

X62T-VT Tank Thermometer Interface

Product Sheet

Drop-in replacement for ENRAF 762 VITO & VITO LT Interface*

Connects to all ENRAF gauges with VITO compatible option boards

Based on Exalon Delft proven X62T-HART Universal Tank Thermometer Interface

No maintenance required

Firmware upgradeable to X62T-HART protects your investment

Connect

The X62T-VT Tank Thermometer Interface is a special version of the X62T-HART. The main difference is that a subset of the HART communication has been enabled in favor of the Honeywell-Enraf 762 VITO manufacturer specific commands. This way you can replace a defective 762 VITO or VITO LT by a X62T-VT with minimal effort.

The X62T-VT has 18 combined force/sense inputs re-configured to measure:

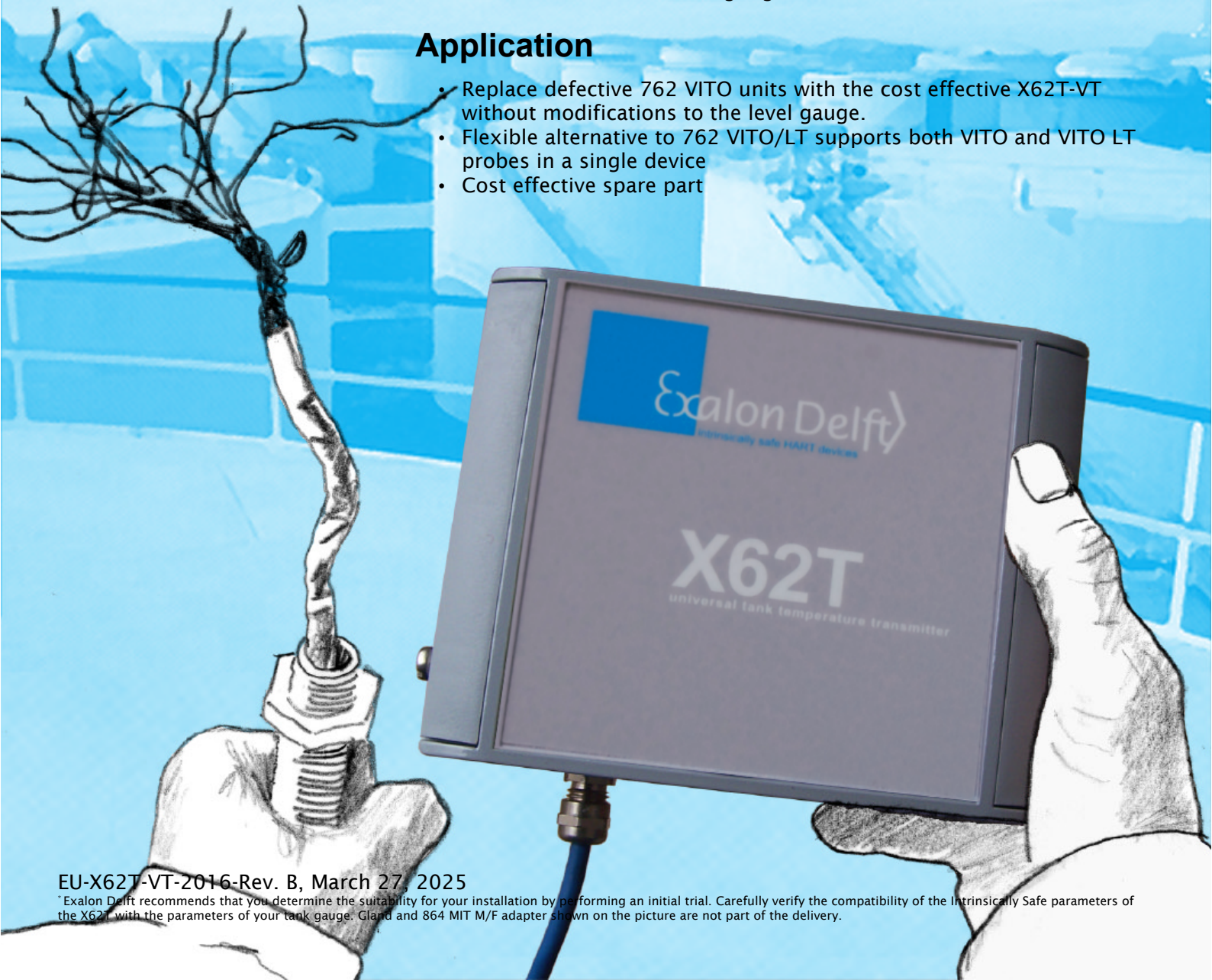
- Enraf® 864 MTT, 764 VITO MTT or 767 VITO LT
- Enraf® 766 VITO MTT + water or 768 VITO LT + water

