



Temperature and water bottom measurement.

The VITO family for temperature and water bottom measurement together with Honeywell Enraf tank gauges is the ultimate answer for inventory control. The VITO-MTT is a robust and reliable device representing the leading edge in sensor technology, fully complying with all major industrial standards. Its accuracy exceeds the requirements for Weights & Measures accepted temperature information.

The VITO-MTT provides average temperature, temperature profiles and vapor temperature. This parameter can be used for mass calculations of the product in the gas phase, contributing to your loss-gain control. Optionally, a digital water bottom measurement can be integrated to ensure high accuracy compared to analog probes. The system complies with safety requirements for use in hazardous areas.

Technical specifications

VITO MTT Temperature probe

Measuring specifications

Temperature range	: See identification code 764 Pos. 2
Accuracy	: $< \pm 0.1\text{ }^{\circ}\text{C}$ ($0.18\text{ }^{\circ}\text{F}$) ¹⁾
Measuring resolution	: $0.01\text{ }^{\circ}\text{C}$ ($0.01\text{ }^{\circ}\text{F}$)

Principle

Measuring principle	: 16 Temperature elements divided over the sensitive length. 15 Temperature elements divided over the sensitive length (If Pos 8 is C)
Reference RTD	: Pt100, accuracy $\pm 0.06\text{ }^{\circ}\text{C}$ at $0\text{ }^{\circ}\text{C}$ ($0.11\text{ }^{\circ}\text{F}$ at $32\text{ }^{\circ}\text{F}$)
Sensor	: Type T (Copper / Constantan), Class 2 according to IEC 584-2

VITO Water probe

Measuring specifications

Operating temperature	: $0\text{ }^{\circ}\text{C}$ to $+100\text{ }^{\circ}\text{C}$ ($+32\text{ }^{\circ}\text{F}$ to $+212\text{ }^{\circ}\text{F}$)
Storage temperature	: -55°C to $+135\text{ }^{\circ}\text{C}$ ($-67\text{ }^{\circ}\text{F}$ to $+275\text{ }^{\circ}\text{F}$)
Measuring resolution	: 0.1 mm
Minimum water level	: 25 mm above lowest part of probe

VITO MTT Combi probe

Mechanical

Dimensions	: Maximum outer diameter 40 mm
Operating temperature	: $0\text{ }^{\circ}\text{C}$ to $+100\text{ }^{\circ}\text{C}$ ($+32\text{ }^{\circ}\text{F}$ to $+212\text{ }^{\circ}\text{F}$)
Storage temperature	: -55°C to $+135\text{ }^{\circ}\text{C}$ ($-67\text{ }^{\circ}\text{F}$ to $+275\text{ }^{\circ}\text{F}$)
Adjusting pipe	: Adjustable length $\pm 230\text{ mm}$, $G\frac{1}{2}$ threaded

VITO MTT Interface

Mechanical

Housing material	: Coated aluminum
Cable entry	: $M20 \times 1.5$ (standard) $\frac{3}{4}$ " NPT or PG 16 via reducer (optional)

General

Environmental

Ambient temperature	: $-40\text{ }^{\circ}\text{C}$ to $+60\text{ }^{\circ}\text{C}$ ($-40\text{ }^{\circ}\text{F}$ to $+140\text{ }^{\circ}\text{F}$)
Operating pressure	: 5 bar / 500 kPa (72 psi) hydrostatic pressure
Safety	: The VITO probe is a passive device and is i.s. for connection with VITO interface <ul style="list-style-type: none">- II 1G EEx ia IIB T4 According to ATEX (probes)- Zone 0 Ex ia IIB T4 According to IECEx (probes)- II 1/2G EEx ia IIB T4 According to ATEX (interface)- Zone 0/1 Ex ia IIB T4 According to IECEx (interface)- Class I, Division 1, Groups B 3), C and D, in acc. to NFPA 70 (FM, USA)

Materials

Sheathing	: Stainless Steel AISI 316L (Werkstoff 1.4404) corrugated tube
Fittings and adjusting pipe	: AISI 316L (Werkstoff 1.4404) Stainless Steel

