

SMOKE AND HEAT DETECTOR

Ref. 1043/231 – 1043/232



DESCRIPTION

The operating principle of the optical-temperature detectors Ref. 1043/231 and Ref.1043/232 is based on analysis of the spreading of light caused by the particles of smoke present in the air and on a temperature sensor with an alarm threshold at 55°.

The detector acts as automatic gain control; a microcontroller calculates the compensation of the reading to maintain constant sensitivity over time, correcting any increased level due to the deposit of dust inside the analysis cell. A red led indicates the following detector conditions: during normal operation it flashes briefly every 4 seconds; in the event of a fault or maintenance it flashes for half a second once a second; in the event of an alarm, the indicator glows steadily.

The detector Ref.1043/232 has a base with relay with NC and NO contacts for activating external devices in the event of an alarm.

INDICATOR LEDS

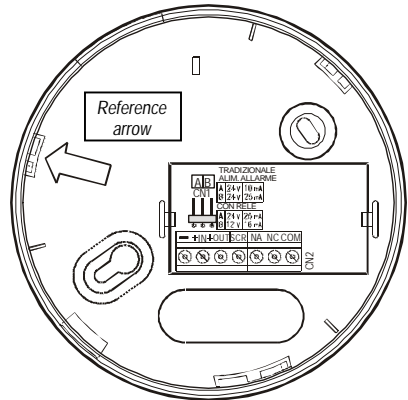
Brief flash every four seconds	normal operation
Glowing steadily	alarm
½ second flash once a second	maintenance or fault

ASSEMBLY AND INSTALLATION INSTRUCTIONS

Install the ceiling detector using 2 bolts.

The detector is connected to the base making the reference arrows coincide.

After installation and before testing, remove the dust cover from the detector.



CONNECTION TERMINALS

Terminals	Description
-	Power negative
+IN	Power positive input
+OUT	Power positive output
SCR (*)	Do not use
NO (*)	Alarm relay NO contact
NC (*)	Alarm relay NC contact
COM (*)	Alarm relay common

(*) Only on detector Ref.1043/232

NOTE: if only one detector is installed, or if it is the last device on the line, connect the line end resistance between the +OUT and - terminals.

In a fire alarm system the position of jumper CN1 must be the following:

Ref.1043/231: position B

Ref.1043/232: position A

Fig.1 – Connection of two or more optical-temperature detectors Ref.1043/231 (or -/232) to a conventional control unit

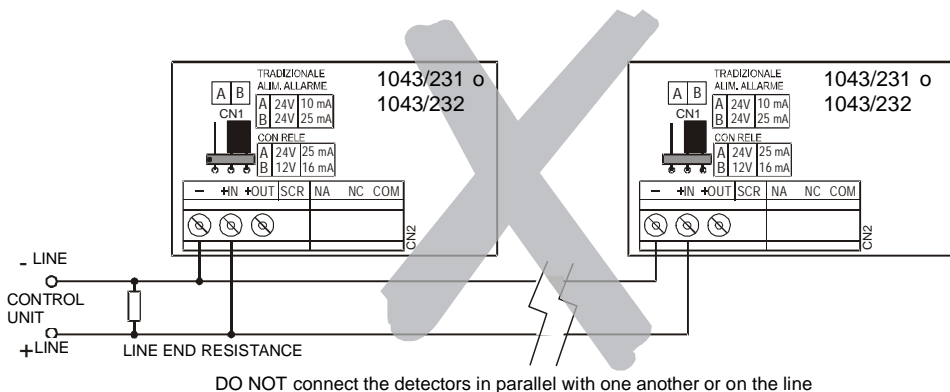
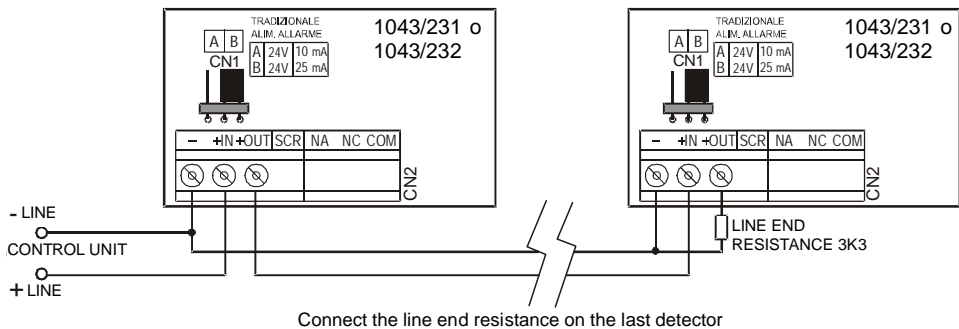
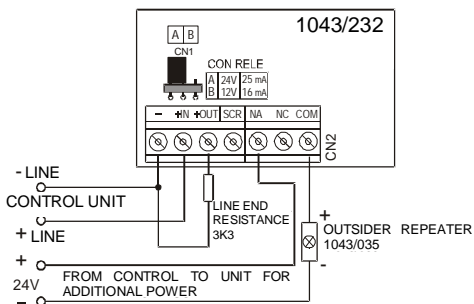


Fig 2 – Connection of an outside optical repeater to an optical temperature detector Ref.1043/232



To turn off outside repeater cut off the supply for at least 1 second.

TEST PROCEDURES

Insert the white plastic rod provided a couple of centimetres inside the hole at the centre of the detector top; check that the alarm led turns on. It is turned off briefly cutting off the power.

Note! Frequent cleaning is recommended in particularly dusty environments

TECHNICAL SPECIFICATIONS

All models:

Stand-by intake: 75 μ A mean
Response time: 3 s
Alarm temperature range: 55° +/-5%
Alarm threshold (smoke): m=0.16dBm +/-20%
Max. air speed: 1m/s
Working temperature range: 0° \div 70° C
Max. relative humidity: 92%
Weight: 210
Dimensions: \varnothing 115 x 45 mm

1043/231 only:

Power voltage: 11 \div 29Vdc
Uptake in the case of alarm(*): 25mA @ 24Vdc
10mA @ 24Vdc
Relay Output: not available

1043/232 only:

Power voltage: 20 \div 29Vdc
Or 11 \div 15Vdc
Uptake in the case of alarm(*): 25mA @ 24Vdc
16mA @ 12Vdc
Relay Output: NO-NC 1A @ 30Vdc

(* Important: intake during an alarm varies depending on the position of jumper CN1. Before changing the position of the jumper check the alarm threshold of the control unit to which the device is connected.

(DS1043-078)

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