

Vibro level indicators

Level limit switches for bulk goods

VF10

Dust



Explosion protection information

and supplement to the operating instructions

Prior to the use of the device in potentially explosive atmospheres please, read and obey the special conditions and instructions for safe application on page VF1-EID-05.

Please observe rules for maximum allowed ambient temperatures shown on page VF1-EID-04.

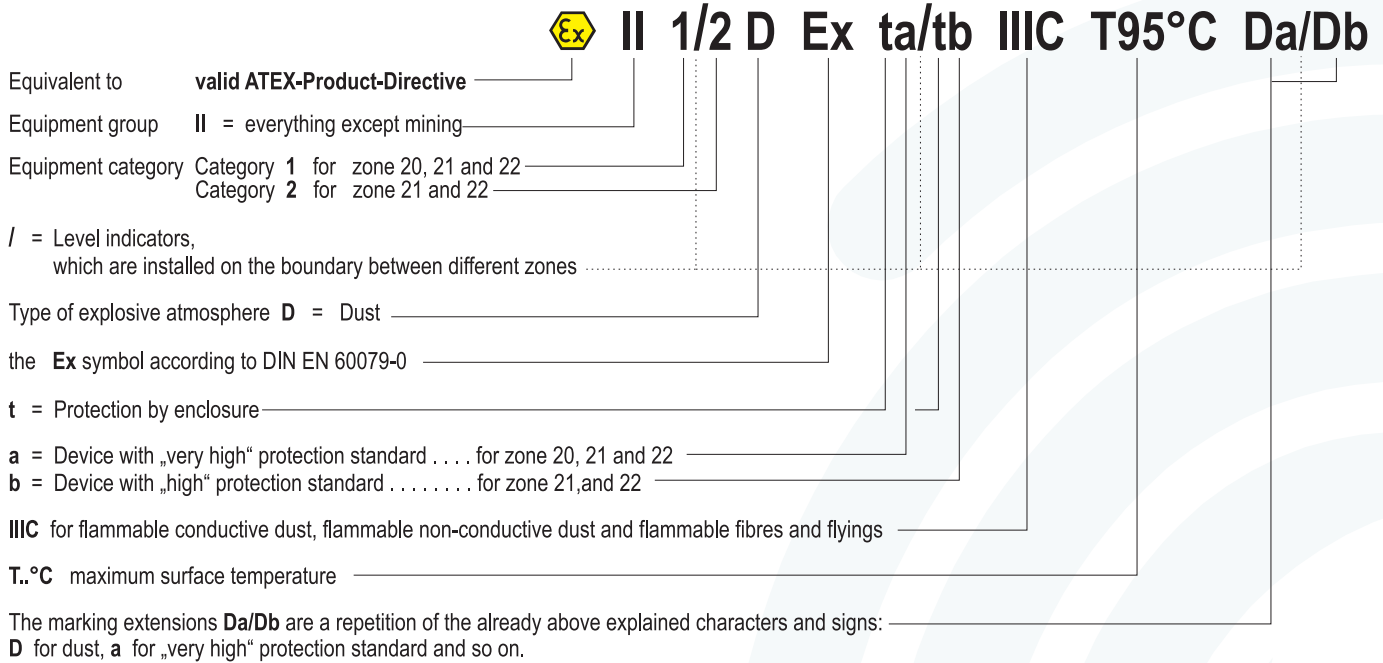
Type plate details with option B1



<p>Manufacturer and address</p> <p>MOLLET Füllstandtechnik GmbH Industriepark RIO 103 D-74706 Osterburken Tel. +49 62 91 64 400</p>		<p>CE sign with the number of the "Notified Body" which is involved in the production control phase</p> <p>CE 0044</p>		<p>EC-type examination certificate number</p> <p>IBExU15ATEX0000 IP66/IP67</p>	
<p>Model designation</p> <p>Typ VF1...B1...</p>	<p>DustEx identification</p> <p>Ex II 1/2D Ex ta/tc bIIC T95°C Da/Db</p>	<p>Details to supply voltage and current consumption</p> <p>Supply 20...250 V AC/DC Consumption 3 VA Contact 5 A / 250 V AC~</p>		<p>Details to loadability of the signal contact</p>	
<p>Unique device serial number</p> <p>S# 1234567890 A.-Nr. 1234567890</p>	<p>Ambient temperature (process temperature)</p> <p>-20 °C ≤ Ta ≤ +80/+60 °C</p>	<p>Design of the devices suitable for pressures in the vessel indicated here. </p> <p>03/10</p>		<p>Month and year of delivery</p>	
<p>Order number</p>					

Marking in accordance with ATEX and DIN EN 60079-0:2009

Vibro level indicator for use at the boundary from zone 20 to zone 21.