Electrical

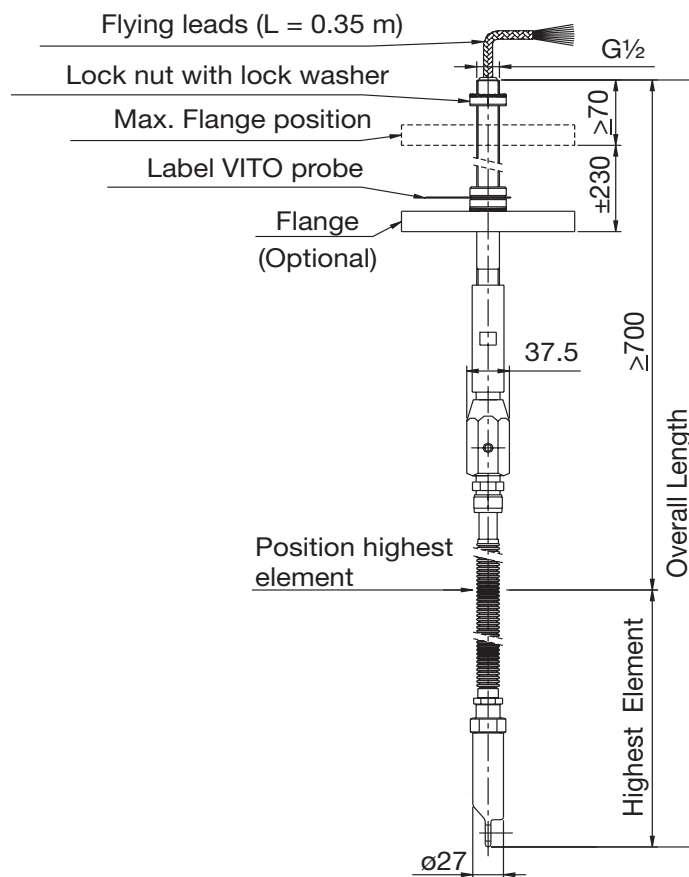
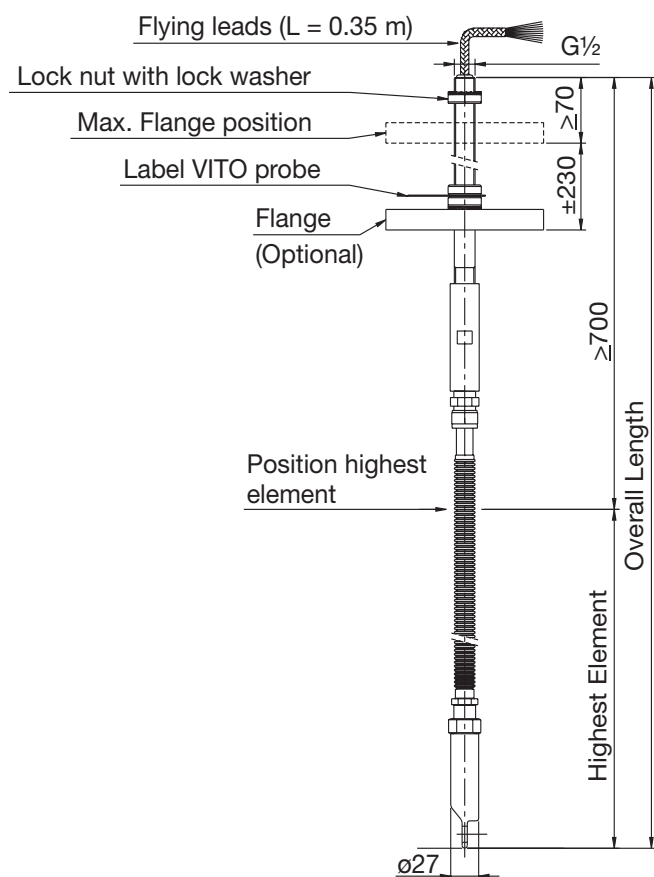
Connection leads	: PTFE isolated, standard length 0.35 m
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Options

Mounting flange	: $2"$ 150 lb r.f. with $G\frac{1}{2}$ threaded mounting hole. For other flanges please contact an Enraf office
Anchor weight	: max. 23 kg

