

Vibrating rod level switch R-500 / R-600



- For powders and granules
- Self-cleaning
- Programmable relay output
- ATEX version II 1/2 D ta/tb IIIC
T90°C...T170°C Da/Db

APPLICATIONS

The R-500/R-600 switch is a robust, corrosion-resistant device designed for level control of granular materials and powders such as carbon black, sugar, grains, cement, metal shavings, etc., with densities $\geq 50 \text{ kg/m}^3$.

DESCRIPTION

The resonance of the bar is ensured by an electronic circuit. When the bar is covered by a granule or powder, the damping is detected electronically, and the measuring circuit activates a relay output.

MODEL SELECTION

Standard version:

Contactor used as an alarm in hoppers and silos.

This contactor has a rigid probe measuring 207 mm and is designed specifically for side mounting.

Rigid extension version:

Used for detecting high and low points, with vertical mounting

(Medium-sized or abrasive particles with significant internal friction due to their movement can damage the probe).

Flexible extension version (via cable):

Used for detecting high and low points (not recommended on large granules that could damage the cable).

The Ex (ATEX) option available meets the requirements of environments where the presence of particles poses an explosion risk.

INSTALLATION

To determine the installation location, the mechanical strength of the device must be taken into account.

We suggest installing the extended cable version for a low-level alarm above the silo outlet.

For side mounting of the device, the installation must be sufficiently inclined to prevent powder from accumulating on the paddle. Avoid installing the system in a recessed area.

Before installation, it is recommended to test the switching function of the unit on a sample of the material to adjust for the desired density.

Tighten the device using only the hex head.

Any attempt to rotate the housing itself may cause damage. After tightening, the housing can be rotated up to 300° to position the cable gland as desired.

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Vibrating rod level switch
R-500 / R-600

17-06-2025

D-507.02-EN-AB

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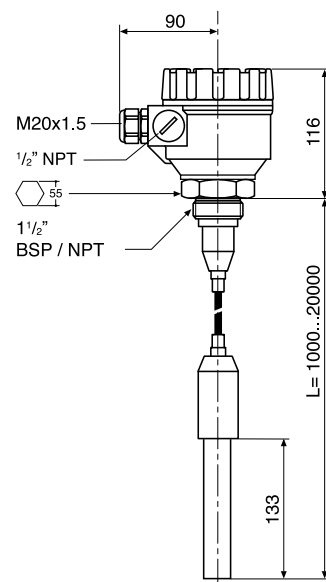
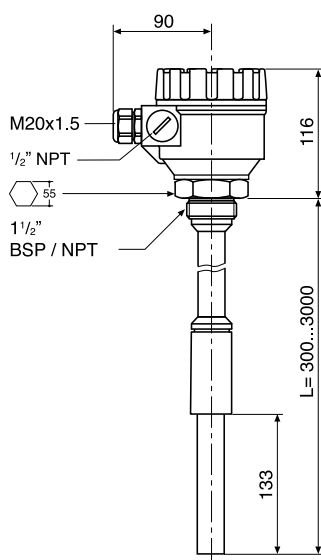
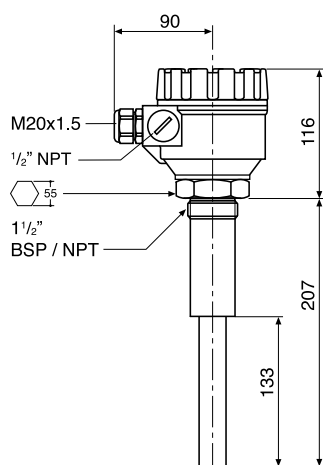
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TECHNICAL FEATURES

Versions	Standard	Rigid extension	Cable extension
Probe length	207 mm	0,3...3 m	1...20 m
Maximum mechanical stress	F = 500 N, M = 100 Nm	M = 100 Nm	F = 45 kN
Parts inside the tank	1.4571 (Stainless steel 316 Ti)		Probe: 316 Ti stainless steel - Cable: PE coated
Housing	Coated aluminum (model R-500) Glass fiber reinforced PBT plastic (model R-600)		
Fitting	1½" BSP or NPT		
Temperature / process	-30...+110 °C - (Option -30... +160 °C)		-25 °C...+90 °C
Ambient temperature	-30...+60 °C		
Maximum pressure	25 bar		6 bar
Minimum density	0,05 Kg /dm³		
Power supply	20...255 V AC/DC (Ex) 20...250 V AC (50-60 Hz) – 20...50 V DC		
Power consumption	≤2,5 VA / 2 W		
Vibration frequency	500 Hz		
Relay output (*)	SPDT 250 V AC / 8 A or SPST 50 V DC / 350 mA		
Response time	<1.8 s or 5 ±1.5 s (on closed unit) <2 s or 5 ±1.5 s (on open unit)		
IP rating	IP 67 (NEMA6)		
Electrical protection	Classe I		
Ex marking	ATEX II 1/2 D Ex ta/tb III C T90°C...T170°C Da/Db (with aluminum housing)		
CE compliance	The device complies with the legal requirements of the applicable European Directives.		

(*) : To be specified when ordering

DIMENSIONS



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CODE NUMBERS AND REFERENCES

R-500 / R-600 standard version

Models

- K** Standard model (max. 110 °C)
- H** High temperature model (max. 160 °C)

Fitting

- H** 1 1/2" BSP
- N** 1 1/2" NPT

Housing

- 5** Epoxy-coated aluminum, IP 67
- 6** Glass fiber reinforced plastic, IP 67 (non-Ex)

Relay output

- 1** SPDT, potential-free relay 250 V AC / 8 A
- 3** SPST, electronic 50 V DC / 350 mA
- 5** SPDT 250 V AC / 8 A, ATEX Ex II 1/2D tD A20/A2 IP67 T*

R K H 6 02 ← Example RKH-602-1 (Standard vibrating bar, length 207 mm — Code 507 101)

R-500 / R-600 rigid extension version

Models

- K** Standard model (max. 110 °C)
- H** High temperature model (max. 160 °C)

Fitting

- R** 1 1/2" BSP
- L** 1 1/2" NPT

Housing

- 5** Epoxy-coated aluminum, IP 67
- 6** Glass fiber reinforced plastic, IP 67 (non-Ex)

Probe length

- 05** 300...500 mm
- 06-30** 600...3 000 mm

Relay output: The coding is identical to that of the standard version.

R K R 5 05 5

R-500 / R-600 flexible extension version (cable)

Fitting

- K** 1 1/2" BSP
- C** 1 1/2" NPT

Housing

- 5** Epoxy-coated aluminum, IP 67
- 6** Glass fiber reinforced plastic, IP 67 (non-Ex)

Probe length

- 01** 1 000 mm
- 02-20** 2 000...20 000 mm

Relay output: The coding is identical to that of the standard version.

R K K 5 01 5

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