Order code **VF12A1B1...** and **VF13A1B1...**

Marking: **II 1 / 2 D** **Dust** **Ex**

Equipment category appropriation by zones

Vibro level indicator for use at the boundary from zone 20 to zone 21.

Ambient temperatures Ta

The ambient temperature *Ta* defines the maximum operating temperature of the indicators. Inside the vessel this is process temperature (the air or the bulk goods temperature) nearby the device.

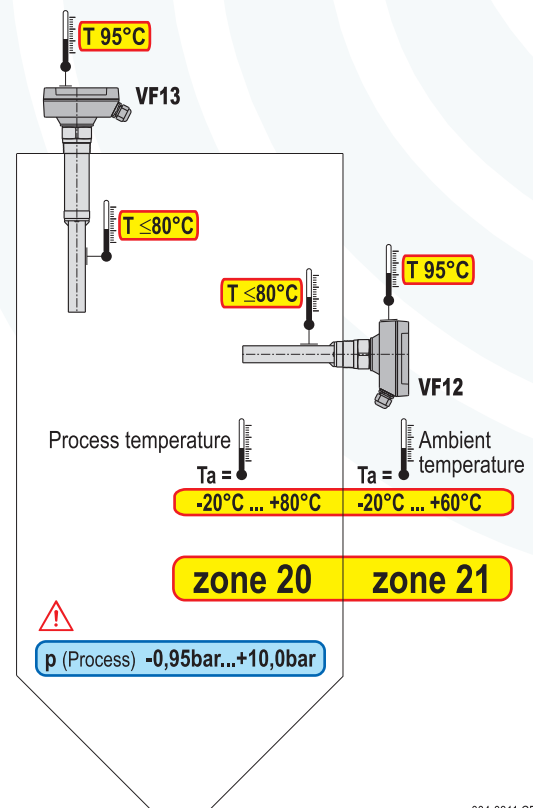
Maximum surface temperature T

The maximum surface temperature *T* means the hottest point at the equipment.

Pressure, vacuum

Design of the devices is suitable for indicated pressures in the vessel.

These pressures are outside of the range for atmospheric conditions defined in the guidance to the ATEX-Product-Directive.



MOLLET Füllstandtechnik GmbH	Industriepark RIO 103 D-74706 Osterburken Tel. +49 62 91 64 400	CE 0044	IBExU15ATEX0000 IP66/IP67
Typ VF1.A1 B1 ...	Ex II 1/2D Ex ta/tb IIIC T95°C Da/Db	Supply 20...250 V AC/DC	
S# 1234567890	-20 °C ≤ Ta ≤ +80/+60 °C	Consumption 3 VA	
A.-Nr. 1234567890 03/10	p (Process) -0,95bar...+10,0bar	Contact 5 A / 250 V AC~	

004-0311.CDR

Order code **VF15A1B1 ...**
Marking: **II 1 / 2 D**



Equipment category appropriation by zones

Vibro level indicator for use at the boundary from zone 20 to zone 21.

Ambient temperatures T_a

The ambient temperature T_a defines the maximum operating temperature of the indicators. Inside the vessel this is process temperature (the air or the bulk goods temperature) nearby the device.

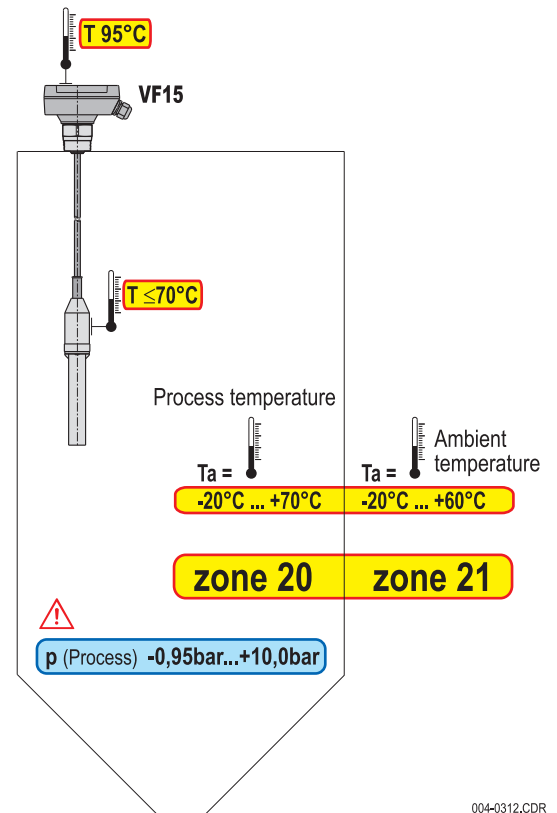
Maximum surface temperature T

The maximum surface temperature T means the hottest point at the equipment.

