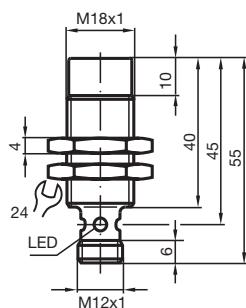


Comfort series

8 mm not embeddable

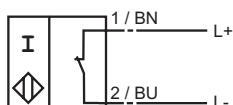
Usable up to SIL 2 acc. to  
IEC 61508

CE 0102

Switching element function	NAMUR NC
Rated operating distance $s_n$	8 mm
Installation	not embeddable
Assured operating distance $s_a$	0 ... 6,48 mm
Reduction factor $r_{Al}$	0,42
Reduction factor $r_{Cu}$	0,4
Reduction factor $r_{V2A}$	0,72
Nominal voltage $U_o$	8 V
Switching frequency $f$	0 ... 500 Hz
Hysteresis $H$	1 ... 15 typ. 5 %
Reverse polarity protection	Protected against reverse polarity
Short circuit protection	yes
Current consumption	
Measuring plate not detected	$\geq 3$ mA
Measuring plate detected	$\leq 1$ mA
Indication of the switching state	ring LED, yellow
EMC in accordance with	EN 60947-5-2; NE 21
Standards	DIN EN 60947-5-6 (NAMUR)
Ambient temperature	-25 ... 100 °C (248 ... 373 K)
Storage temperature	-40 ... 100 °C (233 ... 373 K)
Connection type	V1-connector
Core cross-section	-
Housing material	high grade steel
Sensing face	PBT
Protection degree	IP67
Use in the hazardous area	see instruction manuals
Category	1G; 2G; 1D

Connection\_type:

N / N0



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2003-08-28

## Instruction

Device category 1G  
Directive conformity  
Standard conformity

## Manual electrical apparatus for hazardous areas

CE symbol

BR 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

CE 0102

## Ex-identification

 II 1G EEx ia IIC T6

## EC-Type Examination Certificate

PTB 00 ATEX 2048 X

Assigned type

NCN8-18GM...-N0...

Effective internal capacitance  $C_i$  $\leq 95 \text{ nF}$ ; a cable length of 10 m is considered.Effective internal inductance  $L_i$  $\leq 100 \mu\text{H}$ ; a cable length of 10 m is considered.

## General

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

The EU prototype test certificate must be observed. The special conditions must be adhered to!

The temperature ranges, according to temperature class, are given in the EU prototype test 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.

## Highest permissible ambient temperature

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" and have electrical isolation between the power supply and signal circuits.

The sensor must be protected from strong electromagnetic fields.

## Installation, Commissioning

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

## Maintenance

The sensor must be protected from mechanical damage.

## Special conditions

Protection from mechanical danger

Electrostatic charging

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

Instruction	Manual electrical apparatus for hazardous areas
<b>Device category 2G</b>	for use in hazardous areas with gas, vapour and mist 94/9/EG
Directive conformity	EN 50014:1997, EN 50020:1994
Standard conformity	Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions
CE symbol	 b102
Ex-identification	 II 1G EEx ia IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 2048 X
Assigned type	NCN8-18GM...-N0...
Effective internal capacitance $C_i$	$\leq 95 \text{ nF}$ ; a cable length of 10 m is considered.
Effective internal inductance $L_i$	$\leq 100 \mu\text{H}$ ; a cable length of 10 m is considered.
General	The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The EU prototype test certificate must be observed. The special conditions must be adhered to!
Highest permissible ambient temperature	The temperature ranges, according to temperature class, are given in the EU prototype test certificate.
Installation, Commissioning	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 sensor must be protected from strong electromagnetic fields.
Maintenance	No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.
Special conditions	
Protection from mechanical danger	The sensor must be protected from mechanical damage.
Electrostatic charging	Electrostatic charges must be avoided on the mechanical housing components. Dangerous electrostatic charges on the mechanical housing components can be avoided by incorporating these in the equipotential bonding.

## Instruction

## Manual electrical apparatus for hazardous areas

## Device category 1D

zur Verwendung in explosionsgefährdeten Bereichen mit brennbarem Staub

94/9/EG

Directive conformity  
Standard conformity

IEC 61241-11:2002: draft; prEN61241-0:2002

Züschutzart Eigensicherheit "iD"

Use is restricted to the following stated conditions

CE symbol

CE 0102

## Ex-identification

Ex II 1D Ex iaD 20 T 108 °C

## EC-Type Examination Certificate

ZELM 03 ATEX 0128 X

## Assigned type

NCN8-18GM...-N0...

Effective internal capacitance  $C_i$  $\leq 95 \text{ nF}$ ; a cable length of 10 m is considered.Effective internal inductance  $L_i$  $\leq 100 \mu\text{H}$ ; a cable length of 10 m is considered.

## General

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

The EU prototype test certificate must be observed.

The special conditions must be adhered to!

## Maximum housing surface temperature

Die maximale Gehäuseoberflächentemperatur ist der EG-Baumusterprüfung zu entnehmen.

## Installation, Commissioning

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 at least the requirements of category ia IIB or iaD. Because of the possibility of the danger of ignition, which can arise due to faults and/or transient currents in the equipotential bonding system, galvanic isolation in the power supply and signal circuits is preferable. Associated apparatus without electrical isolation must only be used if the appropriate requirements of IEC 60079-14 are met.

Der eigensichere Stromkreis muss gegen Blitzbeeinflussung geschützt sein.

When used in the isolating wall between Zone 20 and Zone 21 or Zone 21 and Zone 22 the sensor must not be exposed to any mechanical danger and must be sealed in such a way, that the protective function of the isolating wall is not impaired. The applicable directives and standards must be observed.

## Maintenance

No changes can be made to apparatus, which are operated in hazardous areas.

Repairs to these apparatus are not possible.

## [Fett]Special conditions

## Electrostatic charging

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