Auxiliary voltage U_H :	6 kV / 2 (Overvoltage category III)	
at AC/DC-Auxiliary voltage U_H :	4 kV / 2 (Overvoltage category II)	

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:	2 kV	IEC/EN 61 000-4-5
between wire and ground:	4 kV	IEC/EN 61 000-4-5
HF-wire guided	10 V	IEC/EN 61 000-4-6

Interference suppression

Auxiliary voltage AC:	Limit value class B	EN 55 011
Auxiliary voltage AC/DC:	Limit value class A*)	EN 55 011

*) The device is designed for the usage under industrial conditions (Class A, EN 55011).
When connected to a low voltage public system (Class B, EN 55011) radio interference can be generated. To avoid this, appropriate measures have to be taken.

Degree of protection:

Housing:	IP 40	IEC/EN 60 529
Terminals:	IP 20	IEC/EN 60 529

Housing:

Thermoplastic with V0 behaviour
to UL Subj. 94

Vibration resistance:

Amplitude 0,35 mm
frequency 10 ... 55 Hz IEC/EN 60 068-2-6
15 / 055 / 04 IEC/EN 60 068-1

Climate resistance:

EN 50 005

Terminal designation:

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

Line attachment:

Plus-minus terminal screws M 3,5 box
terminal with wire protection

Mounting:

DIN rail IEC/EN 60 715

Weighth: 325 g

Dimensions

Width x height x depth: 45 x 74 x 121 mm

UL-Data

Switching capacity:

NO contacts: Pilot duty A300
10A 250Vac G.P.
10A 24Vdc

NC contacts:

10A 250Vac G.P.
10A 24Vdc



Technical data that is not stated in the UL-Data, can be found in the technical data section.

CCC-Data

Thermal current I_{th} : 5 A

Switching capacity

to AC 15: 2 A / AC 230 V IEC/EN 60 947-5-1
to DC 13: 1 A / DC 24 V IEC/EN 60 947-5-1



Technical data that is not stated in the CCC-Data, can be found in the technical data section.

Standard Type

BD 5936.17/001 AC 230 V 50/60 Hz
Article number: 0049069
• Output: 2 NO, 2 NC contacts
• Auxiliary voltage U_H : AC 230 V
• With automatic reset for broken wire detection
• Width: 45 mm

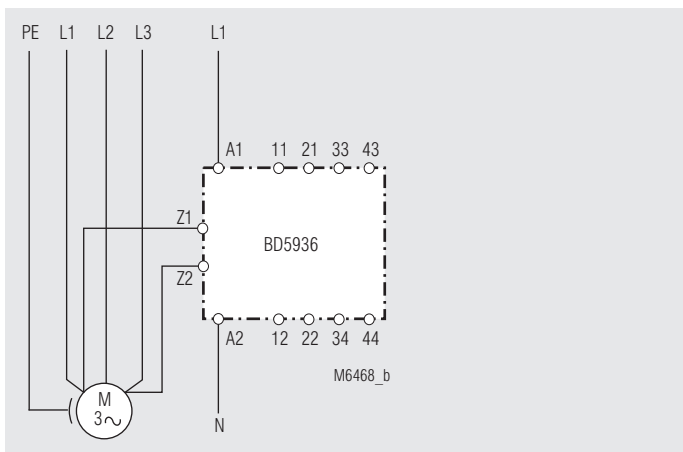
Variants

BD 5936.17: without automatic reset for broken wire detection
BD 5936.17/61: with UL-approval (Canada/USA)
BD 5936: with CCC-approval on request

Ordering example for variants

BD 5936 .17 / _ _ AC 230 V 50 / 60 Hz
Nominal frequency
Auxiliary voltage
Variant, if required
Contacts
Type

Connection Examples



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Altech:](#)

[DOLD 60997](#)