E-T-A Level Sensor NR 160

Description

Capacitive Level Sensor NR 160 is designed to monitor liquids and powders with high relative dielectric constant ε_r. With MIN/MAX selector switch.

Features

- status indication by 2 LEDs
- max. medium temperature +130 °C
- min/max selector switch
- transistor output
- recommended for granules, powder, water and other electrically conductive media

Ordering information

Type No.	
NR 160	Level Sensor
Voltage rating	
DC 9 - 36 V	short-circuit proof PNP transistor output
Mounting method	
G3/4A	thread to DIN 13, part 6, ISO 228/1
3/4"NPT	thread to ANSI B1.20.1
Probe material	
A	Polyamide® PA12-Gf
Fitting material	
2	stainless steel 1.4571/AISI 316 Ti (standard)
Connection (optional)	
B	connector M 12 to DIN EN 60947-5-2
Cable (type: LVCC, AWG 24, 3x0.2 mm²)	
standard without cable	

NR 160	-	DC 9-36 V	-	G3/4A	-	A 2	-	B	ordering example

Ordering information for cable

Type No.	
KA type 1	LVCC, AWG 24, 3x0.2mm²
Available cable lengths	
...	2 m, 3 m, 5 m, 10 m, 15 m, 20 m, 25 m, 30 m, 40 m, 50 m ... 200 m (in 10 m steps)

KA type 1	2 m	ordering example

Accessories

0Z031Z000097	metal coupling if the sensor is to be used as an immersion sensor

Options

AC voltage ratings and relay outputs:
only with power supply NG 03 (see page 149)

Cable: standard without cable; max. 200 m cable available to special order (300 m upon request).

NR 160-...

Technical data

Input voltage	DC 9...36 V or with power supply NG 03
Power consumption	typically 17 mA
Output max. load	PNP transistor, high side switching, max. 0.3 A (0.5 A short-time) short-circuit and overload protected with free-wheeling diode
Voltage drop	approx. 2 V
Ambient temperature	-20 °C...+85 °C -4 °F...+185 °F
Medium temperature	-20 °C...+130 °C (max. +150 °C short-time) -4 °F...-266 °F (max. +302 °F short-time)
Response delay	approx. 0.1 s
Degree of protection to IEC 529/DIN 40050	IP 65 housing
Cable gland	PG 7
Pressure resistance	25 bar/367.5 PSI
Connection	screw terminals max. 1 mm²
Reverse polarity protection	in-built
Material probe fitting sealing (O ring) housing cover	 PA12-Gf DIN 1.4571/AISI 316 Ti Viton® PA6-3-T
Material spec.	PA12-Gf = Polyamide with glass fibre PA6-3-T = Trogamide, transparent
Mounting method	screw in
Mounting attitude	optional
Cable length	standard without cable 300 m max. Observe voltage drop!
Switching point hysteresis (depending on medium viscosity)	horizontally mounted: 21.8 mm max. (probe dia.)
Mass	approx. 200 g

CE mark to demonstrate compliance with applicable directive.

