

CE

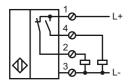
Model Number

NBB25-FPS-A2

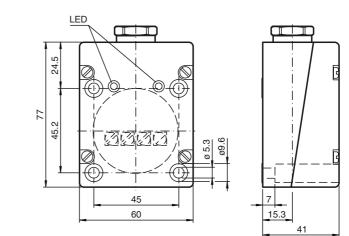
Features

- 25 mm embeddable
- 4-wire DC •

Connection



Dimensions



Technical Data

Installation Output polarity Assured operating distance Actuating element Reduction factor r _{Al} Reduction factor r _{Cu} Reduction factor r _{Brass} Nominal ratings Installation conditions B C F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Ud Repeat accuracy Operating current IL Off-state current Inductive display Indication of the switching state Functional safety related parameters	PNP NO/NC 25 mm embeddable DC 0 15.75 mm structural steel, e. g. 1.0037, SR235JR (formerly St37-2) 75 mm x 75 mm x 1 mm 0.5 0.4 0.8 0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes yes
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	25 mm embeddable DC 0 15.75 mm structural steel, e. g. 1.0037, SR235JR (formerly St37-2) 75 mm x 75 mm x 1 mm 0.5 0.4 0.4 0.8 0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes yes yes yes
Installation Installation Output polarity Assured operating distance s_a Actuating element Reduction factor r_{Al} Reduction factor r_{303} Reduction factor r_{Brass} Nominal ratings Installation conditions B C F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Voltage drop Ud Repeat accuracy Operating current Ir No-load supply current Io Operating voltage display Indication of the switching state Functional safety related parameters	embeddable DC 0 15.75 mm structural steel, e. g. 1.0037, SR235JR (formerly St37-2) 75 mm x 75 mm x 1 mm 0.5 0.4 0.8 0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes yes
Output polarity Assured operating distance sa Actuating element sa Reduction factor r _{Al} sa Reduction factor r _{Cu} sa Reduction factor r _{Gu} sa Reduction factor r _{Su3} sa Reduction factor r _{Brass} sa Nominal ratings sa Installation conditions sa B C F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Ud Voltage drop Ud sepeat accuracy Operating current Ir No-load supply current Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T_M)	DC 0 15.75 mm structural steel, e. g. 1.0037, SR235JR (formerly St37-2) 75 mm x 75 mm x 1 mm 0.5 0.4 0.8 0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 20 mA LED, green
Assured operating distance sa Actuating element Actuating element Reduction factor r _{AI} Reduction factor r _{Cu} Reduction factor r ₃₀₃ Reduction factor r ₃₀₃ Reduction factor r _{Brass} Nominal ratings Installation conditions B C F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Ud Repeat accuracy Poperating current Voltage drop Ud Repeat accuracy Poperating voltage display Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	0 15.75 mm structural steel, e. g. 1.0037, SR235JR (formerly St37-2) 75 mm x 75 mm x 1 mm 0.5 0.4 0.8 0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes yes
Actuating element Image: style="text-align: certain system: cer	structural steel, e. g. 1.0037, SR235JR (formerly St37-2) 75 mm x 75 mm x 1 mm 0.5 0.4 0.8 0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes yes
Reduction factor r _{AI} Reduction factor r _{Cu} Reduction factor r ₃₀₃ Reduction factor r ₃₀₃ Reduction factor r _{Brass} Nominal ratings Installation conditions B C F Operating voltage Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Ud Repeat accuracy Operating current No-load supply current No-load supply current No-load supply current No-load supply current No-load supply current No-load supply current Coperating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	75 mm x 75 mm x 1 mm 0.5 0.4 0.3 0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 20 mA LED, green
Reduction factor r _{Gu} Reduction factor r ₃₀₃ Reduction factor r ₃₀₃ Reduction factor r _{Brass} Nominal ratings Installation conditions B C F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Ud Repeat accuracy Operating current Ir No-load supply current Io Operating voltage display Indication of the switching state	0.5 0.4 0.8 0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
Reduction factor r _{Gu} Reduction factor r ₃₀₃ Reduction factor r ₃₀₃ Reduction factor r _{Brass} Nominal ratings Installation conditions B C F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Ud Repeat accuracy Operating current Ir No-load supply current Io Operating oblage display Indication of the switching state	0.4 0.8 0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes yes
Reduction factor r ₃₀₃ Reduction factor r _{Brass} Nominal ratings Installation conditions B C F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Ud Repeat accuracy Operating current Ir No-load supply current Io Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	0.8 0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes yes
Reduction factor r _{Brass} Nominal ratings Installation conditions B C F Operating voltage U _B Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Nurge suppression Ripple Voltage drop U _d Repeat accuracy Operating current Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	0.5 55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes 22.5 V 1 mm 0 200 mA ≤ 2.01 mA ≤ 20 mA LED, green
Nominal ratings Installation conditions B C F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Ud Repeat accuracy Operating current Ir No-load supply current Io Mission Time (T_M) Image Intercet Parameters <td>55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes 10 % $\leq 2.5 V$ 1 mm 0 200 mA $\leq 20 \text{ mA}$ LED, green</td>	55 mm 50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes yes 10 % $\leq 2.5 V$ 1 mm 0 200 mA $\leq 20 \text{ mA}$ LED, green
Installation conditions B C F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Ud Voltage drop Ud Repeat accuracy Ir Operating current Ir Operating outrage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes 2 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 2.0 mA LED, green
B C F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Ud Voltage drop Ud Repeat accuracy Operating current Ir No-load supply current Io Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M) Voltage Voltage Voltage	50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes 2 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 2.0 mA LED, green