Protect your investment

Compatibility to your future level gauge or host is maintained since the X62T-VT can be upgraded to X62T-HART to support the open HART® protocol or downgraded to X62T-MIT or X62T-MIR to support Enraf® 854 ATG/XTG as well as 873 radar gauges.

Application

- Replace defective 762 VITO units with the cost effective X62T-VT without modifications to the level gauge.
- Flexible alternative to 762 VITO/LT supports both VITO and VITO LT probes in a single device
- Cost effective spare part



Measurement and Installation

Temperature

Measuring principle	The X62 temperature inputs consists of a large multiplexer, a stable current source, A/D converter, and precision reference and test sources for voltage and resistance. The configuration of multiplexers and measurement sequences is completely handled by the X62 and depends only on the configured probe type. For the X62T-VT the probe type is fixed to the MTT type probes with selectable 9 or 16 spots, and selectable capacitive water probe.
MTT probe type	Enraf 864 MTT and 764/766/767/768 VITO MTT probes are constructed of multiple type T (CuNi - Cu) thermocouples with an additional high accuracy Pt100 built in for cold junction compensation.
Sensor order stored in EEPROM	The X62T-VT is a standalone measurement device that automatically determines the connection of the MTT wiring and stores this into it's EEPROM instead of recalculating it at each system start. This eliminates lengthy startup times at power-up or gauge reset events.
762 VITO emulation	The X62T-VT measures and calculates spot temperature independently of the host. To enable 762 VITO emulation these spot temperature are then converted back into the 762 manufacturer specific commands that allow the gauge to calculate the spot temperatures as well as Product and Vapor Temperature.

Water bottom level

Capacitance measurement	The capacitive inputs of the X62 are automatically enabled when a capacitive water probe is connected and disabled when a 5nF capacitor is connected, similar to 762 VITO behavior.
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Installation features

Galvanic separation	All transmitter inputs are galvanically separated from the gauge HART connection.
Lightning protection	The sensors connected to the X62T-VT may be installed into Zone 0. When the wires connecting the X62T-VT and the boundary of Zone 0 are shorter than 1 m, no additional surge protection is required. An internal 90V surge protection device connected to the local structure protects the HART host connection wires. When testing the isolation from ground of the gauge HART wires using voltages above 70 V, it will be necessary to temporarily disconnect the surge protection device's ground wire.
Molded module	The internal X62U module is molded in Silicone rubber to protect the circuitry from corrosion so that it's lifetime is maximized. Naturally as for all transmitters regardless of Ingress Protection rating in high humidity environments some build-up of water inside the enclosure may occur over time. If this is the case regular inspection and if necessary draining is recommended for error free operation.
Entries	The entries are compatible to those of the 862 MIT (PG16), allowing you to reuse the existing glands and Enraf G1/2 M/F probe adapter. When replacing an 862 MIT unit by a X62T-VT carefully check if seals or O-rings need to be replaced. When replacing a 762 VITO an Exalon Delft G1/2 M/F adapter can be ordered to connect the MTT the X62T-VT enclosure.
Enclosure	The enclosure of the X62T-VT is IP65 depending on proper installation.