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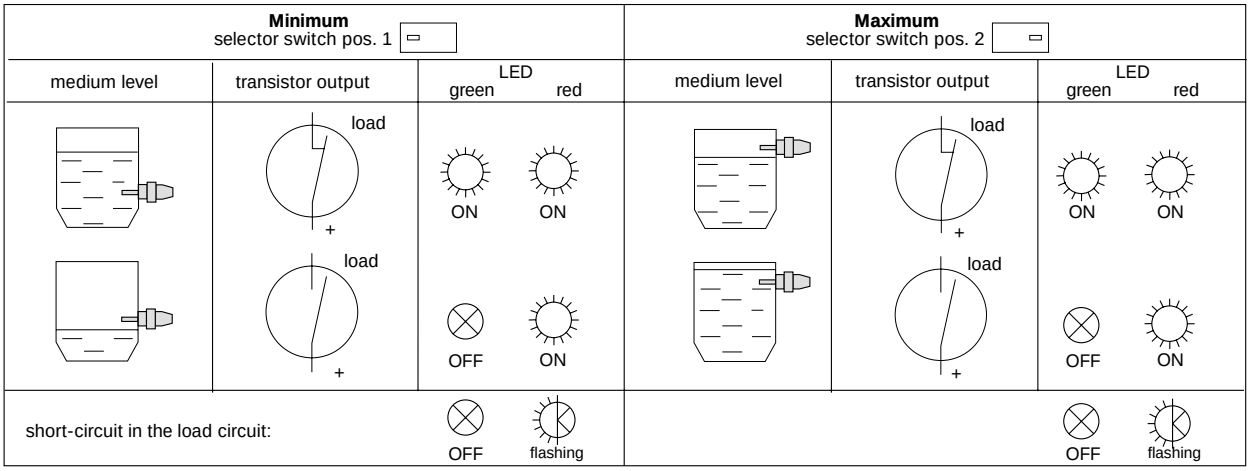
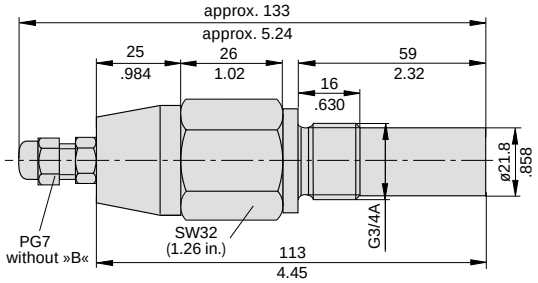
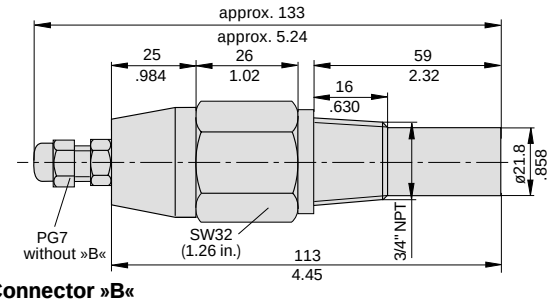
Status indication: MIN or MAX

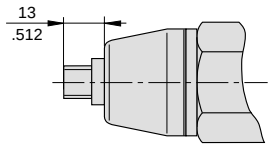


Dimensions

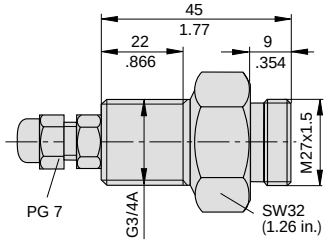




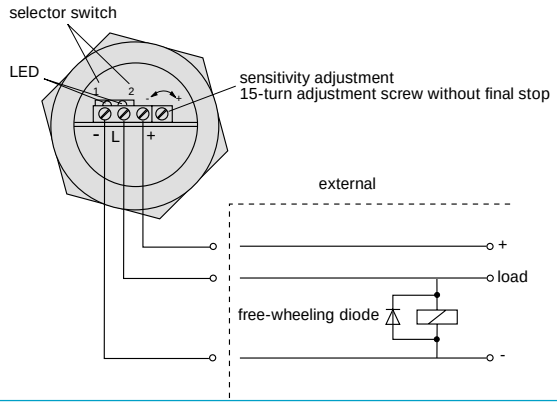
Connector »B«



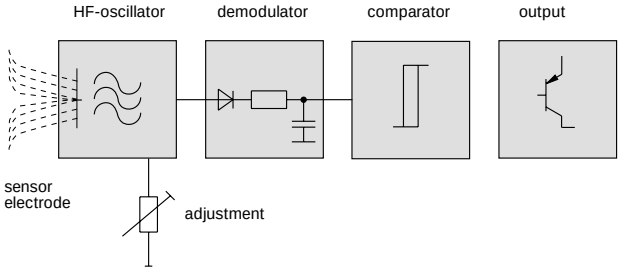
Metal coupling (for pipe extension)
0Z031Z000097
(to be ordered separately)



Connection diagram



Schematic diagram



This is a metric design and millimeter dimensions take precedence (mm / inch)

All dimensions without tolerances are for reference only. In the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved. Product markings may not be exactly as the ordering codes. Errors and omissions excepted.