

Description

Level Sensor NR 60 is designed to monitor water, oils and fuel. It may also be used in automatic filling systems.

Features

- invasive mounting
- transistor output
- minimum or maximum sensor
- self-test function (MIN sensor)

Ordering information

Type No.	
NR 60	Level Sensor
	Medium
	W for water and liquids of similar viscosities
	F for oil and fuel
	Voltage rating
	DC 9 - 36 V
	Mounting method
	M14x1.5 thread to DIN 13, part 6
	1/4" NPTF 1/4" NPT thread to ANSI B1.20.1
	M18x1.5 thread to DIN 13, part 6
	Function (preset)
	MIN minimum sensor
	MAX maximum sensor
	Connection method (connector supplied as accessory)
	B bayonet 16S
	T thread M27x1

NR 60 | - W | - DC 9-36 V | - M14x1.5 | - MIN | - B | ordering example

Accessories

OZ031Z010001	Adapter	M27 x 1 / 3/4" NPTF
OZ051Z003011	Connector,	M27 x 1, 90°
OZ051Z003012	Connector,	M27 x 1
OZ051Z003010	Connector,	bayonet 16S
OZ051Z003009	Connector,	bayonet 16S, 90°

Options

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



Technical data

Input voltage	DC 9...36 V or with power supply NG 03
Closed-circuit current consumption:	approx. 6 mA
Output	NPN transistor, low side switching 12 W with DC 12 V version 24 W with DC 24 V version short-circuit and overload protected over the ambient temperature range
Voltage drop	< 300 mV
Ambient temperature	-30 °C ... +125 °C / -22 °F...+257 °F
Medium temperature	-30 °C ... +125 °C / -22 °F...+257 °F
Response delay	approx. 7 s with MIN sensor approx. 2 s with MAX sensor
Degree of protection (IEC 529/DIN 40050)	IP 67
Cable connection	bayonet 16S, or M27x1 thread
Pressure resistance	25 bar/367.5 PSI
Reverse polarity protection	in-built
Material	probe coating: ETFE fitting: Ms sealing (O ring): Viton® housing: Ms
Material specification	ETFE = Tefzel® (Ethylene Tetrafluoromethylene) Ms = brass
Mounting thread	M14x1.5, or 1/4" NPTF, or M18x1.5
Mounting attitude	optional
Cable length	standard without cable max. 300 m, LVCC 3x0.2 mm² (AWG 24) Observe voltage drop!
Switching point hysteresis (depending on viscosity of medium)	horizontally mounted: NR 60-F = max. 10.5 mm (sensor dia.) NR 60-W = max. 5 mm (sensor dia.)
Mass	approx. 125 g

CE mark to demonstrate compliance with applicable directive.

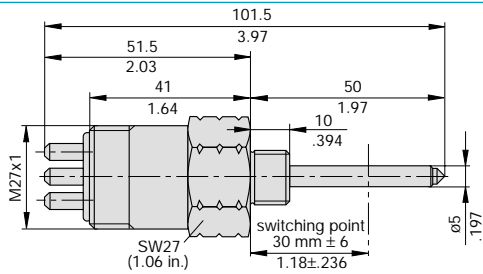
Status indication factory preset for MIN or MAX

2

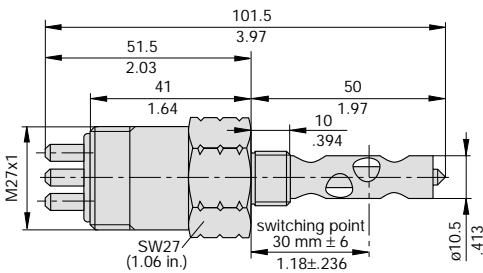
Minimum		Maximum	
Medium level	Transistor output	Medium level	Transistor output

Dimensions

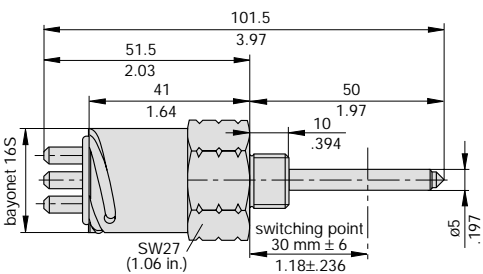
NR 60-W-...T



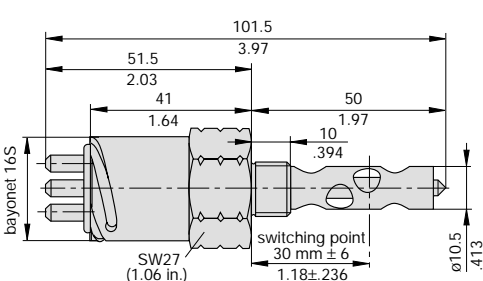
NR 60-F-...T



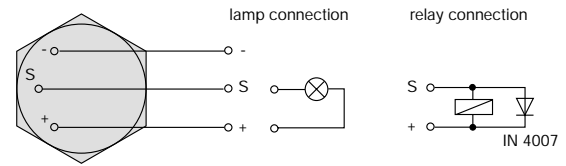
NR 60-W-...B



NR 60-F-...B



Connection diagram

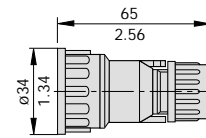


integral free-wheeling diode

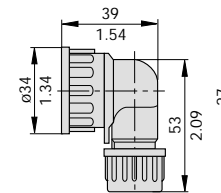
CAUTION: Do not connect minus potential to signal terminal or plus potential to minus terminal!

Connectors / Adapter

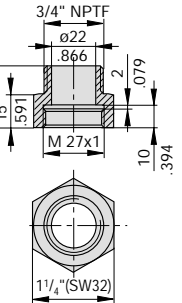
Connector M27x1
OZ051Z003012



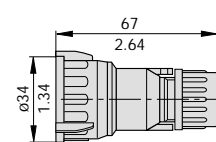
Connector M27x1, 90°
OZ051Z003011



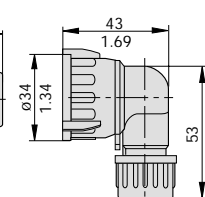
Adapter
OZ031Z010001



Bayonet 16S
OZ051Z003010



Bayonet 16S, 90°
OZ051Z003009



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

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.