



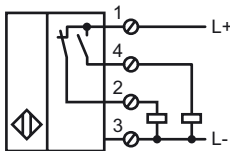
**Model Number**

NJ60-FP-A2-P1-Y237070

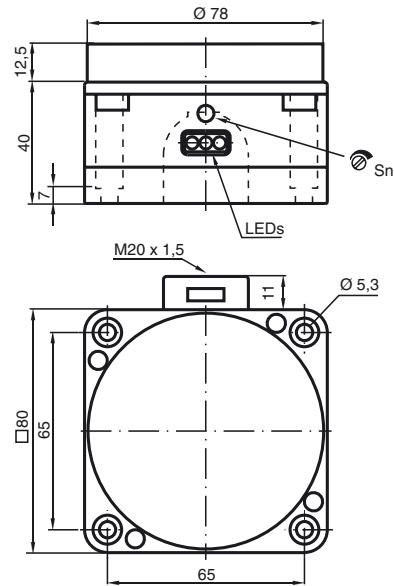
**Features**

- 60 mm not embeddable
- Detects stainless steel tubes in bottles
- Steam resistant
- 2. oscillator frequency

**Connection**



**Dimensions**



**Technical Data**

**General specifications**

Switching element function	PNP	NO/NC
Rated operating distance	$s_n$	60 mm
Installation	not embeddable	
Output polarity	switched high	
Assured operating distance	$s_a$	0 ... 50 mm
Measuring body	high grade steel tube	
Reduction factor $r_{Al}$	0.4	
Reduction factor $r_{Cu}$	0.3	
Reduction factor $r_{303}$	0.85	
Bottle speed	ca. 2.5 m/s (65000 btl./h)	
Adjustment aid	LED, green/red	

**Nominal ratings**

Operating voltage	$U_B$	10 ... 30 V
Switching frequency	$f$	0 ... 100 Hz
Hysteresis	$H$	typ. 3 %
Reverse polarity protected	reverse polarity protected	
Short-circuit protection	pulsing	
Voltage drop	$U_d$	$\leq 3$ V
Operating current	$I_L$	0 ... 200 mA
No-load supply current	$I_0$	$\leq 20$ mA
Operating voltage display	LED, green	
Indication of the switching state	LED, yellow	

**Ambient conditions**

Ambient temperature	0 ... 60 °C (32 ... 140 °F)
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**Mechanical specifications**

Connection type	screw terminals
Core cross-section	up to 2.5 mm <sup>2</sup>
Housing material	POM
Sensing face	POM
Protection degree	IP68

**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
CSA approval	cCSAus Listed, General Purpose

Release date: 2011-08-08 07:54 Date of issue: 2011-08-08 237070\_eng.xml

**Installation hint**

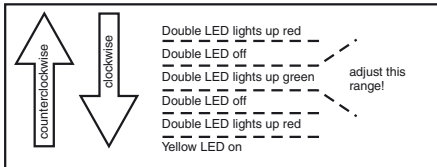
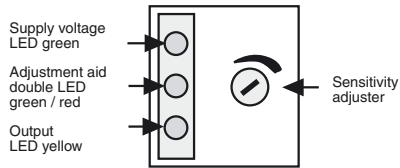
**Installation:**

The sensor should be mounted at least 30 mm above the conveyor chain. This ensures, that the sensor will not be influenced by the conveyor chain.

**Adjustment:**

For correct operation, the sensor has to be adjusted according to the application. The adjustment has to be carried out without the object, which has to be detected

1. Supply the sensor (10 ... 30 V DC).  
The green LED is on.
2. If the output is activated, the yellow LED is on
3. The double LED in the middle has to light up green. If it doesn't, turn the sensitivity adjuster clockwise until the LED lights up yellow. Now turn the sensitivity adjuster counterclockwise until the double LED lights up green.



**Function check:**

To check the correct adjustment, test the reliable detection of a stainless steel test tube in the bottle.