

**Exmess HC3  
Exmess HC3-K**



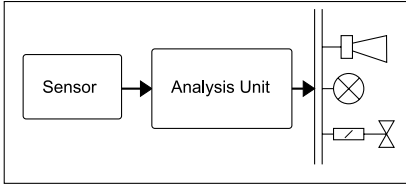
**Gasmonitor HC66  
Gasmonitor HC66-K**



**Data Sheet**



#### Application/Structure



The sensors of the series Exmess HC3 and Gasmonitor HC66 used in combination with the analysis system have following functions:

- Measuring and displaying gas concentrations
- Monitoring and dangerous gas signaling
- Control outputs to initiate measures:
  - to counter an increase in gas concentration
  - to give visible and audible alarm signals

A gas alarm unit comprises the following components:

- Sensor
- Analysis system
- Controllable units such as ventilators, warning lights and solenoids.

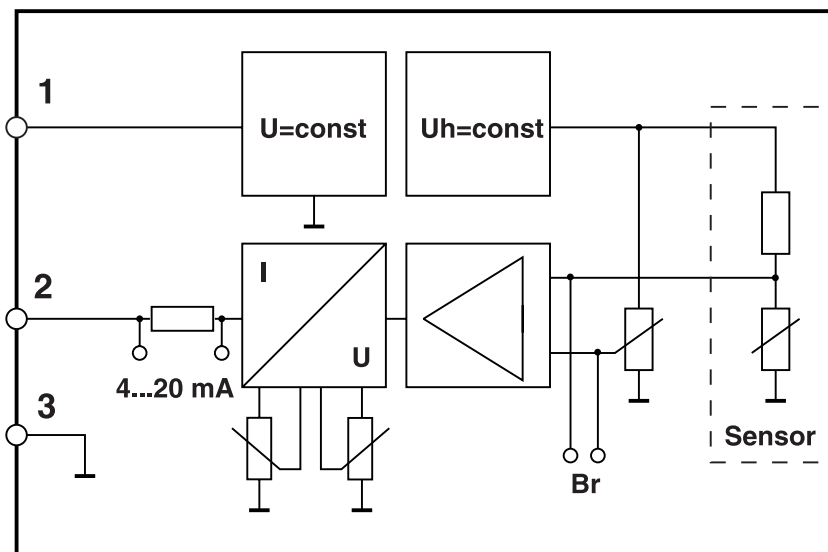
#### Product features

- Detection of combustible gases and vapours
- Measuring range: 0 ... 100 % LEL (low explosion limit)
- Measuring principle: catalytic combustion
- Linear measurement signal: 4 ... 20 mA
- Calibration by one person only
- Two applications:
  - Exmess HC3: installation in explosion risk area
  - Gasmonitor HC66: installation in save area
- Two construction designs:
  - Standard for wall mounting
  - Type K for mounting in ventilation ducts
- Triple-conductor technology
  - 24 VDC
  - 4 ... 20 mA
  - GND

#### Mode of function

Electronics integrated in the sensor control the operating parameters (heating voltage) of the sensor. The sensor consists of an active an a passive element. The passive element is connected to the active element by means of a Wheatstone bridge an compensates for environmental influences such as fluctuations in the surrounding temperature. As soon as combustible gases contact the active sensor, a combustion process takes place. The heat of reaction changes the electrical resistance and consequently the bridge signal. These small voltage signals are amplified and converted to a 4 ... 20 mA measurement signal. Measuring plugs an three potentiometers enable adjustment of the Wheatstone bridge and the zero point (4 mA) as well as the amplification of the output current.

