

**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<sup>1</sup>.

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 12 V operation
- 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



NB983 conventional (non-addressable) gas detector

**Approvals**

NB983 gas detectors have the following approvals.

	UL 2075 <sup>a</sup> EN 50291 <sup>b</sup>	UL 1484 <sup>c</sup> EN 50194 <sup>d</sup>
NB983-CO	✓	—
NB983-LP	—	✓
NB983-NG	—	✓

<sup>a</sup> UL 2075 Gas and Vapor Detectors and Sensors

<sup>b</sup> EN 50291 Electrical apparatus for the detection of carbon monoxide in domestic premises. Test methods and performance requirements

<sup>c</sup> UL 1484 Residential gas detectors

<sup>d</sup> 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

<sup>1</sup> 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 (19) 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 <sup>a</sup> 150 µL/L for 10 min ~ 50 min <sup>a</sup> 400 µL/L for 4 min ~ 15 min <sup>a</sup>  50 µL/L for 60 min ~ 90 min <sup>b</sup> 100 µL/L for 10 min ~ 40 min <sup>b</sup> 300 µL/L for < 3 min <sup>b</sup>		≤ 0.25 LEL C <sub>3</sub> H <sub>8</sub> (propane)	≤ 0.25 LEL CH <sub>4</sub> (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			

<sup>a</sup> Complies with UL 2075, *Gas and Vapor Detectors and Sensors*.

<sup>b</sup> 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 <sub>3</sub> H <sub>8</sub>
NB983-NG	DC 12 V	CH <sub>4</sub>

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