Technical data

Detector Base B312NL

Safety Technology

2CDC 081 486 F0004

B312NL

2CDC 081 351 F0004

ORM2351

2CDC 081 350 F0004

OTM2351

SK 0184 B01

RL

Application

The Detector Base B312NL is used together with the Optical Smoke Detector ORM2351, the Heat Maximum Detector WMM4351, the Heat Differential Maximum Detector DMM5351 or the Combination Detector OTM2351 for the early detection of fires in buildings. It enables the connection of the above detectors to zones on intruder alarm panels in 12 V technology.

Function

When an alarm is tripped the normally closed relay contact opens, disturbing the zone. Due to the integrated self-reset, the detector base periodically interrupts the supply voltage for the detector and checks it to see if an alarm has occurred. If an alarm is no longer present, the detector resets. An optional reed relay in the last detector base of the zone monitors the supply voltage and the removal of a detector from the detector socket.

Mounting

The detector base can be used for a permanent installation in dry interior rooms.
In order to ensure the best detection, in smaller rooms the detector base should be installed in the centre of the room on the ceiling such that smoke and heat can reach the detector unimpaired. With larger rooms the relevant standards (e.g. VDE 0833 - Part 2) should be followed. In the domestic sector it is recommended that a detector is installed in each of the landing and bedroom areas and the children‘s rooms.
The optical smoke detector and the optical-thermal detector should not be installed in rooms in which steam or smoke is expected under normal circumstances (e.g. bathroom and kitchen).

Functional test

The functional test occurs by tripping the relevant fire detector:
Smoke detector: Tripping by smoke or test aerosol
Heat detector: Tripping with hot-air blower or hair dryer

If the contact of a reed relay, supplied by the excitation voltage of the detector and wired between Terminals 3 and 5 of the base, is included in the alarm line (see wiring diagram), the failure or the switching off of this voltage and/or the removal of the detector also leads to an alarm.

Connection

The detector base is connected in 4-wire technology. Two wires are needed for the supply voltage and two wires for the connection to the zone. When connected to an intrusion alarm panel, the zone must be terminated with a 2.7 kΩ resistor (Fig. 1.1 and Fig. 1.3). If, as well as a fire alarm, the lack of supply voltage and/or the removal of the detector from the detector base is to result in an alarm, a reed relay (e.g. RL) must be fitted into the last detector base according to the following circuit (Fig. 1.2 and 1.4).

For the fire detectors on the intrusion alarm panel it is recommended that a dedicated zone is used which also trips an alarm in the deactivated state, e.g. fire detector or sabotage zone.

Connection Methods

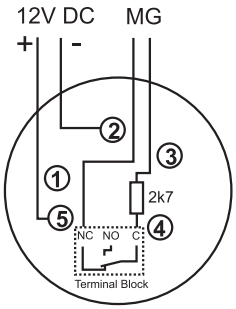

Fig. 1.1 Connection of a detector **without** monitoring of the supply voltage and for detector removal

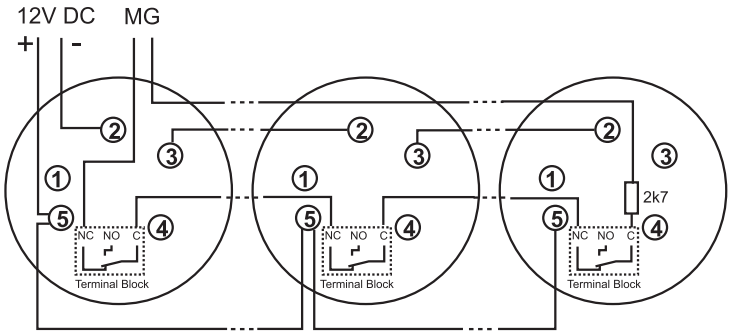

Fig. 1.2 Connection of three detectors **without** Alarm tripping on supply voltage failure and detector removal

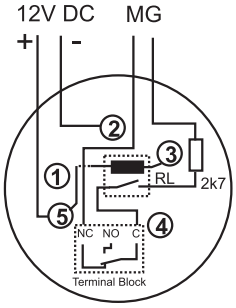

Fig. 1.3 Connection of a detector **with** monitoring of the supply voltage and for detector removal

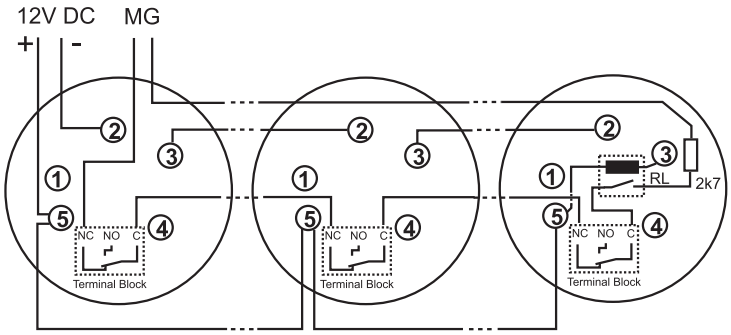

Fig. 1.4 Connection of three detectors **with** Alarm tripping on supply voltage failure and detector removal

The relay contacts are displayed in the de-energised state.

Connection to intrusion alarm panels

Panel	Terminal pairs Zones	Terminal(s) 12 V +	Terminal(s) 12 V –
L108	6-C (fire, gas zone)	V +	V –
L208	1-C, ..., 6-C	V +	V –
L240	1-C, ..., 6-C	V +	V –
L840/MG4	3-4, 5-6, 7-8, 9-10	1	2
MT/S 4.12.1 (Zone terminal ABB i-bus)	1-2, 3-4, 5-6, 7-8	12	11
MT/U 2.12.1 (Zone terminal ABB i-bus)	1-2, 3-4	7	8

Technical data

Operating voltage:	10 to 15 V
Current consumption:	Quiescent 20 μA/ Alarm 6 mA
Contact:	Changeover contact 30 V/1 A
Ambient temperature:	– 20 °C to 70 °C
Dimensions ∅ x H:	127 x 29 mm
Weight:	90 g

Order data

Designation	Order data Short designation	Product no.	bbn 40 16779 EAN	Prices group	Weight 1 pc in kg	Pack unit pc
Detector Base 12 V for Series 300	**B312NL**	2CDG 430 012 R0011	**64674 1**	52	0.07	1
Optical Smoke Detector Series 300	**ORM2351**	2CDG 430 008 R0011	**64669 7**	52	0.07	1
Thermal Maximum Detector Series 300	**WMM4351**	2CDG 430 011 R0011	**64673 4**	52	0.07	1
Thermal Differential Detector Series 300	**DMM5351**	2CDG 430 010 R0011	**64670 3**	52	0.07	1
Optical Thermal Detector Series 300	**OTM2351**	2CDG 430 009 R0011	**64654 3**	52	0.07	1
Test aerosol	**FPA03**	GH V902 0012 V0021	**53444 4**	52	0.3	1
Reed relay	**RL**	GH V927 0013 V0100	**66560 8***	50	0.01	1

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The information in this leaflet is subject to change without further notice.

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