

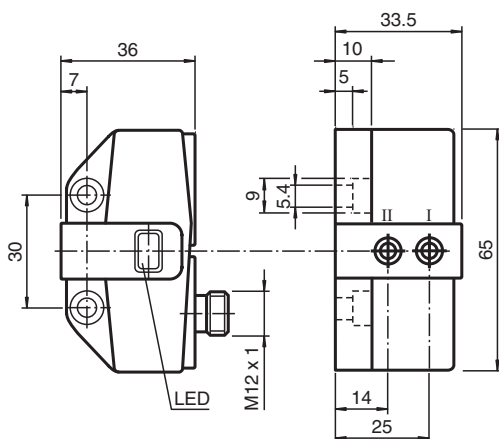
Inductive sensor NCN3-F31-B3B-V1

- 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_{Al}		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

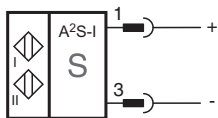
Operating voltage	U_B	26.5 ... 31.9 V via AS-i bus system
Switching frequency	f	0 ... 100 Hz
No-load supply current	I_0	≤ 35 mA

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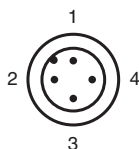
Technical Data

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 IEC 60947-5-2
Approvals and certificates		
UL approval		cULus Listed Load Type: General Purpose Circuitry: Class 2 Power Source Enclosure Type Rating: Type 1 Supply/Switching Voltage: 31.9 V DC
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		≤ 5 Nm
Dimensions		
Height		33.5 mm
Width		65 mm
Length		36 mm

Connection



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