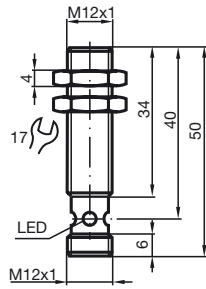


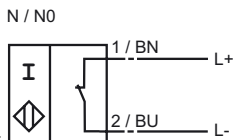
Comfort series
 2 mm embeddable
 Usable up to SIL 2 acc. to
 IEC 61508



CE 0102

Switching element function	NAMUR NC
Rated operating distance s_n	2 mm
Installation	embeddable
Assured operating distance s_a	0 ... 1,62 mm
Reduction factor r_{AI}	0,23
Reduction factor r_{Cu}	0,21
Reduction factor r_{V2A}	0,7
Nominal voltage U_o	8 V
Operating voltage U_B	5 ... 25 V
Switching frequency f	0 ... 2000 Hz
Hysteresis H	1 ... 10 typ. 3 %
Reverse polarity protection	Protected against reverse polarity
Short circuit protection	yes
Current consumption	
Measuring plate not detected	≥ 3 mA
Measuring plate detected	≤ 1 mA
Indication of the switching state	Multihole-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
Housing material	high grade steel
Sensing face	PBT
Protection degree	IP67
Use in the hazardous area	see instruction manuals
Category	1G; 2G

Connection_type:



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2003-12-18

Instruction

Manual electrical apparatus for hazardous areas

Device category 1G
 Directive conformity
 Standard conformity

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 symbol

CE 0102

Ex-identification

II 1G EEx ia IIC T6

EC-Type Examination Certificate
 Assigned type

PTB 00 ATEX 2048 X
 NCB2-12GM...-N0...

Effective internal capacitance C_i
 Effective internal inductance L_i

≤ 90 nF ; a cable length of 10 m is considered.
 ≤ 100 μ 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.

Highest permissible ambient temperature

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.

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 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.

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 not be mechanically damaged.

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

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 2G	for use in hazardous areas with gas, vapour and mist
Directive conformity	94/9/EG
Standard conformity	EN 50014:1997, EN 50020:1994 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions
CE symbol	CE 0102
Ex-identification	II 1G EEx ia IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 2048 X
Assigned type	NCB2-12GM...-N0...
Effective internal capacitance C_i	≤ 90 nF ; a cable length of 10 m is considered.
Effective internal inductance L_i	≤ 100 μ 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.
Maintenance	No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible.
[Fett]Special conditions	
Protection from mechanical danger	The sensor must not be mechanically damaged. When used in the temperature range below -20°C the sensor should be protected from knocks by the provision of an additional housing.
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.