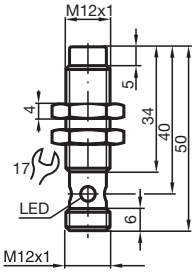
Inductive proximity switches

NCN4-12GM35-N0-V1

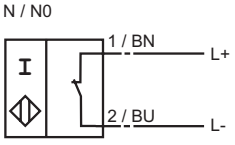
Comfort series
4 mm not embeddable
Usable up to SIL 2 acc. to IEC 61508



CE 0102

Switching element function	NAMUR NC
Rated operating distance s_n	4 mm
Installation	not embeddable
Assured operating distance s_a	0 ... 3,24 mm
Reduction factor r_{Al}	0,37
Reduction factor r_{Cu}	0,36
Reduction factor r_{V2A}	0,74
Nominal voltage U_o	8 V
Switching frequency f	0 ... 1800 Hz
Hysteresis H	1 ... 10 typ. 5 %
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	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:



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2003-09-10

Instruction	**Manual electrical apparatus for hazardous areas**
Device category 1G	BR for use in hazardous areas with gas, vapour and mist
Directive conformity	94/9/EG
Standard conformity	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	Ex II 1G EEx ia IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 2048 X
Assigned type	NCN4-12GM...-N0...
Effective internal capacitance C_i	≤ 95 nF ; a cable length of 10 m is considered.
Effective internal inductance L_i	≤ 100 µH ; 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. 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, Comissioning	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	Ex II 1G EEx ia IIC T6
EC-Type Examination Certificate	PTB 00 ATEX 2048 X
Assigned type	NCN4-12GM...-N0...
Effective internal capacitance C_i	≤ 95 nF ; a cable length of 10 m is considered.
Effective internal inductance L_i	≤ 100 µH ; 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, Comissioning	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.
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 1D	zur Verwendung in explosionsgefährdeten Bereichen mit brennbarem Staub
Directive conformity	94/9/EG
Standard conformity	IEC 61241-11:2002: draft; prEN61241-0:2002 Zünschutzart 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 The Ex-significant identification is on the enclosed adhesive label
EC-Type Examination Certificate	ZELM 03 ATEX 0128 X
Assigned type	NCN4-12GM...-N0...
Effective internal capacitance C_i	≤ 95 nF ; a cable length of 10 m is considered.
Effective internal inductance L_i	≤ 100 µH ; 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-Baumusterprüfbescheinigung zu entnehmen.
Installation, Comissioning	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 und 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. 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!
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.