Pressure, vacuum

Design of the devices is suitable for indicated pressures in the vessel.

These pressures are outside of the range for atmospheric conditions defined in the guidance to the ATEX-Product-Directive.



MOLLET Füllstandtechnik GmbH Industriepark RIO 103 D-74706 Osterburken Tel. +49 62 91 64 400		CE 0044 IBExU15ATEX0000 IP66/IP67
Typ	VF15A1 B1 ...	Ex ta/tb II C T95°C Da/Db Supply 20...250 V AC/DC Consumption 3 VA Contact 5 A / 250 V AC~
S#	1234567890	-20 °C ≤ T_a ≤ +70/+60 °C
A.-Nr.	1234567890 03/10	p (Process) -0,95bar...+10,0bar ⚠

004-0312.CDR

Inside high process temperature, outside ambient temperature

Order code **VF12A1B1...E1...** and **VF13A1B1...E1...**

Marking: **II 1 / 2 D**

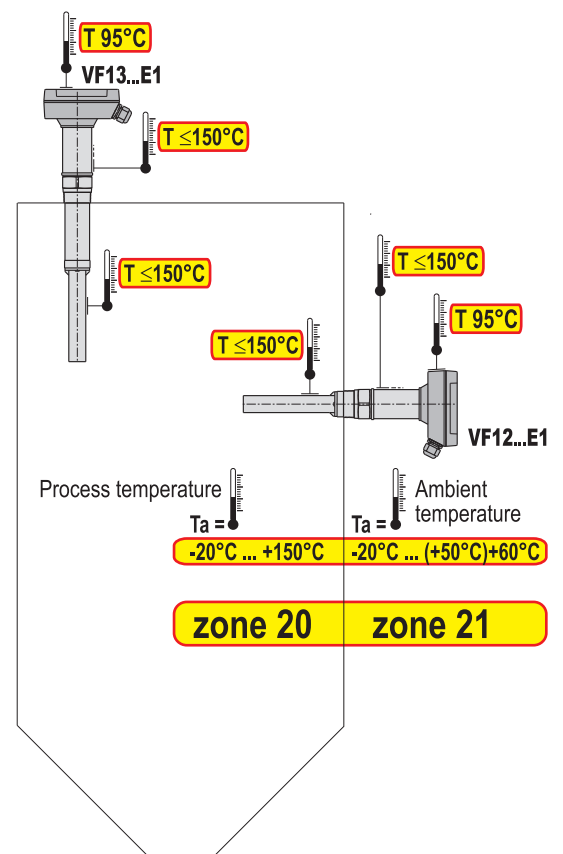


Maximum surface temperature T

Probe and vibration rod produce no increase of temperature, but they are able to take high temperatures from inside of the vessel and forward it.

Due to this, the surface temperature has to be determined according to the process temperature (temperature of bulk solids or ambient) inside of the vessel.

The maximum authorised ambient temperature / ... °C at the electronic housing is dependent from the process temperature ... °C/.
(Please notice diagram at page VF1-EID-04)



MOLLET Füllstandtechnik GmbH Industriepark RIO 103 D-74706 Osterburken Tel. +49 62 91 64 400		CE 0044 IBExU15ATEX0000 IP66/IP67
Typ	VF1.A B1 ... E1 ...	Ex ta/tb II C T95°C Da/Db Supply 20...250 V AC/DC Consumption 3 VA Contact 5 A / 250 V AC~
S#	1234567890	-20 °C ≤ T_a ≤ +150/(+50°C)+60 °C
A.-Nr.	1234567890 03/10	p (Process) -0,95bar...+10,0bar ⚠

004-0313.CDR

Separate electronic housing

Order code **VF12A22B3...** and **VF13A22B3...**

Marking: **II 1 / 3 D**



Equipment category appropriation by zones

Vibro level indicator for use at the boundary from zone 20 to zone 22.

Ambient temperatures T_a

The ambient temperature T_a defines the maximum operating temperature of the indicators. Inside the vessel this is process temperature (the air or the bulk goods temperature) nearby the device.

