

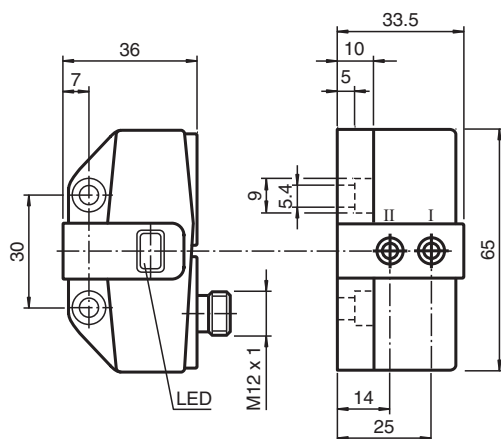
Inductive sensor NCN3-F31-B3B-V1

- Direct mounting on standard actuators
- A/B node with extended addressing possibility for up to 62 nodes
- Mode of operation, programmable
- Degree of protection IP67
- Communication monitoring, turn-off

Valve positioner and valve control module



Dimensions



Technical Data

General specifications

Switching function		Normally open/closed (NO/NC) programmable
Output type		AS-Interface
Rated operating distance	s_n	3 mm
Installation		flush mountable
Assured operating distance	s_a	0 ... 2.43 mm
Reduction factor r_{AI}		0.5
Reduction factor r_{Cu}		0.45
Reduction factor r_{304}		1
Reduction factor r_{St37}		1.2
Node type		A/B node
AS-Interface specification		V3.0
Required gateway specification		$\geq V2.1$

Nominal ratings

Operating voltage	U_B	26.5 ... 31.9 V via AS-i bus system
Switching frequency	f	0 ... 100 Hz
No-load supply current	I_0	≤ 35 mA

Release date: 2022-05-23 Date of issue: 2022-05-23 Filename: 226324_eng.pdf

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

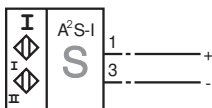
 PEPPERL+FUCHS

Technical Data

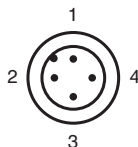
Functional safety related parameters		
MTTF _d		842 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
LED PWR		AS-Interface voltage; LED green
LED IN		switching state (input); LED yellow
Electrical specifications		
Rated operating voltage	U _e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I _e	100 mA
Compliance with standards and directives		
Standard conformity		
Electromagnetic compatibility		EN 50295:1999-10
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		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Mechanical specifications		
Connection (system side)		4-pin, M12 x 1 connector
Connector housing		metal
Housing material		PBT
Degree of protection		IP67
Tightening torque, fastening screws		4 Nm ... 5 Nm

Connection

B3B-V1



Connection Assignment



Additional Information

Programming Instructions

Address	00 preset, alterable via Busmaster or programming units
IO-code	D
ID-code	A
ID1-code	7
ID2-code	E

Data bit

Bit	Function
D0	not used
D1	not used
D2	switch output sensor 1 ¹⁾ (0=damped; 1=undamped)
D3	switch output sensor 2 ¹⁾ (0=damped; 1=undamped)







Parameter bit

Bit	Function
P0	Watchdog (0=inactive; 1=active)
P1	switching element function sensor II ²⁾ 0=NO; 1= NC)
P2	switching element function sensor I ²⁾ 0=NO; 1= NC)
P3	not used

1) Applies to NC function (P1/P2=1; preset), with NO function (P1/P2=0) reversed characteristics

2) Default setting: NC

Accessories

	BT65A	Activator for F31 series
	BT65X	Activator for F31 series
	BT65B	Activator for F31 series
	BT115B	Activator for F31 series
	V1-W-2M-PUR	Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey
	V1-G-2M-PUR	Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey