

**A dependable choice.**

The VITO LT probe belongs to the VITO family for temperature and water bottom measurement. Robust and reliable, it accurately measures average product temperature using nine temperature elements. Its advanced thermosensor technology meets all major industrial standards. VITO LT probe measures average product and vapor temperature, free water level and provides temperature profile inputs. Together with the Honeywell Enraf Automatic Tank Gauge (ATG), the VITO LT helps meet

your accuracy requirements for tank inventory.

**Global Experience. Locally Applied.**

## Technical Specifications

### Temperature Measurement: 767 VITO LT Temperature Probe, 768 VITO LT Temperature & Water Probe

Principle	
Measuring principle	Cold junction compensated thermocouples (type T) to measure the temperature differentials with respect to a 4 wire 1/5 DIN Class A Pt100 reference resistor, physically embedded to cold junction.
Number of elements	9 temperature elements
Measuring Specifications	
767 Probe temp. range	-55 °C to +135 °C (-67 °F to +275 °F)
768 Probe temp. range	-55 °C to +135 °C (-67 °F to +275 °F)
Storage temperature	-55 °C to +135 °C (-67 °F to +275 °F)
Probe accuracy	±0.1 °C (±0.18 °F) <sup>1</sup>
Measuring resolution	0.01 °C (0.01 °F)
Measuring length	Refer to Identification Code (also see dimensional drawing). For longer probes consult factory.

### Water Sensing: 768 VITO LT Temperature & Water Probe

Principle	
Principle	PTFE sheathed capacitive probe
Measuring Specifications	
Measuring range	50 cm (20"), 100 cm (39") and 200 cm (79")
Instrument accuracy	±2 mm (0.078") <sup>1</sup> , water is measured only between 0 °C to +100 °C (+32 °F to +212 °F) process temperature range.
Measuring resolution	0.1 mm (0.004")
Minimum water level	25 mm (0.98")

### General: 768 VITO LT Temperature & Water Probe

Mechanical	
Sheathing	Stainless steel AISI 316L (mat. no. 1.4404) corrugated probe
Adjusting pipe	Stainless steel AISI 316L (mat. no. 1.4404), adjustable length: ±230 mm (±9"), ISO 228/1-G1/2B (1/2" BSP)
Lining water probe	PFA (fluoropolymer)
Outer diameter of probe	27 mm (1.06") for 767 VITO LT probe and 40 mm (1.57") for 768 VITO LT probe
Mounting flange	Optional, 1/2 BSP threaded mounting hole required
Anchor weight	Optional, max. 23 kg (50 lb)
Environmental Safety	
Operating pressure	5 bar / 500 kPa (72 psi) Hydrostatic pressure
Safety	<ul style="list-style-type: none"> <li>- II 1G Ex ia IIB T4 Ga; acc. to ATEX KEMA 01ATEX1212</li> <li>- Ex ia IIB T4 Ga; acc. to IECEx KEM 05.0014</li> <li>- Ex ia IIB Ta; acc. to Kosha certificate; 13-AV4BO-0487</li> <li>- Class I, Division 1, Groups C &amp; D; acc. to FM I. D. 3015746</li> <li>- Class I, Division 1, Groups C &amp; D; acc. to CSA certificate 1635480</li> <li>- Ex ia IIB T4 Ga ; acc. to INMETRO TUV 13.0975 X</li> </ul> For other approvals and updates please consult factory
Electrical	
Flying lead length	Color coded PTFE insulated stranded wires. Length: 35 cm (14"), 120 cm (47") and 500 cm (197")

### 762 VITO Interface

Specifications	
Application	An electronic converter used in combination with the VITO probes
Data communication	HART® communication to tank gauging ATG <sup>2</sup>
Ambient temp. range	-40 °C to +60 °C (-40 °F to +140 °F)
Storage temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Cable entry	Cable entry options; M20 x 1.5, 3/4" NPT via reducer and PG16 via reducer
Mounting	Direct on VITO probes using standard 1/2" BSP entry
Housing	Chromatised, Polyurethane coated Aluminum, GD-AISi10Mg
Ingress protection	IP66 / IP67 according to EN 60529 (NEMA 4X)
Safety	<ul style="list-style-type: none"> <li>- II 1/2G Ex ia IIB T4 Ga/Gb ; acc. to ATEX KEMA 01ATEX1212</li> <li>- Ex ia IIB T4 Ga/Gb ; acc. to IECEx KEM 05.0014</li> <li>- Ex ia IIB Ta; acc. to Kosha certificate; 13-AV4BO-0487</li> <li>- Class I, Division 1, Groups C &amp; D; acc. to FM I. D. 3015746</li> <li>- Class I, Division 1, Groups C &amp; D; acc. to CSA certificate 1635480</li> <li>- Ex ia IIB T4 Ga/Gb ; acc. to INMETRO TUV 13.0975 X</li> </ul> For other approvals and updates please consult factory

#### Note(s):

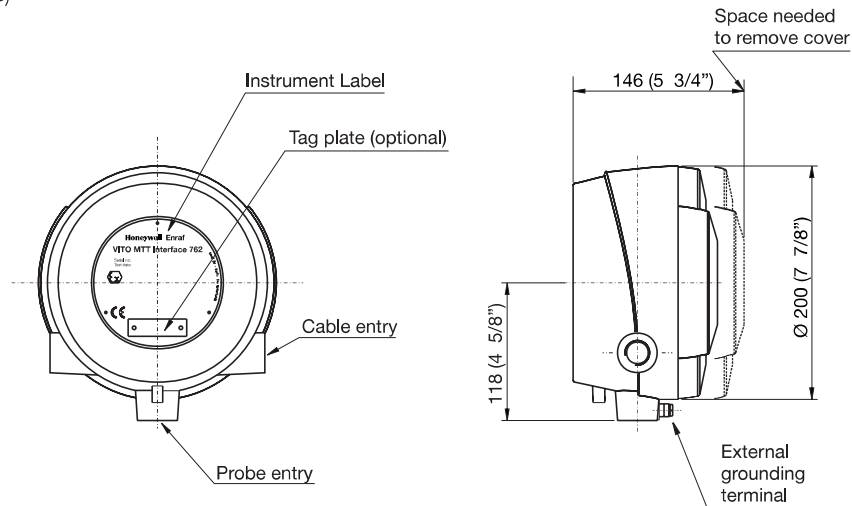
<sup>1</sup> Under reference conditions.

<sup>2</sup> HART® is a registered trademark of the HART Communications Foundation.

## Dimensional Drawing

### 762 VITO Interface

Dimensions in mm (inches)



## Identification Code: 762 VITO Interface

### Pos 1 W&M Approved

- U General purpose
- X With W&M type approval only if Pos 2 = T

### Pos 2 Version

- P VITO LT interface (for VITO LT probe)
- R VITO MRT interface for resistance measurements (MRT/RTD/361 MPT)
- T VITO interface for 764/765/766/864 VITO probes

### Pos 3 Position Not Used

\*

### Pos 4 Position Not Used

\*

### Pos 5, 6, 7 Product Designation

- 7 6 2 VITO Interface

### Pos 8 Entry to Sensor

- \* No IP adapter
- I IP adapter (only if Pos 9 = A)

*Note: recommended for environments with high humidity and strong fluctuations in ambient temperature.*

### Pos 9 Entry to Sensor

- A G 1/2 (standard in box)
- B 3/4" NPT (only when Pos 2 = R)

### Pos 10 Cable Entry

- G M20 x 1.5 (only when Pos 11 = A or I)
- N 3/4" NPT; via reducer
- S PG16 via reducer (only when Pos 11 = A or I)

### Pos 11 Safety Approvals

- A ATEX / IEC Ex Europe / Global
- F FM / CSA USA / Canada
- I INMETRO Brazil

### Pos 12 Separator

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### Pos 13 Tag Plate

- Z No tag plate
- T Tag plate (Material: CuNi alloy)



