



CE  
0102

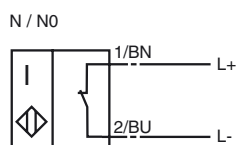
### Model Number

NJ4-30GM-N-200

### Features

- Temperature range 0 ... 200 °C
- 4 mm embeddable

### Connection



### Accessories

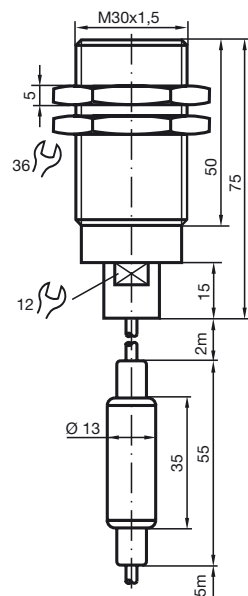
#### BF 30

Mounting flange

#### EXG-18

Mounting aid

## Dimensions



## Technical Data

### General specifications

Switching element function	NAMUR NC
Rated operating distance	$s_n$ 4 mm
Installation	embeddable
Output polarity	NAMUR
Assured operating distance	$s_a$ 0 ... 3.04 mm
Reduction factor $r_{AI}$	0.4
Reduction factor $r_{Cu}$	0.3
Reduction factor $r_{V2A}$	0.85

### Nominal ratings

Nominal voltage	$U_o$ 8 V
Switching frequency	$f$ 0 ... 1000 Hz
Hysteresis	$H$ typ. %
Current consumption	
Measuring plate not detected	$\geq 3$ mA
Measuring plate detected	$\leq 1$ mA

### Standard conformity

EMC in accordance with	IEC / EN 60947-5-2:2004
Standards	DIN EN 60947-5-6 (NAMUR)

### Ambient conditions

Ambient temperature	0 ... 200 °C (273 ... 473 K)
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### Mechanical specifications

Connection type	5 m, SIHF-cable
Core cross-section	0.34 mm <sup>2</sup>
Housing material	Stainless steel
Sensing face	PPS
Protection degree	IP65
Note	amplifier -25°C...70°C 2 m Teflon cable between amplifier and oscillator

### General information

Use in the hazardous area	see instruction manuals
Category	1G; 2G

**ATEX 1G**

## Instruction

Device category 1G  
 Directive conformity  
 Standard conformity

## CE symbol

## Ex-identification

## EC-Type Examination Certificate

Appropriate type  
 Effective internal capacitance  $C_i$   
 Effective internal inductance  $L_i$   
 Cable length

Explosion group IIA  
 Explosion group IIB  
 Explosion group IIC  
 General

## Highest permissible ambient temperature

## Installation, Commissioning

## Maintenance


## Special conditions

Protection from mechanical danger

Electrostatic charging

**Manual electrical apparatus for hazardous areas**

for use in hazardous areas with gas, vapour and mist  
 94/9/EG  
 EN 50014:1997; EN 50020:1994; EN 50284:1999  
 Ignition protection "Intrinsic safety"  
 Use is restricted to the following stated conditions  
 C E 0102

 II 1G EEx ia IIC T6

PTB 00 ATEX 2048 X  
 NJ4-30GM-N-200...

$\leq 70$  nF ; a cable length of 10 m is considered.

$\leq 100$   $\mu$ H ; a cable length of 10 m is considered.

Dangerous electrostatic charges on the fixed connection cable must be taken into account for lengths equal to and exceeding the following values:

113 cm

56 cm

9 cm

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual.

The EC-Type Examination Certificate has to be observed. The special conditions must be adhered to!

Directive 94/9EG and hence also EC-Type Examination Certificates apply in general only to the use of electrical apparatus under atmospheric conditions. The use in ambient temperatures of  $> 60$  °C was tested with regard to hot surfaces by the mentioned certification authority.

If the equipment is not used under atmospheric conditions, a reduction of the permissible minimum ignition energies may have to be taken into consideration.

The temperature ranges, according to temperature class, are given in the EC-Type Examination Certificate. Note: Use the temperature table for category 1 !!! The 20 % reduction in accordance with EN 1127-1:1997 has already been accounted for in the temperature table for category 1.

Laws and/or regulations and standards governing the use or intended usage goal must be observed.

The intrinsic safety is only assured in connection with an appropriate related apparatus and according to the proof of intrinsic safety.

The associated apparatus must satisfy the requirements of category ia.

Due to the possible danger of ignition, which can arise due to faults and/or transient currents in the equipotential bonding system, galvanic isolation of the power supply and signal circuit is preferable. Associated apparatus without electrical isolation must only be used if the appropriate requirements of IEC 60079-14 are met.

No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.

When used in the temperature range below  $-20$  °C the sensor should be protected from knocks by the provision of an additional housing.

Electrostatic charges on the metal housing components must be avoided. Dangerous electrostatic charges on the metal housing components can be avoided by incorporating these components in the equipotential bonding. When used in group IIC non-permissible electrostatic charges should be avoided on the plastic housing parts.

**ATEX 2G**

Instruction

**Device category 2G**

Directive conformity

Standard conformity

CE symbol

Ex-identification

EC-Type Examination Certificate

Appropriate type

Effective internal capacitance  $C_i$ Effective internal inductance  $L_i$ 

General

Highest permissible ambient temperature

Installation, Commissioning

Maintenance

[Fett]Special conditions

Protection from mechanical danger

Electrostatic charging

**Manual electrical apparatus for hazardous areas**for use in hazardous areas with gas, vapour and mist  
94/9/EG

EN 50014:1997, EN 50020:1994

Ignition protection "Intrinsic safety"

Use is restricted to the following stated conditions

CE 0102

 II 1G EEx ia IIC T6

PTB 00 ATEX 2048 X

NJ4-30GM-N-200...

 $\leq 70$  nF ; a cable length of 10 m is considered. $\leq 100$   $\mu$ H ; a cable length of 10 m is considered.

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The EC-Type Examination Certificate has to be observed. The special conditions must be adhered to!

Directive 94/9/EG and hence also EC-Type Examination Certificates apply in general only to the use of electrical apparatus under atmospheric conditions.

The use in ambient temperatures of  $> 60$  °C was tested with regard to hot surfaces by the mentioned certification authority.

If the equipment is not used under atmospheric conditions, a reduction of the permissible minimum ignition energies may have to be taken into consideration.

The temperature ranges, according to temperature class, are given in the EC-Type Examination Certificate.

Laws and/or regulations and standards governing the use or intended usage goal must be observed. The intrinsic safety is only assured in connection with an appropriate related apparatus and according to the proof of intrinsic safety. The adhesive label provided must be affixed in the immediate vicinity of the sensor! The surface to which the label is applied must be clean, flat and free from grease!

The affixed adhesive label must be readable and durable, taking account of the possibility of chemical corrosion!

No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.

When used in the temperature range below  $-20$ °C the sensor should be protected from knocks by the provision of an additional housing.

Electrostatic charges on the metal housing components must be avoided. Dangerous electrostatic charges on the metal housing components can be avoided by incorporating these components in the equipotential bonding.