Mechanical

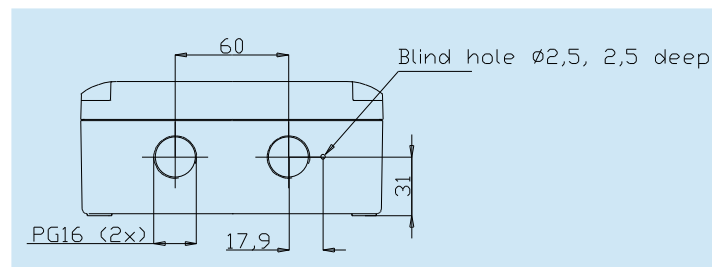
Cable entry	Suitable for PG16 glands and adapters (not part of delivery)
Thermometer connection	G1/2 suitable for connection to Enraf 864 MIT or Exalon Delft M/F adapter (not part of delivery)
Dimensions (X62 enclosure)	160 x 130 x 70 mm (l x w x h) See ordering options below.

Environmental

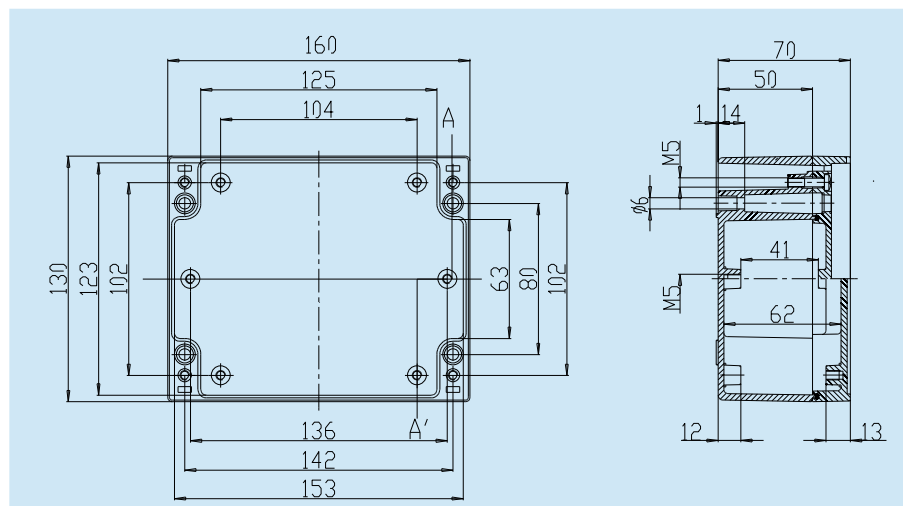
Operating temperature	-40 °C ... +60 °C
Ingres Protection	IP65 with proper installation
Loop voltage	12V ... 24V @ 4 mA 14V ... 24V @ 16 mA
Safety	II 2(1) G Ex ia IIB T4 according to ATEX for connection to an ATEX certified power supply with Ex d [ia] or [Ex ia] only
Input parameters	Supply/Output circuit: $U_i = 30V$, $I_i = 270\text{ mA}$, $P_i = 1.2W$, $C_i = 5nF$, $L_i = 0$ Sensor/Input circuit: $U_o = 5.9V$, $I_o = 62mA$, $P_o = 92mW$, $C_o = 900\mu F$, $L_o = 30mH$
Lightning protection	According to NEN-EN-IEC 60079-25
Galvanic separation	60V according to NEN-EN-IEC §6.3.3 and Table 5 Withstands 500 V isolation test.

Temperature (excluding sensor)

Range	-200 °C / +250 °C
Accuracy	$\pm 0.1\text{ °C}$ (typical, reference conditions)
Resolution	$\pm 0.05\text{ °C}$



X62T-VT/H Entries



Enclosure



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