$\begin{tabular}{ c c c } \hline C & & & & \\ \hline F & & & \\ \hline Operating voltage & & & U_B \\ \hline Switching frequency & f & & \\ \hline Hysteresis & & H & \\ \hline Reverse polarity protected & & & \\ \hline Short-circuit protection & & & \\ \hline Overload resistance & & & \\ \hline Wire breakage protection & & \\ \hline Inductive overvoltage protection & & \\ \hline Inductive overvoltage protection & & \\ \hline Starge suppression & & \\ \hline Ripple & & & \\ \hline Voltage drop & & U_d & \\ \hline Repeat accuracy & & & \\ \hline Operating current & & I_L & \\ \hline Operating current & & I_r & \\ \hline No-load supply current & & I_0 & \\ \hline Operating voltage display & & \\ \hline Indication of the switching state & \\ \hline Functional safety related parameters & \\ \hline Mission Time (T_M) & & \\ \hline \end{tabular}$	50 mm 210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes 2 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 2.0 mA LED, green
F Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Inductive overvoltage protection Surge suppression Ripple Ud Voltage drop Ud Repeat accuracy Operating current Off-state current Ir No-load supply current Io Operating of the switching state Functional safety related parameters Mission Time (T _M) Image: Suppression	210 mm 10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
Operating voltage UB Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Image: Short-circuit protection Overload resistance Image: Short-circuit protection Inductive overvoltage protection Image: Short-circuit protection Surge suppression Image: Short-circuit protection Surge suppression Ud Repeat accuracy Operating current Operating current Ir No-load supply current Io Operating oblage display Indication of the switching state Functional safety related parameters Mission Time (TM)	10 34 V DC 0 70 Hz 0.05 5.5 mm yes yes yes yes yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
Switching frequency f Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop U _d Repeat accuracy Operating current Off-state current I _r No-load supply current I ₀ Operating othes witching state Functional safety related parameters Mission Time (T _M) Head State	0 70 Hz 0.05 5.5 mm yes yes yes yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 2.0 mA ≤ 20 mA LED, green
Hysteresis H Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Ud Repeat accuracy Operating current Ir No-load supply current Io Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	0.05 5.5 mm yes yes yes yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
Reverse polarity protected Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop U _d Repeat accuracy Operating current I _L Off-state current I _r No-load supply current I ₀ Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	yes yes yes yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
Short-circuit protection Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Voltage drop Voltage drop Voltage drop Ud Repeat accuracy Operating current IL Off-state current No-load supply current Indication of the switching state Functional safety related parameters Mission Time (T _M)	yes yes yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
Overload resistance Wire breakage protection Inductive overvoltage protection Surge suppression Ripple Voltage drop Ud Repeat accuracy Operating current Ic Off-state current Ic Off-state current Ic Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	yes yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
$\begin{tabular}{ c c c c } \hline Inductive overvoltage protection \\ Surge suppression \\ Ripple \\ \hline Voltage drop & U_d \\ Repeat accuracy \\ \hline Operating current & I_L \\ Off-state current & I_r \\ No-load supply current & I_0 \\ \hline Operating voltage display \\ Indication of the switching state \\ \hline Functional safety related parameters \\ \hline Mission Time (T_M) \\ \hline \end{tabular}$	yes yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	yes 10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	10 % ≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	≤ 2.5 V 1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
Repeat accuracy Operating current IL Off-state current Ir No-load supply current Io Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	1 mm 0 200 mA ≤ 0.01 mA ≤ 20 mA LED, green
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Off-state current Ir No-load supply current Io Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	≤ 0.01 mA ≤ 20 mA LED, green
No-load supply current I ₀ Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	≤ 20 mA LED, green
Operating voltage display Indication of the switching state Functional safety related parameters Mission Time (T _M)	LED, green
Indication of the switching state Functional safety related parameters Mission Time (T _M)	
Functional safety related parameters Mission Time (T _M)	
Mission Time (T _M)	
	20 a
	0 %
Ambient conditions	0 /8
Ambient temperature	-25 85 °C (-13 185 °F)
Storage temperature	-40 85 °C (-40 185 °F)
Mechanical specifications	
	screw terminals
Core cross-section	up to 2.5 mm ²
Housing material	PBT
Sensing face	PBT
Housing base	PBT
5	IP65
	270 g
Compliance with standards and directives	
Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007
Approvals and certificates	
UL approval	cULus Listed, General Purpose
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear
· · · · · · · · · · · · · · · · · · ·	CCC marking because they do not require approval.

Subject to modifications without notice Pepperl+Fuchs Group

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Installation hint

These sensors are especially designed for embeddable mounting in conveyor floors. Due to its precise location in metal base plates the sensor is afforded a high degree of mechanical protection. No clearance is required between the sensor and the base plate, avoiding the need for protective guarding to prevent possible foot injury.

The large sensing range ensures positive detection, and thus provides consistent control and monitoring of the conveyor.

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