

X62T-MIR Tank Thermometer Interface

Product Sheet

Drop-in replacement for ENRAF 862 MIR Interface*

Connects to all ENRAF gauges with HPU, OPU or MPU option boards

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

No maintenance required

Software upgradeable to X62T-HART protects your investment

Connect

The X62T-MIR Tank Thermometer Interface is a special version of the X62T-HART. The main difference is that the HART communication has been disabled in favor of the Honeywell-Enraf 862 MIR protocol. This way you can replace a defective 862 MIR by a modern X62T-MIR with minimal effort. Even the entries to the enclosure have been made compatible to the 862 MIR so you can reuse the adapters and glands from the current installation.

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

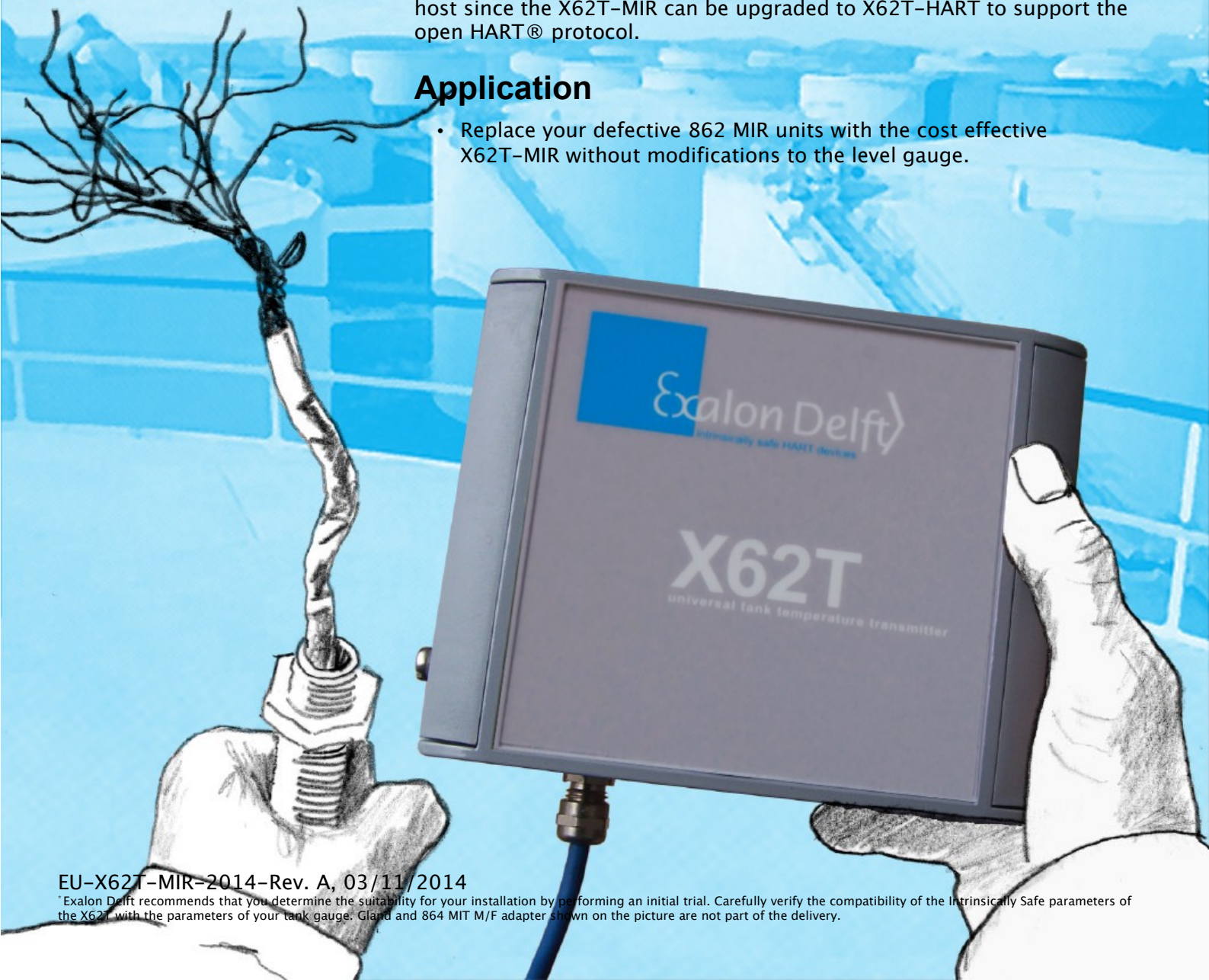
- Enraf® 863 MRT

Protect your investment

You won't have to worry about future compatibility to your level gauge or host since the X62T-MIR can be upgraded to X62T-HART to support the open HART® protocol.

Application

- Replace your defective 862 MIR units with the cost effective X62T-MIR without modifications to the level gauge.