#### Block Diagram





#### Technical specifications

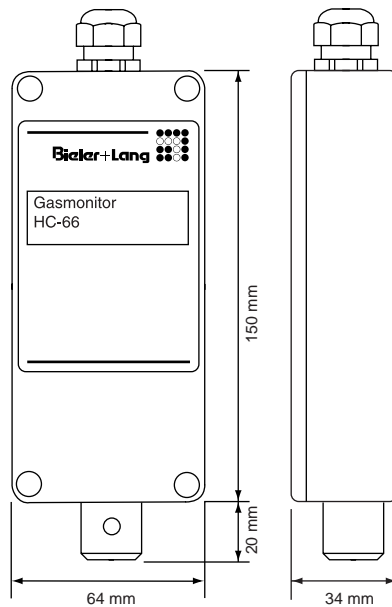
	Gasmonitor HC66	Gasmonitor HC66 K	Exmess HC3	Exmess HC3K
Application	safe area		explosion-risk area	
Mechanical design	standard	installation in ventilation ducts	standard	installation in ventilation ducts
Measurable gases	combustible gases and vapours			
Measuring range	0 ... 100 % LEL			
Measuring principle	catalytic combustion			
Measuring signal	4 ... 20 mA			
Supply voltage	18 ... 28 VDC		19 ... 24 VDC	
Max supply current	100 mADC			
Response time T90	10 sec. (Methane)		< 17 sec. (Methane)	
Max. gas-flow	15 m/sec			
Temperature range	-20 °C ... +60°C		-20°C ... +60°C	housing: -20°C ... +60°C sensor-cap: -20°C ... +80°C
Air-pressure range	900 ... 1100 hPa			
Humidity	30 ... 90 % relative humidity			
Influence on	Zero: < 1% of signal Span: < 10% of signal		Zero < 0,05	Span < 0,0008
Temperature %LEL/°C			< 0,0008	< 0,006
Pressure %LEL/mbar			< 0,006	< 0,03
Humidity %LEL/%rel F			< 0,1	< 0,5
Drift %LEL/week				
Max. cable length	1000m depending on cable-type			
Cable	3 active wires, shielded cable preferably JE-Y(ST)...BD		3 active wires, shielded cable preferably H05VVC4V5-K	
Suitable analysis units	Gasmesscomputer 8022, GMC 8022E, GMC 8364, LS 8120E			
Explosion-approval			Amplifier MV420Ex: EEx mde IIC / SCS No. 93.C.5066U	
			sensor-cap EEx dem IIC T6 BVS-Nr. 98.E.2051	sensor-cap EEx dem IIC T4 BVS-Nr. 98.E.2051
Performance approval			PfG-Nr.: 41300591	



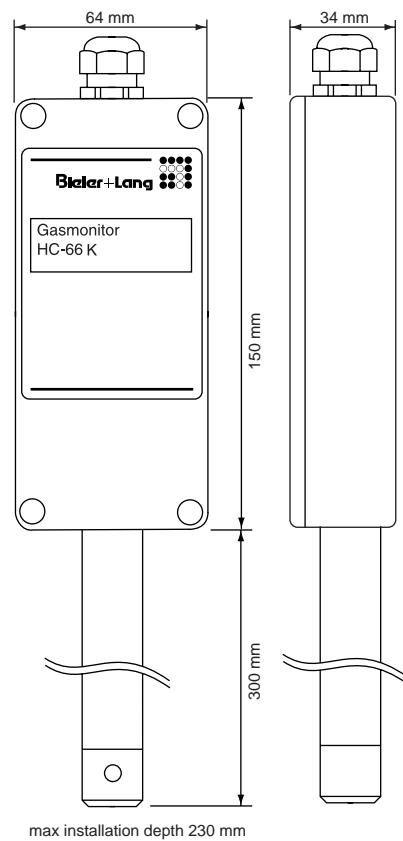
**Mechanical specifications**

	Gasmonitor HC66	Gasmonitor HC66-K	Exmess HC3	Exmess HC3-K
Protection class	IP54			
Enclosure material	sensor-cap: PVC housing: aluminium		sensor-cap: brass housing: aluminium flame block: sintered metal	
Weight	360 g	1200 g	860 g	1650 g
Cable inlet	Pg 13,5 - cable diameter up to 12 mm			
Terminals	3-pin 0,5 ... 1,5 mm <sup>2</sup>			

