



### Model Number

NCB10-30GM40-N0-10M-OG

### Features

- 10 mm flush
- Shielded PUR cable for oil and gas sector

### Accessories

BF 30

Mounting flange, 30 mm

## Technical Data

### General specifications

Switching function		Normally closed (NC)
Output type		NAMUR
Rated operating distance	$s_n$	10 mm
Installation		flush
Assured operating distance	$s_a$	0 ... 8.1 mm
Actual operating distance	$s_r$	9 ... 11 mm typ.
Reduction factor $r_{AI}$		0.32
Reduction factor $r_{Cu}$		0.32
Reduction factor $r_{304}$		0.72
Output type		3-wire

### Nominal ratings

Nominal voltage	$U_o$	8 V
Switching frequency	$f$	0 ... 650 Hz
Hysteresis	$H$	1 ... 10 typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		yes
Suitable for 2:1 technology		yes, Reverse polarity protection diode not required
Current consumption		
Measuring plate not detected		$\geq 3$ mA
Measuring plate detected		$\leq 1$ mA
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	1870 a
Mission Time ( $T_M$ )	20 a
Diagnostic Coverage (DC)	0 %

### Ambient conditions

Ambient temperature	-25 ... 80 °C (-13 ... 176 °F)
Storage temperature	-40 ... 80 °C (-40 ... 176 °F)

### Mechanical specifications

Connection type	cable PUR (halogen-free), 10 m, screened, Oil resistant, Flame-retardant as per IEC 60332-1
Core cross-section	2x 0.5 mm <sup>2</sup>
Housing material	Stainless steel 1.4305 / AISI 303
Sensing face	PBT
Degree of protection	IP66 / IP67
Cable	
Bending radius	> 7.5 x cable diameter
Note	The shield is not connected to the sensor.

### General information

Use in the hazardous area	see instruction manuals
Category	1G; 2G; 3G; 1D

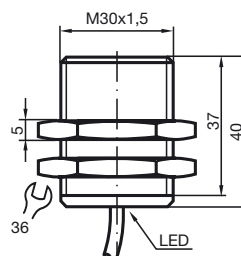
### Compliance with standards and directives

Standard conformity	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
Standards	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012

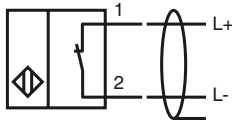
### Approvals and certificates

UL approval	
Ordinary Location	E87056
Hazardous Location	E501628
Control drawing	116-0452
CSA approval	cCSAus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated $\leq 36$ V

## Dimensions



Electrical Connection



Equipment protection level Ga

CE marking	CE 0102	
ATEX marking	Ex II 1G Ex ia IIC T6...T1 Ga The Ex-related marking can also be printed on the enclosed label.	
Standards	EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions	
Appropriate type	NCB10-30GM...-N0...	
Effective internal capacitance $C_i$	≤ 105 nF ; a cable length of 10 m is considered.	
Effective internal inductance $L_i$	≤ 100 μH ; a cable length of 10 m is considered.	
Ambient temperature	Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate. <b>Note:</b> Use the temperature table for category 1 !!! The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1.	

Equipment protection level Gb

CE marking	CE 0102	
ATEX marking	Ex II 1G Ex ia IIC T6...T1 Ga The Ex-significant identification is on the enclosed adhesive label	
Standards	EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions	
Appropriate type	NCB10-30GM...-N0...	
Effective internal capacitance $C_i$	≤ 105 nF ; a cable length of 10 m is considered.	
Effective internal inductance $L_i$	≤ 100 μH ; a cable length of 10 m is considered.	
Maximum permissible ambient temperature $T_{amb}$	Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate.	

Equipment protection level Gc (ic)

Certificate	PF 13 CERT 2895 X	
CE marking	CE	
ATEX marking	Ex II 3G Ex ic IIC T6...T1 Gc The Ex-significant identification is on the enclosed adhesive label	
Standards	EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection category "ic" Use is restricted to the following stated conditions	
Effective internal capacitance $C_i$	≤ 105 nF ; a cable length of 10 m is considered.	
Effective internal inductance $L_i$	≤ 100 μH ; A cable length of 10 m is considered.	

Special conditions

for $P_i=34$ mW, $I_i=25$ mA, T6	55 °C (131 °F)
for $P_i=34$ mW, $I_i=25$ mA, T5	55 °C (131 °F)
for $P_i=34$ mW, $I_i=25$ mA, T4-T1	55 °C (131 °F)
for $P_i=64$ mW, $I_i=25$ mA, T6	55 °C (131 °F)
for $P_i=64$ mW, $I_i=25$ mA, T5	55 °C (131 °F)
for $P_i=64$ mW, $I_i=25$ mA, T4-T1	55 °C (131 °F)
for $P_i=169$ mW, $I_i=52$ mA, T6	52 °C (125.6 °F)
for $P_i=169$ mW, $I_i=52$ mA, T5	52 °C (125.6 °F)
for $P_i=169$ mW, $I_i=52$ mA, T4-T1	52 °C (125.6 °F)
for $P_i=242$ mW, $I_i=76$ mA, T6	44 °C (111.2 °F)
for $P_i=242$ mW, $I_i=76$ mA, T5	44 °C (111.2 °F)
for $P_i=242$ mW, $I_i=76$ mA, T4-T1	44 °C (111.2 °F)

Equipment protection level Da

CE marking	CE 0102	
ATEX marking	Ex II 1D Ex ia IIIC T135°C Da The Ex-related marking can also be printed on the enclosed label.	
Standards	EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions	
Appropriate type	NCB10-30GM...-N0...	
Effective internal capacitance $C_i$	≤ 105 nF ; a cable length of 10 m is considered.	
Effective internal inductance $L_i$	≤ 100 μH ; a cable length of 10 m is considered.	
Maximum permissible ambient temperature $T_{amb}$	Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the surface temperature, and the effective internal reactance values can be found on the EC-type-examination certificate. <b>The maximum permissible ambient temperature of the data sheet must be noted, in addition, the lower of the two values must be maintained.</b>	

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