

Rotating paddle level switch DF 21



- For powders and granules
- Resistant to high temperatures
- High pressure resistant
- Extension shaft: up to 1000 mm
- Threaded fittings or flanges
- ATEX options: Dust and Gas

APPLICATIONS

This sensor is suitable for level detection on granules, dust, and other free solids. Mounted on silos or tanks, the DF21 operates effectively for level control, filling/emptying operations, and provides protection against overfilling.

These applications are found in the following industries:

- Food: Sunflower seeds, ground coffee, cocoa powder, flour, sugar, etc.
- Chemical: Plastic powder, granules
- Building: Sand, Cement, Plaster
- Energetic: Active carbon, Charcoal powder, Fly ash

DESCRIPTION

An electric motor drives a rotating paddle in the absence of material. When material is present, it slows down the paddle, causing the motor to pivot within its housing, engage a return spring, and trigger two contacts. One is a dry contact dedicated to control and alarm functions, while the other disconnects the motor power supply. When the product level drops, the return spring resets the motor to its original position, reactivating the unit.

TECHNICAL FEATURES

Material:	
Housing	Aluminum or stainless steel
Shaft	304 stainless steel (316 Ti option)
Paddle	304 stainless steel (316 Ti option)
Ambient temperature	-20...+70 °C
Bulk goods temperature	-40 ... +500 °C (depending on model)
Operating pressure	-1 ... 25 bar
Power supply	230, 115, 48, 24 V AC / 48, 24, 12 V DC
Contact output	Potential-free, 1 mA / 4 V DC ... 2 A / 250 V AC
Rotations	1 /minute
Response time	Env. 1,20 sec
Consumption	4 VA - 4 W
Electrical protection	Classe I
IP rating	IP 66 selon DIN EN 60529
ATEX options	ATEX II 1/2 D T80 °C IP66 ATEX II 1 D T70 °C IP66 ATEX II 1/3 D T80 °C IP66

CE compliance: The device complies with the legal requirements of the applicable European Directives.

BAMO INTERNATIONAL

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Rotating paddle level switch
DF 21

17-06-2025

D-510.03-EN-AC

NIV

510-03/1

Detector
Certifications - Approvals

- B0** Standard (CE and IP66 compliant)
B1 ATEX Ex II 1/2D T80 °C IP66
B2 ATEX Ex II 1D T70 °C IP66
B3 ATEX Ex II 1/3D T80 °C IP66

Supply voltages

- C1** 220...240 V AC / 50-60 Hz
C2 110...120 V AC / 50-60 Hz
C3 48 V AC / 50-60 Hz
C4 24 V AC / 50-60 Hz
C5 24 V DC

Self-monitoring

- D0** = without monitoring

Signal LEDs

- H0** Standard = With status LEDs

Operating temperatures

- E0** Standard = -25...+80 °C (except B2)
E1 -40...+150 °C
E2 -25...+200 °C
E3 -25...+260 °C
E4 -25...+500 °C (except B1, B2)

Container pressure

- P0** Standard = -0.5...5 bar (except B1, B2, B3)*
P1 -0,5...10 bar

Process connection

- G** DIN/ISO228 gas Thread 1"
G2 DIN/ISO228 gas thread 1 1/4"
G3 DIN/ISO228 gas thread 1 1/2"
G9 Other (upon request)

Fitting materials

- A** Aluminum
E Stainless steel 1.4301 / 304

Blades

- M0** (without)
S2 Socket blade.....130x30 mm
M1 Socket blade.....90x28 mm
M2 Socket blade.....98x40 mm
T1 Blade T50.....98x50 mm
T2 Blade T100.....98x50 mm
T8 Rubber blade.....250x100 mm
X1 Blade X50.....98x50 mm
X2 Blade X100.....98x100 mm
X3 Blade X200.....180x100 mm

Extension shaft

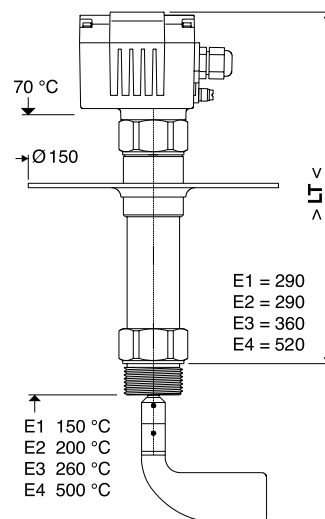
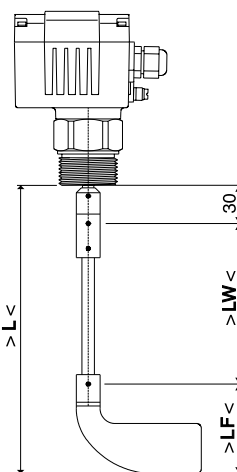
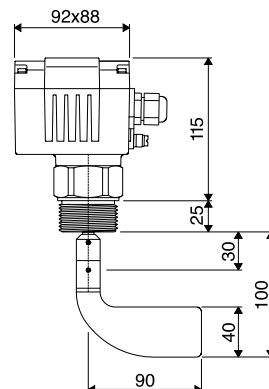
- Without extension (standard)
LW Extension shaft

Dimension LW (mm)

- x x 0** (maxi = 990 mm)

DF 21 A1 B0 C1 D0 H0 EO P0 G3 A T1 LW x x 0

* : 0,08bar...+0,08bar (-80...+80mbar)



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