



Model Number

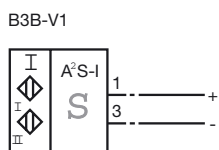
NCN3-F31-B3B-V1

Valve positioner and valve control module

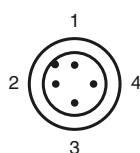
Features

- Direct mounting on standard actuators
- Nominal sensing range 3 mm by V2A target
- A/B slave with extended addressing possibility for up to 62 slaves
- Mode of operation, programmable
- Protection degree IP67
- Communication monitoring, turn-off

Connection



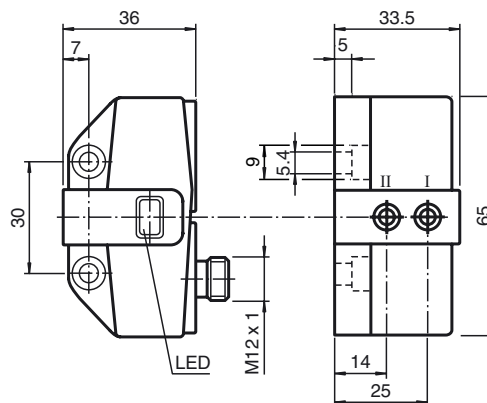
Pinout



Accessories

- BT65A**
Activator for F31 series
- BT65X**
Activator for F31 series
- BT115A**
Activator for F31 series
- BT115X**
Activator for F31 series
- BT65B**
Activator for F31 series
- BT115B**
Activator for F31 series
- V1-W-2M-PUR**
Cable socket, M12, 4-pin, PUR cable
- V1-G-2M-PUR**
Cable socket, M12, 4-pin, PUR cable
- V1-G**
4-pin, M12 female field-attachable connector

Dimensions



Technical Data

General specifications

Switching element function		programmable
Rated operating distance	s_n	3 mm
Installation		embeddable mountable
Output polarity		AS-Interface
Assured operating distance	s_a	0 ... 2.43 mm
Reduction factor r_{AI}		0.5
Reduction factor r_{Cu}		0.45
Reduction factor r_{303}		1
Reduction factor r_{St37}		1.2
Slave type		A/B slave
AS-Interface specification		V3.0
Required master 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

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 operational voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operational current	I_e	100 mA

Ambient conditions

Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
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Mechanical specifications

Connection (system side)		connector M12 x 1, 4-pin
Protection degree		IP67
Material		
Housing		PBT

Compliance with standards and directives

Standard conformity		
Electromagnetic compatibility		EN 50295:1999-10

Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007
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Approvals and certificates

UL approval		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
CCC approval		Products with a maximum operating voltage of ≤ 36 V do not bear a CCC marking because they do not require approval.

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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 (P2/P3=1; preset), with NO function (P2/P3=0) reversed characteristics

²⁾ Default setting: NC

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