

# Inductive sensor

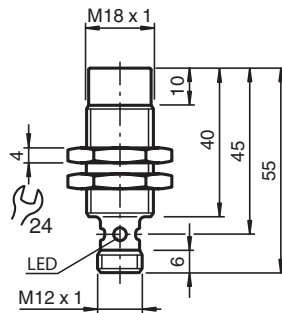
## NCN8-18GM40-N0-V1



- 8 mm non-flush
- Stainless steel housing
- Usable up to SIL 2 acc. to IEC 61508



## Dimensions



## Technical Data

### General specifications

Switching function		Normally closed (NC)
Output type		NAMUR
Rated operating distance	$s_n$	8 mm
Installation		non-flush
Assured operating distance	$s_a$	0 ... 6.48 mm
Actual operating distance	$s_r$	7.2 ... 8.8 mm typ. 8 mm
Reduction factor $r_{AI}$		0.42
Reduction factor $r_{Cu}$		0.4
Reduction factor $r_{304}$		0.72
Output type		2-wire

### Nominal ratings

Nominal voltage	$U_o$	8.2 V ( $R_i$ approx. 1 k $\Omega$ )
Switching frequency	$f$	0 ... 300 Hz
Hysteresis	$H$	1 ... 15 typ. 5 %
Reverse polarity protection		reverse polarity protected

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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**PF** PEPPERL+FUCHS

## Technical Data

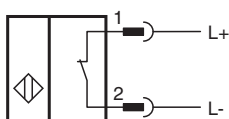
Short-circuit protection		yes
Current consumption		
Measuring plate not detected		min. 3 mA
Measuring plate detected		≤ 1 mA
Switching state indicator		Multihole-LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		1914 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
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
<b>Approvals and certificates</b>		
EAC conformity		TR CU 012/2011
FM approval		
Control drawing		116-0165
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 ≤36 V
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 100 °C (-13 ... 212 °F)
Storage temperature		-40 ... 100 °C (-40 ... 212 °F)
<b>Mechanical specifications</b>		
Connection type		Connector plug M12 x 1 , 4-pin
Core cross-section		-
Housing material		Stainless steel 1.4305 / AISI 303
Sensing face		PBT
Degree of protection		IP67
<b>Equipment protection level Ga</b>		
CE marking		[*PD-Z02585A*]
ATEX marking		⊕ 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		NCN8-18GM...-N0...
Effective internal capacitance	C <sub>i</sub>	max. 95 nF ; a cable length of 10 m is considered.
Effective internal inductance	L <sub>i</sub>	max. 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.
<b>Equipment protection level Gb</b>		
CE marking		[*PD-Z02585A*]
ATEX marking		⊕ 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

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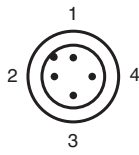
## Technical Data

Appropriate type		NCN8-18GM...-N0...
Effective internal capacitance	$C_i$	max. 95 nF ; a cable length of 10 m is considered.
Effective internal inductance	$L_i$	max. 100 $\mu$ 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 EC-type examination certificate.
<b>Equipment protection level Gc (ic)</b>		
Certificate		PF 13 CERT 2895 X
CE marking		[*PD-Z02586A*]
ATEX marking		⊕ 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	$C_i$	max. 95 nF ; a cable length of 10 m is considered.
Effective internal inductance	$L_i$	max. 100 $\mu$ H ; A cable length of 10 m is considered.
<b>Special conditions</b>		
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)
<b>Equipment protection level Da</b>		
CE marking		[*PD-Z02585A*]
ATEX marking		⊕ 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		NCN8-18GM...-N0...
Effective internal capacitance	$C_i$	max. 95 nF ; a cable length of 10 m is considered.
Effective internal inductance	$L_i$	max. 100 $\mu$ 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 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>
<b>General information</b>		
Use in the hazardous area		see instruction manuals
Category		1G; 2G; 1D

## Connection



## Connection Assignment



Wire colors in accordance with EN 60947-5-6

1	BN	(brown)
2	BU	(blue)

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