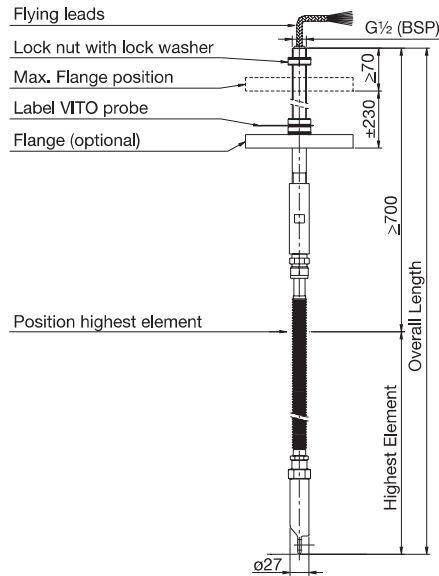
Typical Identification Code

Your Identification Code

## Dimensional Drawing

### 767 VITO LT Temperature Probe

Dimensions in mm



## Identification Code: 767 VITO LT Temperature Probe

### Pos 1 W&M Approved

**U** General purpose

### Pos 2 Temperature Range

**S** Standard -55 °C to +135 °C (-67 °F to +275 °F)

### Pos 3 Safety Approvals

- A** ATEX Europe
- F** FM USA
- I** INMETRO Brazil

### Pos 4 Length Flying Lead

- N** 35 cm
- O** 120 cm
- P** 500 cm

### Pos 5, 6, 7 Product Designation

**7 6 7** VITO temperature probe

### Pos 8 Position of Lowest Temperature Element

- C** Lowest element at 1 meter from bottom of probe
- D** Lowest element at bottom of probe

### Pos 9, 10, 11, 12 Overall Length in Steps of 10 cm (price per meter)

**# # 1 0** Range 0370 to 2500

### Pos 13, 14, 15, 16 Position of Highest Temperature Element

**# # # 0** Range 300 to 2430 in steps of 10 cm  
(at least 70 cm from top of probe)

### Pos 17 Separator

**/**

### Pos 18 Tag Plate

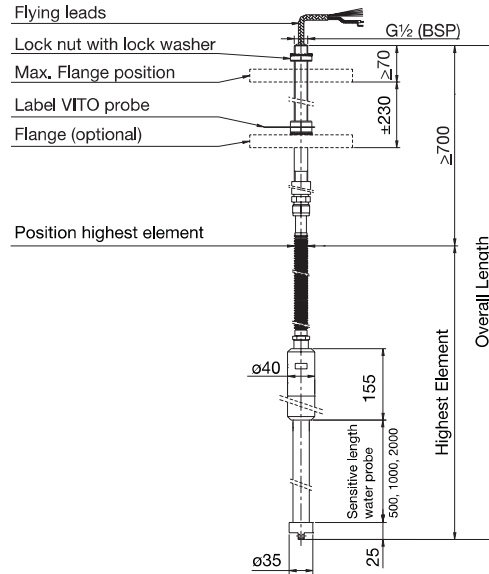
- Z** No tag plate
- T** Tag plate (Material: CuNi alloy)

<b>U</b>	<b>S</b>	<b>A</b>	<b>N</b>	<b>7</b>	<b>6</b>	<b>7</b>	<b>C</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>/</b>	<b>Z</b>	<b>Typical Identification Code</b>
<b>U</b>	<b>S</b>			<b>7</b>	<b>6</b>	<b>7</b>					<b>0</b>				<b>0</b>	<b>/</b>		<b>Your Identification Code</b>

## Dimensional Drawing

### 768 VITO LT Temperature and Water Probe

Dimensions in mm



## Identification Code: 768 VITO LT Temperature and Water Probe

### Pos 1 W&M Approved

**U** General purpose

### Pos 2 Sensitive Length for Water Bottom Measurement

- A** 050 cm
- B** 100 cm
- C** 200 cm

### Pos 3 Safety Approvals

- A** ATEX Europe
- F** FM USA
- I** INMETRO Brazil

### Pos 4 Length Flying Lead

- N** 35 cm
- O** 120 cm
- P** 500 cm

### Pos 5, 6, 7 Product Designation

**7** **6** **8** VITO temperature and water probe

### Pos 8 Position of Lowest Temperature Element

- C** Lowest element at minimum 1 meter from bottom of probe (if Pos 2 = A)
- D** Lowest element at bottom of probe

### Pos 9, 10, 11, 12 Overall Length in Steps of 10 cm (price per meter)

- # # # 0** Range 0420 - 2500 if Pos 2 = A
- # # # 0** Range 0470 - 2500 if Pos 2 = B
- # # # 0** Range 0570 - 2500 if Pos 2 = C

### Pos 13, 14, 15, 16 Position of Highest Temperature Element (at least 70cm from top of probe)

- # # # 0** Range 0350 - 2430 in steps of 10 cm if Pos 2 = A
- # # # 0** Range 0400 - 2430 in steps of 10 cm if Pos 2 = B
- # # # 0** Range 0500 - 2430 in steps of 10 cm if Pos 2 = C

### Pos 17 Separator

**7**

### Pos 18 Tag Plate

- Z** No Tag plate
- T** Tag plate (Material: CuNi alloy)

Typical Identification Code

Your Identification Code