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UL 1484, UL 2075,
EN 50194, EN 50291

NB983 Conventional (non-addressable) gas detector

Electronic gas detector for 4-wire systems datasheet

Description

NB983 conventional (non-addressable) gas detectors are state-of-the-art detectors suitable for connection to 4-wire conventional (non-addressable) fire detection control and indicating equipment, or to 4-wire addressable fire detection control and indicating equipment that can accept conventional (non-addressable) type detectors[1].

Advanced electronics in conjunction with a semiconductor gas sensor provide early detection of carbon monoxide, natural gas or propane gases and high immunity against unwanted alarms.

The NB983 range of conventional (non-addressable) detectors provides fire detection and alarm system designers with a Standards-compliant, economical gas detector for life safety and property protection applications.

Features

The NB983 gas detectors are available in a wide range of variants to suit many applications.

- Advanced algorithms provide advanced detection discrimination
- Carbon monoxide, natural gas or propane gases detection available
- Stable gas sensing chamber. No adjustment or replacement required
- High immunity against unwanted alarms
- Surface-mount device (SMD) circuit board design
- 4-wire system operation
- Detector auto-reset once gas levels fall below alarm threshold levels
- Internal reed switch for hush and test functions
- DC 24 V operation
- DC 12 V optional operation available for CO detector
- N/C or N/O alarm relay output
- 70 dB internal sounder
- Easy installation. No programming required
- Base options include
  - Low profile 100 mm diameter base
  - High profile 100 mm base for mounting on hard surfaces with conduit cable entry
  - Low profile 150 mm diameter base
  - Recessed mounting for base mounting
- Connects to zone monitor for use with addressable control and indicating equipment
- Sleek low-profile housing design
- Low maintenance

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Approvals

NB983 gas detectors have the following approvals.

	UL 2075 [a] EN 50291 [b]	UL 1484 [c] EN 50194 [d]
NB983-CO	✔	—
NB983-LP	—	✔
NB983-NG	—	✔

[a] UL 2075 *Gas and Vapor Detectors and Sensors*

[b] EN 50291 *Electrical apparatus for the detection of carbon monoxide in domestic premises. Test methods and performance requirements*

[c] UL 1484 *Residential gas detectors*

[d] EN 50194 *Electrical apparatus for the detection of combustible gases in domestic premises. Test methods and performance requirements*

Accessories

The following accessories are compatible with NB983 gas detectors.

Description	Part number	Datasheet
8-term. 100 mm low profile base	774912	31-0003
8-term. 100 mm low profile base	774914	31-0003
8-term. 100 mm high profile base	884912	31-0003
8-term. 150 mm low profile base	784914	31-0003
27 mm recessed mounting ring	775912	31-0003
Zone monitor	NB773	31-0056

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[1] May be used in conjunction with the NB773 zone monitor module.

Specifications

	NB983-CO-12	NB983-CO-24	NB983-LP	NB983-NG
Operating voltage	DC (10 ~ 15) V	DC (21 ~ 27) V	DC (21 ~ 27) V	DC (21 ~ 27) V
Start-up current	≤ 120 mA			
Start-up time	≤ 10 min			
Quiescent current	35 mA	20 mA	45 mA	
Alarm current (max)	90 mA	75 mA	60 mA	
Sampling time	3 s ~ 5 s			
Reset voltage	≤ 1 V			
Reset time	≤ 5 s			
Alarm response threshold	70 µL/L for 60 min ~ 240 min [a] 150 µL/L for 10 min ~ 50 min [a] 400 µL/L for 4 min ~ 15 min [a] 50 µL/L for 60 min ~ 90 min [b] 100 µL/L for 10 min ~ 40 min [b] 300 µL/L for < 3 min [b]		≤ 0.25 LEL C_3H_8 (propane)	≤ 0.25 LEL CH_4 (natural gas)
Alarm relay	SPST. N/O or N/C. 1.0 A @ DC 30 V / 0.5 A @ AC 125 V			
Auto reset time	< 30 s			
Sounder output	≥ 70 dB @ 3 m			
Operating temperature	-10 °C ~ +50 °C			
Operating humidity	0 % ~ 95 % RH, non-condensing			
Storage temperature	-25 °C ~ +80 °C			
Storage humidity	0 % ~ 98 % RH, non-condensing			
Quiescent condition indicator	Single continuous emitting green LED			
Alarm condition indicator	Flashing red LED			
Dimensions (excluding contacts)	Φ 100 mm × 38 mm			
Ingress protection rating	IP-32			

[a] Complies with UL 2075, *Gas and Vapor Detectors and Sensors.*

[b] Complies with EN 50291, *Electrical apparatus for the detection of carbon monoxide in domestic premises. Test methods and performance requirements.*

Ordering Information

	Nominal Operating Voltage	Gas
NB983-CO-12	DC 12 V	CO
NB983-CO-24	DC 24 V	CO
NB983-LP	DC 24 V	C_3H_8
NB983-NG	DC 24 V	CH_4

View the complete range of products at www.wizmart.com