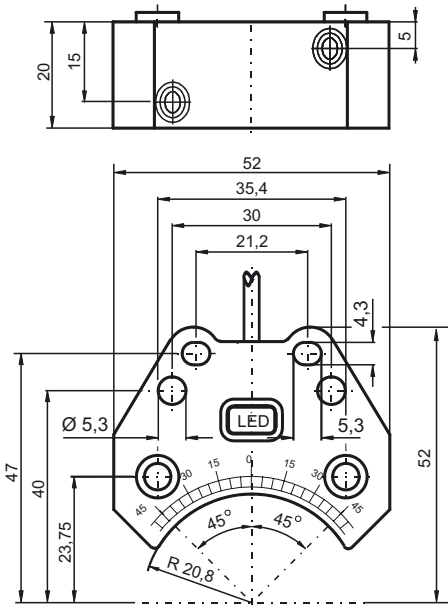


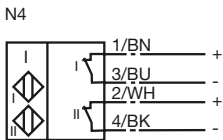
For installation in housing
Direct mounting on stand-
ard actuators
Satisfies machinery direc-
tive
EU prototype test certi-
cate TÜV99 ATEX 1479X



CE 0102

General specifications	
Switching element function	DC Dual Break function
Rated operating distance s_n	3 mm
Installation	embeddable
Output polarity	NAMUR
Assured operating distance s_a	0 ... 2.43 mm
Reduction factor r_{AI}	0.5
Reduction factor r_{Cu}	0.4
Reduction factor r_{V2A}	1
Reduction factor r_{SI37}	1.1
Nominal ratings	
Nominal voltage U_o	8 V
Switching frequency f	0 ... 1500 Hz
Hysteresis H	typ. 5 %
Reverse polarity protection	protected against reverse polarity
Short-circuit protection	yes
Design data	
Current consumption	
Measuring plate not detected	≥ 3 mA
Measuring plate detected	≤ 1 mA
Indication of the switching state	LED, yellow
Standard conformity	
EMC in accordance with	IEC / EN 60947-5-2:2004; NE 21
Standards	DIN EN 60947-5-6 (NAMUR)
Ambient conditions	
Ambient temperature	-25 ... 100 °C (248 ... 373 K)
Storage temperature	-40 ... 100 °C (233 ... 373 K)
Mechanical specifications	
Connection type	180 mm, PVC cable
Core cross-section	0.14 mm ²
Housing material	PBT
Sensing face	PBT
Protection degree	IP67
Note	Installation in housing
General information	
Use in the hazardous area	see instruction manuals
Category	2G; 3G; 3D

Connection type:



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

Special conditions

Protection from mechanical danger

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

Ex II 2G EEx ia IIC T6

TÜV 99 ATEX 1479 X

NCN3-F25.-N4...

≤ 100 nF ; a cable length of 10 m is considered. The value is applicable for the sensor circuit.

≤ 100 μ H ; a cable length of 10 m is considered. The value is applicable for the sensor circuit.

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!

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.

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.

ATEX 3D

Instruction

Device category 3D

Directive conformity

Standard conformity

CE symbol

Ex-identification

General

Installation, Commissioning

Maintenance

Special conditions

Minimum series resistance R_V

Maximum operating voltage U_{Bmax}

Maximum heating (Temperature rise)

at $U_{Bmax}=9\text{ V}$, $R_V=562\ \Omega$

using an amplifier in accordance with EN 60947-5-6

Protection from mechanical danger

Protection of the connection cable

Manual electrical apparatus for hazardous areas

for use in hazardous areas with non-conducting combustible dust

94/9/EG

EN 50281-1-1

Protection via housing

Use is restricted to the following stated conditions

CE 0102

Ex II 3D IP67 T 111 °C X

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

The data stated in the data sheet are restricted by this operating instruction! The special conditions must be adhered to!

Laws and/or regulations and standards governing the use or intended usage goal must be observed. Each sensor circuit can be operated with the stated maximum values.

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

A minimum series resistance R_V is to be provided between the power supply voltage and the proximity switch in accordance with the following list. This can also be assured by using a switch amplifier.

The maximum permissible operating voltage U_{Bmax} must be restricted to the values given in the following list. Tolerances are not permitted.

Values can be obtained from the following list, depending on the max. operating voltage U_b max and the minimum series resistance R_V .

11 °C

11 °C

The sensor must not be mechanically damaged.

The connection cable must be prevented from being subjected to tension and torsional loading.

ATEX 3G (nL)

Instruction

Device category 3G (nL)

Directive conformity

Standard conformity

CE symbol

Ex-identification

Effective internal capacitance C_i

Effective internal inductance L_i

General

Installation, Commissioning

Maintenance

[Fett]Special conditions

Maximum permissible ambient temperature T_{Umax} at $U_i = 20 V$

for $P_i=34 mW$, $I_i=25 mA$, T6

for $P_i=34 mW$, $I_i=25 mA$, T5

for $P_i=34 mW$, $I_i=25 mA$, T4-T1

for $P_i=64 mW$, $I_i=25 mA$, T6

for $P_i=64 mW$, $I_i=25 mA$, T5

for $P_i=64 mW$, $I_i=25 mA$, T4-T1

for $P_i=169 mW$, $I_i=52 mA$, T6

for $P_i=169 mW$, $I_i=52 mA$, T5

for $P_i=169 mW$, $I_i=52 mA$, T4-T1

Protection from mechanical danger

Manual electrical apparatus for hazardous areas

for use in hazardous areas with gas, vapour and mist

94/9/EG

EN 60079-15:2003 Ignition protection category "n"

Use is restricted to the following stated conditions

CE 0102

II 3G EEx nL IIC T6 X

$\leq 100 nF$; A cable length of 10 m is considered.

The value is applicable for the sensor circuit.

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

The value is applicable for the sensor circuit.

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The data stated in the data sheet are restricted by this operating instruction! The special conditions must be observed!

Laws and/or regulations and standards governing the use or intended usage goal must be observed. The sensor must only be operated with an energy-limited circuit, which satisfies the requirements of IEC 60079-15. The explosion group complies with the connected, supplying, power limiting circuit.

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

Each sensor circuit can be operated with the stated maximum values.

74 °C

89 °C

100 °C

69 °C

84 °C

100 °C

51 °C

66 °C

91 °C

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.