¹⁾ Under reference conditions

VITO MTT Temperature probe

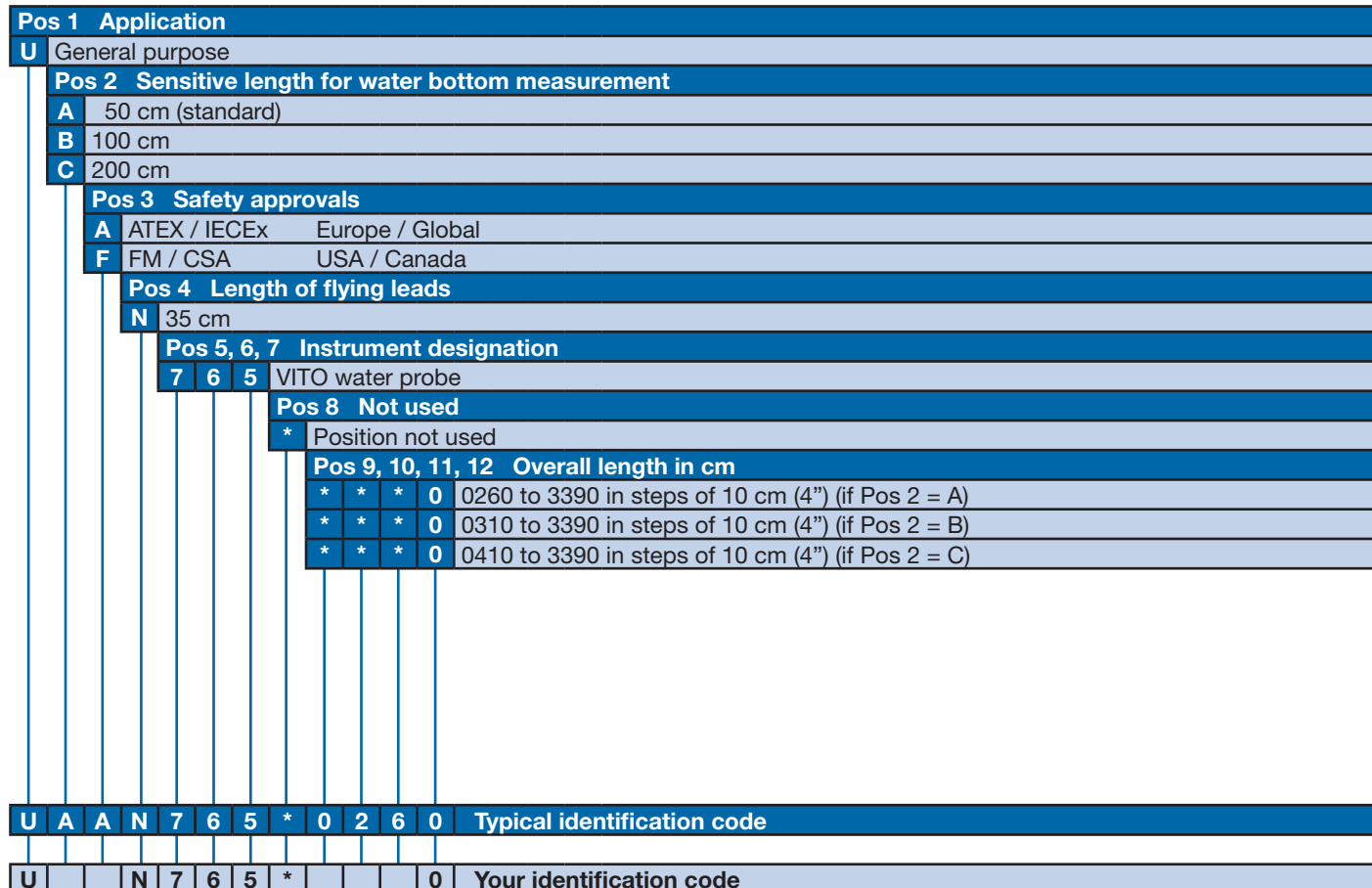


Low temperature version

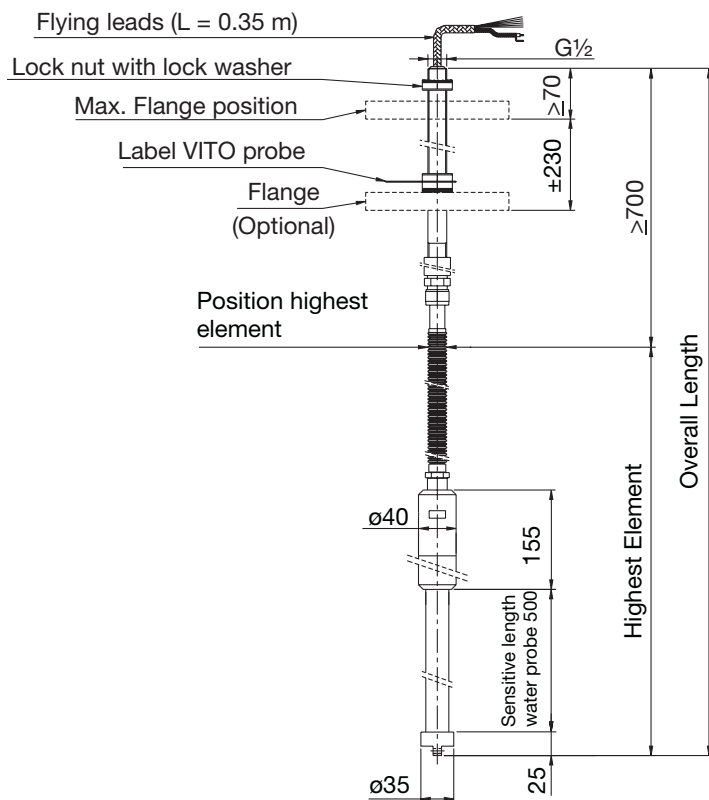
Identification code 764

Pos 1 Application												
U	General purpose											
X	W&M version (additional verification)											
Pos 2 Temperature range probe												
S	Standard : -55 °C to +135 °C (-67 °F to + 275 °F)											
C	Low temperature : -200 °C to +70 °C (-328 °F to + 158 °F)											
H	High temperature : -55 °C to +200 °C (-67 °F to + 392 °F)											
V	Very high temperature : -55 °C to +250 °C (-67 °F to + 482 °F)											
Pos 3 Safety approvals												
A	ATEX / IECEx Europe / Global											
F	FM / CSA USA / Canada											
Pos 4 Length of flying leads												
N	35 cm											
Pos 5, 6, 7 Instrument designation												
7	6	4	VITO MTT 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 cm												
*	*	*	0	0370 to 9990 in steps of 10 cm								
Pos 13, 14, 15, 16 Position of highest temperature element												
*	*	*	0	0300 to 9920 in steps of 10 cm								
				(at least 70 cm from top of probe)								
<div> <div>U</div> <div>S</div> <div>A</div> <div>N</div> <div>7</div> <div>6</div> <div>4</div> <div>D</div> <div>0</div> <div>3</div> <div>7</div> <div>0</div> <div>0</div> <div>3</div> <div>0</div> <div>0</div> </div> Typical identification code												
<div> <div></div> <div></div> <div></div> <div>N</div> <div>7</div> <div>6</div> <div>4</div> <div></div> <div></div> <div></div> <div></div> <div>0</div> <div></div> <div></div> <div></div> <div>0</div> </div> Your identification code												

Identification code 765



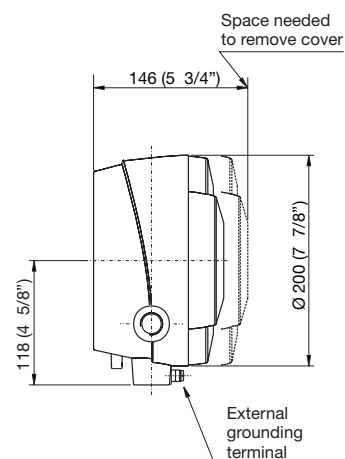
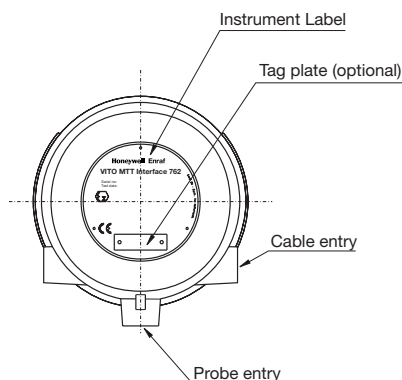
VITO MTT Combi probe



Identification code 766

Pos 1 Application																															
U		General purpose																													
X		W&M version (additional verification)																													
Pos 2 Sensitive length for water bottom measurement																															
A		50 cm																													
Pos 3 Safety approvals																															
A		ATEX / IECEx Europe / Global																													