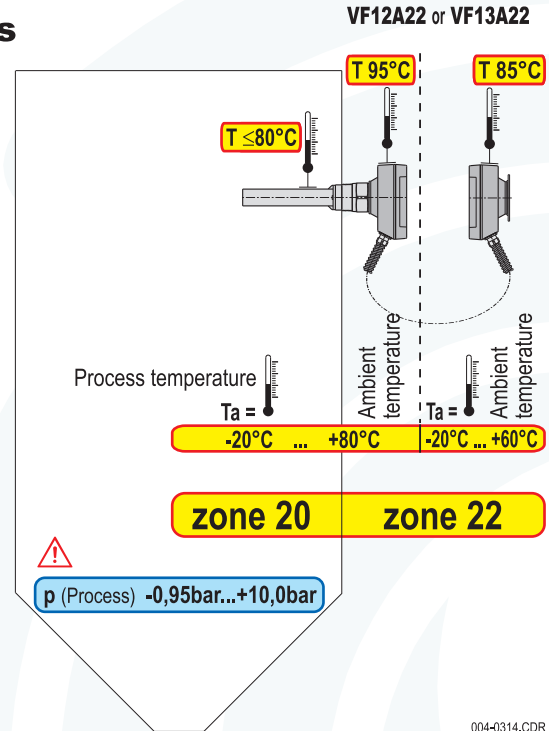
Maximum surface temperature T

The maximum surface temperature T means the hottest point at the equipment.

Pressure, vacuum

Design of the devices is suitable for indicated pressures in the vessel.

These pressures are outside of the range for atmospheric conditions defined in the guidance to the ATEX-Product-Directive.

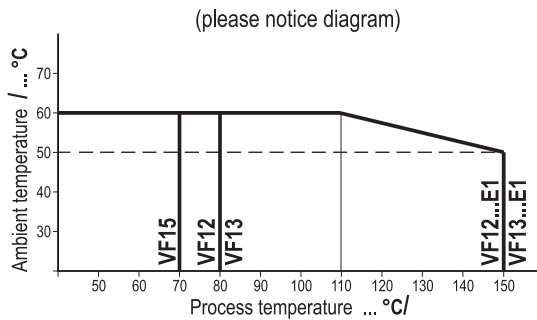


MOLLET Füllstandtechnik GmbH	Industriepark RIO 103 D-74706 Osterburken Tel. +49 62 91 64 400	CE 0044	IBExU15ATEX0000 IP65
Typ VF1 A22 B3 ...	II 1/3D Ex ta/tc III C T95°C Da/Dc	Supply 20...250 V AC/DC	Consumption 3 VA
S# 1234567890 A.-Nr. 1234567890 03/10	-20 °C ≤ Ta ≤ +80/+60 °C	Contact 5 A / 250 V AC~	
	p (Process) -0,95bar...+10,0bar		

004-0314.CDR

Maximum ambient temperatures

The maximum authorised ambient temperature / ... °C at the electronic housing is dependent from the process temperature ... °C/.



Example T_a - marking

maximum authorised process temperature maximum authorised ambient temperature at the electronic housing

$-20\text{ °C} \leq T_a \leq +150\text{ °C} / \leq (+50\text{ °C}) +60\text{ °C}$

Due to high process temperature
reduced maximum authorised ambient
temperature at the electronic housing

maximum authorised process temperature

$-20\text{ °C} \leq T_a \leq +80\text{ °C} / \leq +60\text{ °C}$

maximum authorised ambient
temperature at the electronic housing



Special conditions and instructions for safe application

1. The installation, maintenance, initial operation, removal and repair have to be controlled resp. checked by an “authorized person” for explosion protection.
2. For the electrical connection you have to take notice of the local and statutory requirements and/or the VDE 0100.
3. Take notice of the specifications on the data plate.
4. A fuse (with max. 4A) has to be connected in series to the voltage supply.
5. Protect the signal contact from voltage peaks when inductive loads are connected.
6. As soon as the device will be brought into the explosion hazardous area it has to be mounted immediately at the intended place and a cable has to be brought into the cable gland.
7. Please check if the cable gland have loosened during mounting process or transport. When it is loosened, it has to be fixed again with a torque of 3.75 Nm.
8. To secure the type of protection, the screw nut of the cable gland has to be fixed at the installation with a minimum torque of 2.7 Nm.
ATTENTION! If it will be fastened too strong, the IP-protection can be affected.
9. The device has to be grounded and the ground connection of the device has to be installed in such a way that mechanical damage will be excluded.
10. The device may put into operation with built-in cap-sealing and when it is closed, only.
11. Remove the dust from the housing before you open it and make sure that no dust turbulences exist.
12. Switch off the power supply, before opening the device. (touchdangerous voltage)
13. Please check position and intactness of all gaskets before you close the device.
14. Tightening torque of the central fixing srew: 3 Nm and of the lid screw: 3 Nm.
15. The maximum authorised temperatures for process (bulk solids) and ambience have to be observed.
16. Take notice of the requirements of DIN EN 60079-14, DIN EN 60079-17 and DIN EN 1127-1, especially regarding the dust deposits and temperatures and follow the pertinent rules and regulations.

