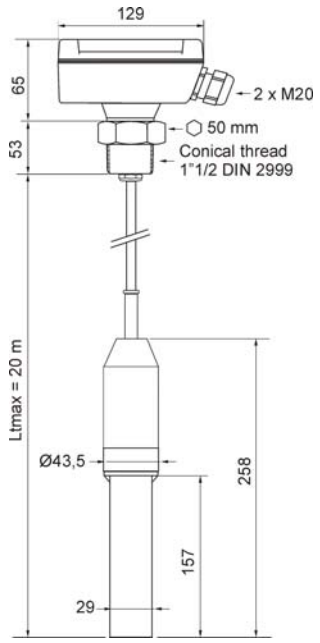
DISIBEINT

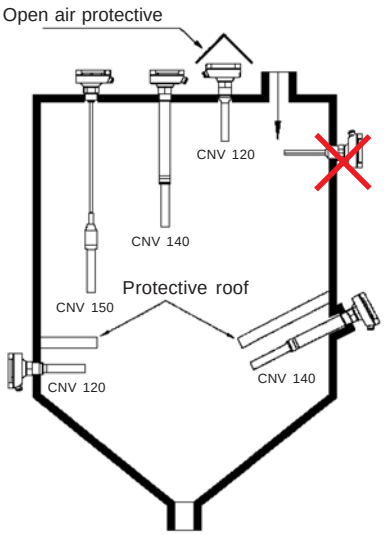
CNV 150 / CNV 150 Ex



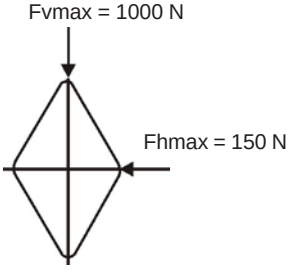
VIBRATING LEVEL SENSOR FOR SOLIDS IN GRAIN. EXTENDED WITH CABLE.

Function	Detection of the level in solids, in grain or fine with low degree of humidity. Usable in products of medium density (> 20 g/l).
Operating principle	In the lowest part of the probe is placed a piezoelectric crystal that vibrates to a resonance frequency. When a product arrives at the height of the probe, the oscillation changes and the electronic circuit switches the output signal. The switching point depends on the density of the material, with a maximum granulation size of of 10 mm.
Process connection	Top screw 1", conical thread DIN 2999.
Electrical connection	By connector DIN43650
Output	SPDT Relay 1A / 50 VAC, 15W
Voltage / Consumption	24 V AC/DC ±10% / 1VA, maximum
Level detection	Adjustable by means of one selector located in the connector.
Timing	· When detecting: 1 s · When no detecting: 2 to 5 s, depending on the product.
Detection indicator	Red led in the connector.
Temperature	· In the head: -20..+60ºC · In the probe: -20..+70ºC
Pressure	10 bar
Density	50 g/l
Maximum load	80 Nm (vertical or horizontal application)
Warning	It is not recommendable to use it with sticky or dusty materials or with those with tendency to deposit themselves on the probe.
Protection	Connector: IP 66 - Probe: IP 67

Installation example



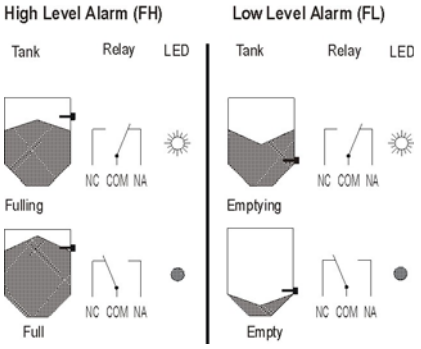
Max. load into the probe

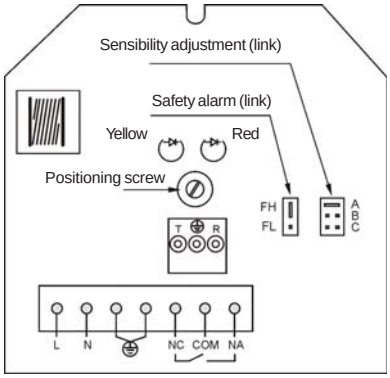


ATEX Version

Reference: CNV 150 Ex
Certificate for Group II, Category 1/2 D (dust), Zones 20, 21 and 22.

Installation	The CNV-150 can be installed in the silo lateral or vertically. Do not thread rotating by the body, use a tool of 41mm. Normally thread to the sidewall of the silo to the height desired for detecting the product. It is recommended to place the probe with an inclination between 20º and 30º towards the exit of the silo to facilitate the material to flow more easily and do not deposit itself on the probe. When choosing the detection point, must be considered the angle of the filling slope and the draining cone so that the controllers can have time enough for the action on the transport mechanisms or signaling.
Protection in the installation	In a necessary case a protective cover must be used and it has to be located at 150 mm over the probe. This cover also must be used when minimum or intermediate levels in silos with a probable danger of formation of vaults or, when by the draining system and the nature of the product, a strong overload could exist on the probe. (To see installation example, page 1).
Position of the cable glands	They must be pointing downwards downwards to avoid the humidity enter inside the housing. If the housing is not in the right position after having screwedthe probe firmly in the silo wall, as follows: 1. Take out the cover 2. Unscrew half turn the positioning screw in the center 3. Rotate the housing right or left (never a complete turn) until the cable glands be pointing downwards. 4. Screw Tighty the positioning screw and close the cover back.
Operation mode	High level: With the probe in the air, switch selector FH to ON position, with which the relay is operated (LED lighting). When the probe detects the product or there is failure in the supply voltage, the relay is released and the LED turns off. Low level: With the probe in the air, switch selector FL to ON position, with which the relay is released (LED turns off). When the probe is covered with product the relay is operated (LED lighting), and releases when the probe does not detect anymore or when there is failure in the supply voltage.
Sensibility	Position A: Use this adjustment only for light materials, with low densities until 20g/l. Position B: Standard adjustment, enough for a large number of materials. Position C: For heavy materials with high densities. In this position the sensitivity of the controller is low, the light materials cannot be detected with this adjustment.
Safety indications	· Do not manipulate the sensor without disconnecting the supply voltage previously. · Before carrying out the electrical connection compares the data of the plate of characteristics that agree with the one of the connection. · If the supply voltage and the relay signal do not come from the same source, the cables of the supply voltage must be separated of the cables of the relay signal by means of cable locking devices, so that it is avoided that the cables of connection of the supply voltage can be in contact with the terminals of the relay and vice versa (what it could be possible in case of error, for example, breakage of a cable). · The power supply must be protected with a fuse (max. 4A). · Protect the contacts of the main switch of the inductive loads. · The ground connection must be carried out with complete safety.





Maximum section of the conductors is to 1,5mm^2

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