F		FM / CSA USA / Canada																													
Pos 4 Length of flying leads																															
N		35 cm																													
Pos 5, 6, 7 Instrument designation																															
7		6		6		VITO MTT combi probe																									
Pos 8 Position of lowest temperature element																															
C		Lowest element at 1 m from bottom of probe																													
D		Lowest element at bottom of probe																													
Pos 9, 10, 11, 12 Overall length in cm																															
*		*		*		0		0370 to 3390 in steps of 10 cm																							
Pos 13, 14, 15, 16 Position of highest temperature element																															
*		*		*		0		0300 to 3320 in steps of 10 cm																							
								(at least 70 cm from top of probe)																							
Typical identification code																															
U		A		A		N		7		6		6		D		0		3		7		0		0		3		0		0	
Your identification code																															
A		N		7		6		6								0								0							

Dimensional drawing VITO Interface



Identification code 762

Pos 1 Application											
U	General purpose										
X	W&M version (additional verification)										
Pos 2 Version											
T	VITO interface (for VITO probe or 864 MTT)										
Pos 3 Not used											
*	Position not used										
Pos 4 Not used											
*	Position not used										
Pos 5, 6, 7 Instrument designation											
7	6	2	VITO MTT Interface								
Pos 8 Not used											
*	Position not used										
Pos 9 Probe entry											
A	G 1/2 standard in box										
Pos 10 Cable entry											
G	M20 x 1.5 standard in box (not if Pos 11 = F)										
N	3/4" NPT via reducer										
S	PG 16 via reducer (not if Pos 11 = F)										
Pos 11 Safety approvals											
A	ATEX / IECEx					Europe / Global					
F	FM / CSA					USA / Canada					
U	T	*	*	7	6	2	*	A	G	A	Typical identification code
T	*	*	7	6	2	*	A				Your identification code

For More Information

To learn more about Honeywell Enraf's solutions, contact your Honeywell Enraf account manager or visit www.honeywellenraf.com.

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