



Level



Pressure



Flow



Temperature

Liquid
Analysis

Registration

Systems
Components

Services



Solutions

Capacitance level limit switch for solids

Nivector FTC968

E+Hdirect

www.e-direct.us


FTC968 Standard

FTC968 with
Protector

- No moving parts
- Maintenance-free operation
- No calibration, quick startup
- With `Protector`: no contact with solids
- Highly interference-free from electromagnetic fields and voltage peaks

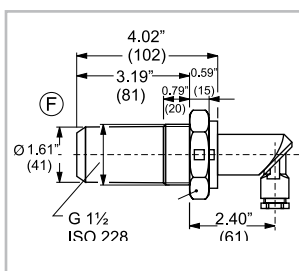
Application

The Nivector capacitance level limit switch is suitable for powdered and fine-grained solids of all kinds up to a grain size of 0.39 in. (e.g. plastic granulate materials, washing agents, animal feed). Because of its construction materials, Nivector is also suitable for use in food applications, such as grain, sugar, herbs and spices.

Measurement principle

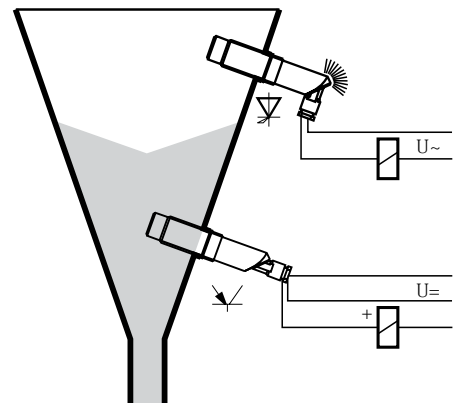
The face of the Nivector unit acts as a sensor. If the solids come into contact with the front face, then the electronics change the switch output. The instrument can be operated in any application with safety. Because of the failsafe operation, the switching status indication on the instrument via LEDs allows simple verification from the outside. An electronic shield prevents interference through the container walls or sidewall buildup.

Product: bulk solids ≥ 1.18 inch grain size	Product dielectric constant: $\epsilon_r \geq 1.6$
Approval: Dust-Ex-Zone 10	Product temperature: -4 to +176°F
Probe length: 3.2 inches	Process pressure: -14.5 to +87 psi



Using the integral `Protector` adapter for G 1½" BSPP straight threads, the Nivector can be removed from the full vessel for a function test. The vessel is then protected from spilling. In addition, the Nivector is protected from damage caused by especially abrasive or coarse solids, as it has no direct contact with the material being monitored.

Application Example



The Nivector FTC968 is a compact level limit switch, to which a miniature contactor, a solenoid valve or a programmable logic controller (PLC) may be directly connected.

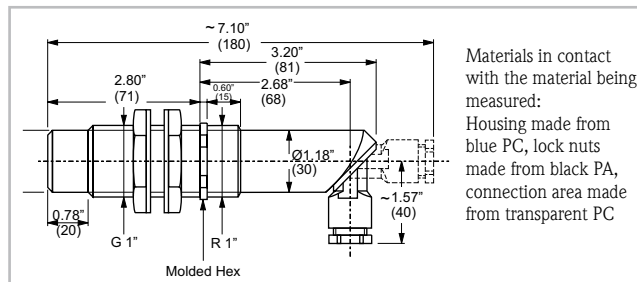
Nivector FTC968

Technical data

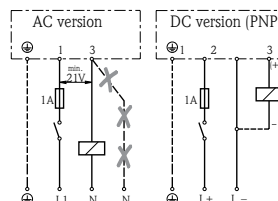
Output	
■ Safety circuit	Minimum or maximum failsafe, can be switched according to load
■ Load connectable	AC: short duration (40 ms): max. 1.5 A max. 375 VA at 253 V or max. 31.5 VA at 21 V (not protected against short circuit); continuous: max. 87 VA at 253 V, max. 7.4 VA at 21 V, min. 2.5 VA at 253 V (10 mA), min. 0.5 VA at 2.1 V (20 mA) voltage drop max. 12 V, leakage current max. 4 mA DC: short duration (50 ms) max. 0.5 A, max. 55 V (clocked overload and short-circuit protection); continuous: max. 350 mA, residual voltage <3 V, leakage current <100 µA
■ Switching time	Approx. 0.2 s when sensor is covered/cleared
Power supply	
AC: 21 to 253 V, 50/60 Hz DC: 10 to 55 V	
Operating conditions	
■ Ambient temperature	-4 to +140°F
■ Material temperature	-4 to +176°F
■ Operating temperature	-4 to +176°F
■ Storage temperature	-13 to +185°F
■ Operating pressure	-14.5 to +87 psi
■ Grain size	Up to 0.39 inches
■ Rel. dielectric constant of measured material	min. 1.6
■ Protection	NEMA 4/NEMA 6 (IP 65/IP 67) according to Standard EN 60529
■ Electromagnetic compatibility	Noise immunity according to Standard EN 50 082-2 (field strength 10 V/m); interference emission according to Standard EN 50 081-1

Many other models, versions and options are available. Please contact Endress+Hauser for more information.

Dimensions in inches (mm) and materials



Electrical connection



Mechanical construction

- Process connections Thread G 1" BSPP with two nuts, thread R 1" (DIN 2999) between molded hex and terminal cover
- Electrical connection Screwed terminals for max. AWG 16 wires in sealed cable entry (can be rotated as required), for 0.25 to 0.31" cable diameter
- Protector Thread G1½" BSPP (ISO 228)

User interface

- Display in connection area Red LED for display of switching mode, visible from the outside
- Operation in connection area Rotary switch for switchover from minimum to maximum safety mode, potentiometer for switching sensitivity

Nivector FTC968			Order no.	Price/pcs. in \$				
Version		Electronics		1 to 5	6 to 15	16 to 35	We hereby order:	Total:
FTC968	Non-Ex	AC version	918 098-0000	\$160.00	\$144.00	\$130.00	pcs.	\$
		DC version	918 098-0140	\$160.00	\$144.00	\$130.00	pcs.	\$

Accessories (Nivector FTC968)		Order no.	Price/pcs. in \$	We hereby order:	Total:
Protector (integral adapter with spill protection)		917 255-1000	\$60.00	pcs.	\$

Net excluding cost of shipping and taxes.

Acceptance per our Standard Terms and Conditions (find at www.e-direct.us).

at the total price of:

FOB Greenwood, IN; shipped pre-paid; shipping charges and applicable taxes added to invoice.

☐ E-direct catalog (free)

Shipping Method ☐ Ground ☐ Priority One Day ☐ Priority Two Day

E-direct

E-direct
Endress+Hauser, Inc.
2350 Endress Place
Greenwood, IN 46143

(For customers in the USA only)

Online Shop www.e-direct.us

Order: by phone 888-EH DIRECT
(343-4732)

by fax 800-321-7754

For special requests, e-mail us: e-direct@us.endress.com

Warranty

Should an instrument fail during the 1 year warranty period, a replacement unit will be provided. Shipment from receipt of order for quantities 1-3 within 2 business days.

Delivery

Endress+Hauser

People for Process Automation