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-MIT the probe type is fixed to the MTT type probes with 16 spots.
MRT probe type	Enraf 863 MRT probes are constructed of multiple CU90 RTD's. The X62T-MRT measures the resistance values and transmits these to the gauge. Temperature conversion is then performed in the gauge.
Number of elements	Unused MRT inputs need to be tied to GND and are transmitted as 0Ω resistors.
862 MIR emulation	The X62T-MIR measures and calculates averaging temperatures independently of the host. To enable 862 MIR emulation these averaging temperature are then converted back into the digital MIR signals representing resistance that allow the gauge to calculate the average temperatures as well as Product and Vapor Temperature.

Water bottom level

Capacitance measurement	The capacitive inputs of the X62 have been disabled in the X62T-MIR to remain compatible with the 862 MIR. These inputs can be re-enabled by upgrading the software to X62T-HART.
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Installation features

Galvanic separation	All transmitter inputs are galvanically separated from the MIT host connection.
Lightning protection	The sensors connected to the X62T-MIR may be installed into Zone 0. When the wires connecting the X62T-MIR 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 MIT host connection wires. When testing the isolation from ground of the MIT host 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 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 863, allowing you to reuse the existing glands and G1/2 M/F probe adapter. When replacing an 862 MIT unit by a X62T-MIT carefully check if seals or O-rings need to be replaced.
Enclosure	The enclosure of the X62T-MIR is IP65 depending on proper installation.

Mechanical

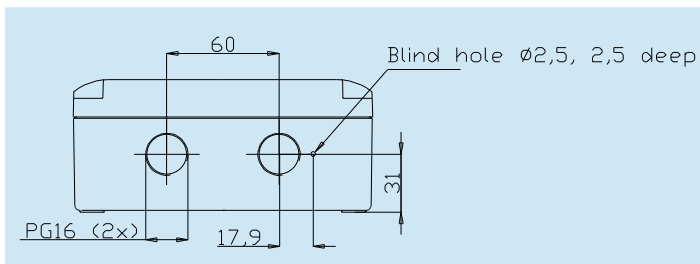
Cable entry	Suitable for PG16 glands and adapters (not part of delivery)
Thermometer connection	G1/2 suitable for connection to Enraf 863 MIT M/F adapter (not part of delivery)
Dimensions (X62 enclosure)	160 x 130 x 70 mm (l x w x h) See ordering options below.

Environmental

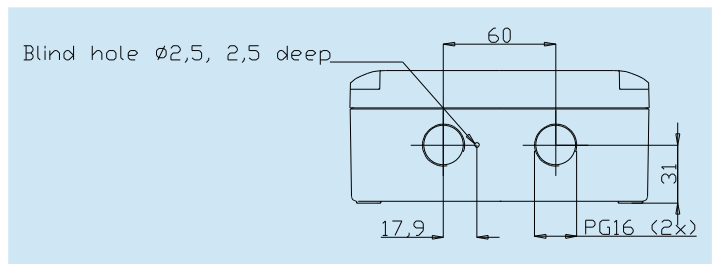
Operating temperature	-40 °C ... +70 °C
Ingres Protection	IP65 with proper installation
Loop voltage	15V ... 20V (@ 5-15mA)
Safety	II 2(1) G EEx ia IIB T4 according to ATEX for connection to an ATEX certified power supply with Ex d [ia] or [Ex ia] only
Input parameters	Supply/Output circuit: $U_i = 30V$, $i_i = 270\text{ mA}$, $P_i = 1.2W$, $C_i = 5nF$ 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)

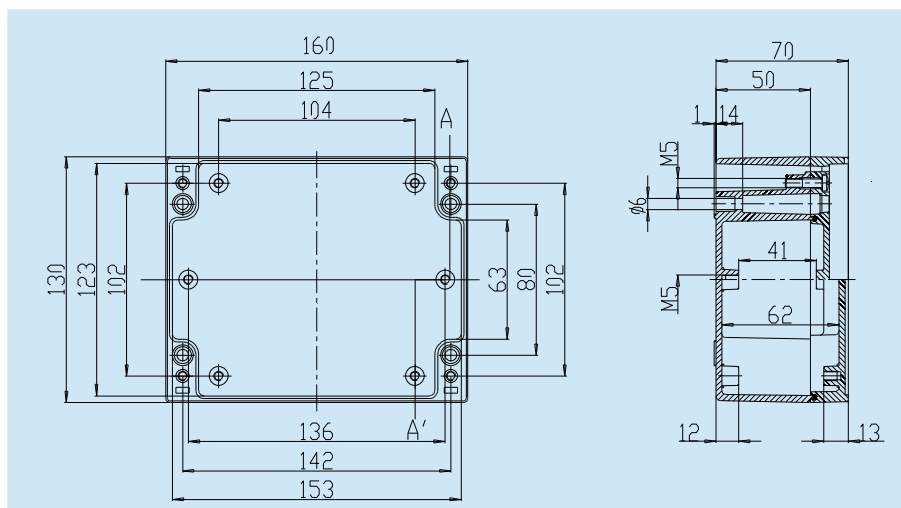
Range	10Ω - 300Ω (temperature range depending on the selected type in the gauge)
Accuracy	±0.1 °C (typical, reference conditions)
Resolution	±0.05 °C



X62T-MIR/H



X62T-MIR/W



Mounting holes