



Model Number

NCB40-FP-N0-P1-V1

Features

- 40 mm flush

Accessories

V1-G

Female connector, M12, 4-pin, field attachable

V1-W

Female connector, M12, 4-pin, field attachable

V1-G-N-2M-PUR

Female cordset, M12, 2-pin, NAMUR, PUR cable

V1-W-N-2M-PUR

Female cordset, M12, 2-pin, NAMUR, PUR cable

Technical Data

General specifications

Switching function	Normally closed (NC)
Output type	NAMUR
Rated operating distance	s_n 40 mm
Installation	flush
Assured operating distance	s_a 0 ... 32 mm
Actual operating distance	s_r 36 ... 44 mm typ. 40 mm
Reduction factor r_{AI}	0.35
Reduction factor r_{CU}	0.35
Reduction factor r_{304}	0.8
Output type	2-wire

Nominal ratings

Installation conditions	
F	100 mm
Nominal voltage	U_o 8.2 V (R_i approx. 1 k Ω)
Switching frequency	f 0 ... 80 Hz
Hysteresis	H 0 ... 5 typ. 3 %
Reverse polarity protection	reverse polarity protected
Short-circuit protection	yes
Current consumption	
Measuring plate not detected	≥ 3 mA
Measuring plate detected	≤ 1 mA
Time delay before availability	t_v ≤ 20 ms
Switching state indicator	LED, yellow

Functional safety related parameters

MTTF _d	2368 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-25 ... 100 °C (-13 ... 212 °F)
Storage temperature	-40 ... 100 °C (-40 ... 212 °F)

Mechanical specifications

Connection type	Connector plug M12 x 1, 4-pin
Housing material	PBT
Sensing face	PBT
Housing base	PBT
Degree of protection	IP67

General information

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

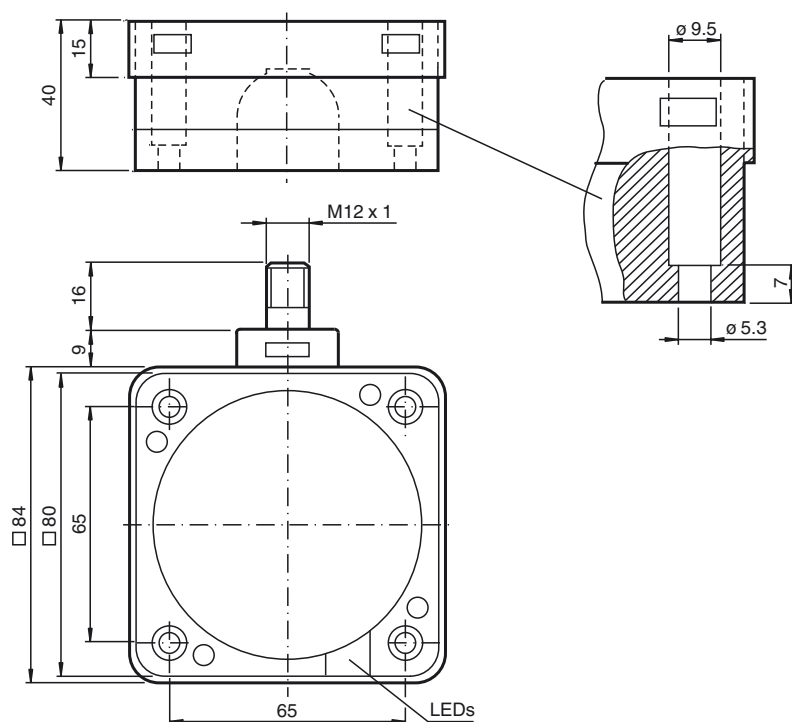
Compliance with standards and directives

Standard conformity	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
Electromagnetic compatibility	NE 21:2007
Standards	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012

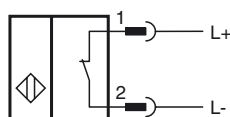
Approvals and certificates

EAC conformity	TR CU 012/2011
FM approval	
Control drawing	116-0165
UL approval	
Ordinary Location	E87056
Hazardous Location	E501628
Control drawing	116-0451
CSA approval	cCSAus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated ≤ 36 V

Dimensions



Electrical Connection



Wire colors in accordance with EN 60947-5-6

1	BN	(brown)
2	BU	(blue)

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	NCB40-FP-N0..	
Effective internal capacitance C_i	≤ 220 nF ; a cable length of 10 m is considered.	
Effective internal inductance L_i	≤ 360 μ H ; a cable length of 10 m is considered.	
Highest permissible 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 EU-type examination certificate. Note: 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.	
Special conditions		

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Equipment protection level Gb

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	NCB40-FP-N0..	
Effective internal capacitance	C_i	$\leq 220 \text{ nF}$; a cable length of 10 m is considered.
Effective internal inductance	L_i	$\leq 360 \text{ }\mu\text{H}$; 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 EU-type examination certificate.	

Special conditions**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	NCB40-FP-N0..	
Effective internal capacitance	C_i	$\leq 220 \text{ nF}$; a cable length of 10 m is considered.
Effective internal inductance	L_i	$\leq 360 \text{ }\mu\text{H}$; a cable length of 10 m is considered.

Special conditions