



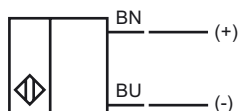
### Model Number

NBB6-F-B3B

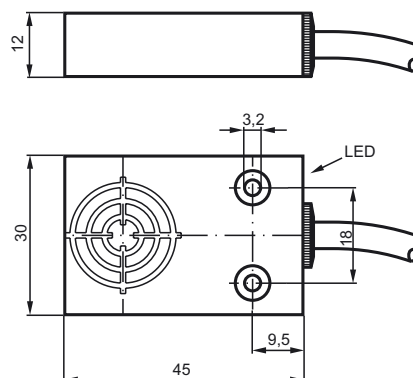
### Features

- Basic series
- 6 mm flush
- NO/NC selectable
- Protection degree IP67
- Oscillator monitoring

### Connection



### Dimensions



### Technical Data

#### General specifications

Switching element function		NO/NC programmable
Rated operating distance	$s_n$	6 mm
Installation		flush
Output polarity		AS-Interface
Assured operating distance	$s_a$	0 ... 4.86 mm
Reduction factor $r_{Al}$		0.28
Reduction factor $r_{Cu}$		0.25
Reduction factor $r_{304}$		0.75
Slave type		A/B slave
AS-Interface specification		V3.0
Required master specification		≥ V2.1

#### Nominal ratings

Operating voltage	$U_B$	26.5 ... 31.9 V via AS-i bus system
Switching frequency	$f$	≥ 500 (P3=0), ≥ 100 (P3=1)
Hysteresis	$H$	typ. 5 %
Operating current	$I_L$	20 mA

#### Functional safety related parameters

MTTF <sub>d</sub>		532 a
Mission Time ( $T_M$ )		20 a
Diagnostic Coverage (DC)		0 %

#### Indicators/operating means

LED POWER	AS-Interface voltage; LED green
LED IN	switching state (input); LED yellow
LED OUT	Dual LED yellow/red yellow: switching state red: error mode

#### Electrical specifications

Rated operational voltage	$U_e$	26.5 ... 31.6 V from AS-Interface
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#### Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

#### Mechanical specifications

Connection type	cable PVC, 2 m
Core cross-section	0.34 mm <sup>2</sup>
Housing material	PBT
Protection degree	IP67
Mass	90 g

#### Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007 EN 50295:1999

#### 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.

**Programming instructions**

Address 00 preset, alterable via  
Busmaster or  
programming units  
IO-code 0  
ID-code A  
ID1-code 7  
ID2-code E

**Data bit**

Bit	Function
D0	switching state
D1	not used
D2	oscillator monitoring
D3	not used

**Parameterbit**

Bit	Function
P0	not used
P1	switching element function NO* / NC
P2	not used
P3	Pulse extension P3 = 1 : 10 ms* P3 = 0 : Without

\* Standard setting

**Fault mode**

- No communication  
Red LED On  
Green LED On
- Address 0 set  
Red LED On  
Green LED flashes