

Description

Level Sensor NR 80 is designed to monitor a preset medium level in electrically non-conductive containers with a wall thickness up to approx. 5 mm. It is fitted outside the container. Suitable for water and other electrically conductive liquids with a high relative dielectric constant ϵ_r . Available as MIN or MAX sensor.

Features

- non-invasive mounting
- transistor output
- minimum or maximum sensor
- LED status indication
- very small physical size

Ordering information

Type No.	
NR 80	level sensor for liquids
Voltage rating	
DC 6 - 36 V	
Housing	
1	moulded housing (54.5 x 36 x 18 mm)
Output	
1	NPN transistor, low side switching
2	PNP transistor, high side switching
Function (factory preset)	
MIN	minimum sensor
MAX	maximum sensor
Cable (type: LVCC, AWG 24, 3x0.2mm ²)	
Cable 2 m standard	
10 m max. ⁽¹⁾	

NR 80 - DC 6-36 V - 1 1 - MIN - 2 m ordering example

⁽¹⁾ Available cable lengths: 2 m, 3 m, 5 m, 8 m, 10 m

Options

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



Technical data

Input voltage	DC 6...36 V or with power supply NG 03
Power consumption	typically 5 mA
Output	NPN transistor, low side switching, or PNP transistor, high side switching
max. load	100 mA, with free-wheeling diode
Voltage drop	approx. 2 V
Ambient temperature	0 °C ... +70 °C / +32 °F...158 °F
Medium temperature	sensor not in contact with medium
Response delay	approx. 60 ms
Degree of protection to IEC 529/DIN 40050	IP 54 housing
Medium	liquids
Pressure resistance	N/A
Connection	3-wire AWG24 cable
Reverse polarity protection	in-built
Material housing	ABS = acrylonitrile butadine styrene
Mounting method	outside container (see dimension diagram)
Mounting attitude	optional
Cable length	2 m standard (6.56 ft), 10 m max. (32.8 ft)
Switch point hysteresis (depending on medium viscosity)	vertically mounted: 12.5 mm max. (probe dia. = dia. of active surface)
Mass	approx. 90 g

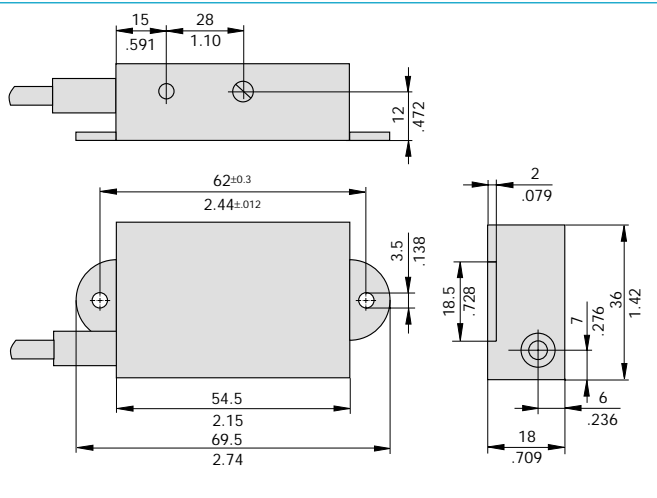
CE mark to demonstrate compliance with applicable directive.

Status indication factory preset for MIN or MAX

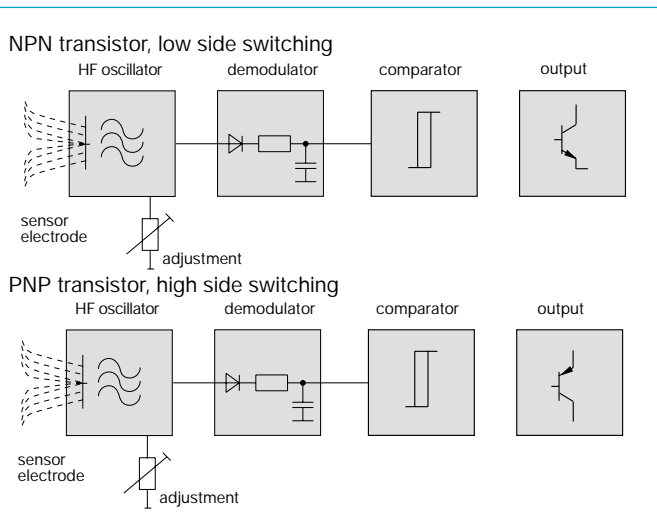
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Minimum				Maximum			
medium level	transistor output		LED green	medium level	transistor output		LED green
	NPN	PNP			NPN	PNP	

Dimensions



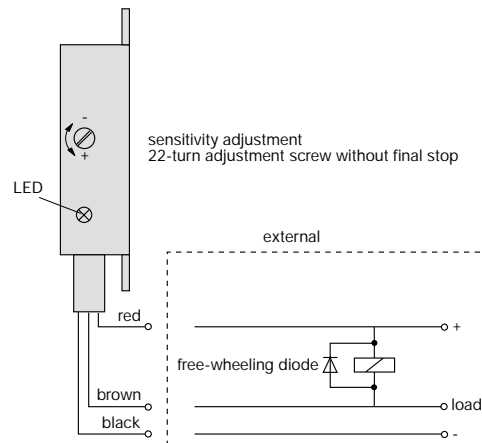
Schematic diagram



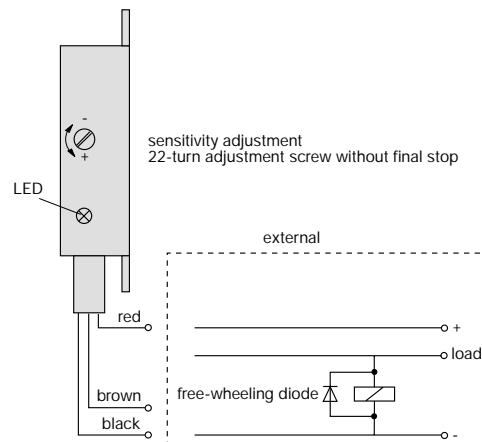
This is a metric design and millimeter dimensions take precedence ($\frac{\text{mm}}{\text{inch}}$)

Connection diagram

NR 80-DC 6-36-11-...
(NPN transistor)



NR 80-DC 6-36-12-...
(PNP transistor)



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.