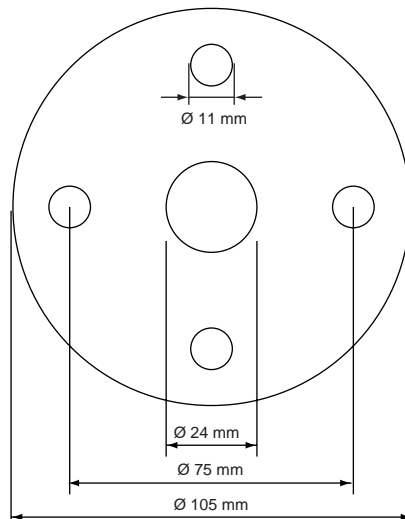
● Gasmonitor HC66



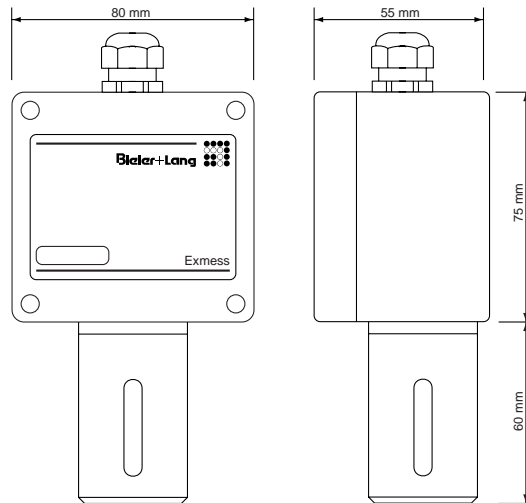
● Gasmonitor HC66-K



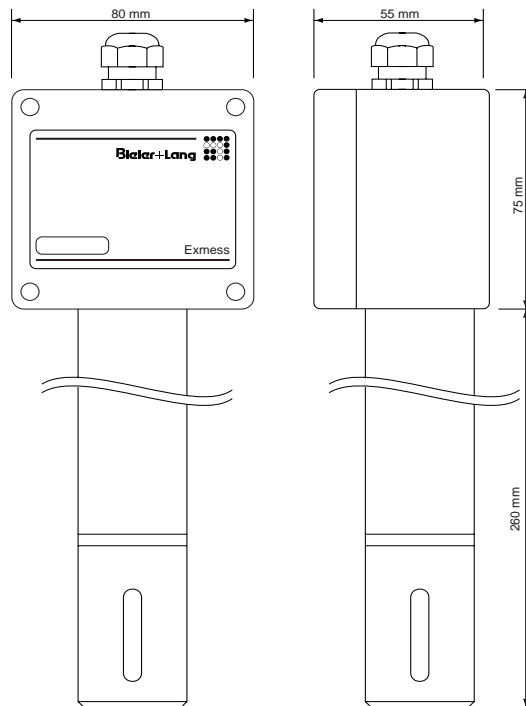
● Flange Gasmonitor HC66-K



**Mechanical specifications** • Exmess HC3

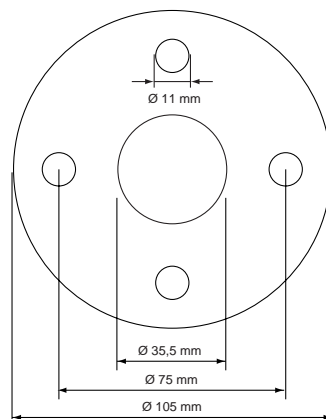


• Exmess HC3-K



max. installation depth 230 mm

• Flange Exmess HC3-K



**Approval**

- Explosion proof
    - MV420Ex: EEx mde IIC / SCS No. 93.C.5066U
    - Exmess HC3: EEx dem IIC T6 / BVS-Nr. 98.E.2051
    - Exmess HC3-K: EEx dem IIC T4 / BVS-Nr. 98.E.2051
  - Performance approval: PfG-Nr.: 41300591
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**Safety**

- The following standards guarantee ultimate appliance safety:
- EN 50081-1 01/1992 EMC - emitted interference
  - EN 50082-2 02/1995 EMC - interference immunity
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**Equipment**

- Test gas set
  - Calibration gases
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**Service**

Everything from one source - from project development to the installation of your new gas alarm unit. Guaranteed by our comprehensive sales and service network. Call us for the address of your local contact partner. Our after-sales technicians are pleased to assist you with hands-on help and advice.

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