

TRANBERG® WIRELESS THERMOSTAT

Tranberg ThermoConnect TTC C / TTC CL

Trusted Wireless



The controller & controller limiter thermostat is an electronic heatracing control unit featuring the benefits of local control and the capability for central monitoring. The controller & controller limiter control unit can be used for single phase circuits up to 16 A and is approved for use

in hazardous areas.

The controller limiter is equipped with an IEC 61508-SIL 2 classified safety temperature limiter on board (NGC-20-CL-E). It measures the temperature with up to two RTD(s) connected to the unit. The Safety temperature limiter has a dedicated tem-

perature input. The controller & controller limiter unit is equipped with a RS-485 interface. Through this interface up to 247 units can be networked to one serial port of standard PC running Tranberg PlantConnect™

Application

- Hazardous areas
- Chemical and petrochemical industries
- Industrial plants (for frost protection or temperature maintenance)
- According to NORSOK requirements
- All areas where thermal processes need to be prevented from overheating (controller limiter only)

Features and benefits

- Ready for Tranberg PlantConnect™ (Remote control and monitoring).
- Two RTD channels for temperature controller.
- High ingress protection. IP66.
- Manufactured in acid proof stainless steel (AISI 316L).
- Remote control and monitoring capabilities via.
- Stand alone unit which will operate independent of remote control and monitoring in case of communication loss Automated heat-tracing system check.
- Switch enable isolation of heating cables for maintenance and inspection.
- Wireless thermostat can extend modbus coverage to areas which are difficult and costly to install bus cables in, and may be a more cost effective alternative to cables in field.
- Ex tablet available for field connection via bluetooth



Technical Data

Type Designation:	Stahl 8150/5, part number 81502357 (controller) / 81502358 (controller limiter)	
Material:	AISI 316L / EN 1.4404	
Voltage Range:	100-254V AC +/-10%, 50/60Hz	
Ex-Protection:	Ex II 2 G Ex db eb ib mb IIC T4 Gb	
Maximum Load:	16A	
Ingress protection:	IP66	
Weight:	35,5 kg	
Operating temperature:	-40° to +45°C	
Max. wire termination (with end sleeve):	Power in:	Max. 6mm ²
	Heating Cable (Power Out):	Max. 4mm ²
	Earth Terminals:	Max. 10mm ²

Approvals and certificates

- PTB 09ATEX1109

TRANBERG STAHL

THE STRONGEST LINK.

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Trusted Wireless Features

Robust and interference-free communication.

Trusted Wireless 2.0 uses the so-called FHSS (Frequency Hopping Spread Spectrum) method. The technology uses a selection of up to 127 channels from the entire spectrum of the frequency band, which it hops between on the basis of a pseudo-random pattern. This increases the robustness of the communication.

Trusted Wireless 2.0 therefore enables particularly good coexistence management of various wireless systems. Through the use of different RF (radio frequency) bands, several Trusted Wireless 2.0 systems can be operated in parallel. The option also exists to block particular channels selectively (black listing), e.g., in order to be able to operate WLAN systems in parallel without performance limitations.

Reliable transmission

In the case of a proprietary technology such as Trusted Wireless 2.0, the protocol is not publicly accessible, which means the technology is extremely well protected against attack. In addition, further security mechanisms have been implemented: the 128-bit data encryption ensures that data packets that could be intercepted in theory cannot be understood. Integrity verification checks the sender's authenticity and rejects messages that have been altered.

Key Facts Trusted Wireless

Network structure	Mesh network 1 master up to 249 slaves
Standard	Proprietary by Phoenix Contact
Transmission method	Frequency hopping (FHSS)
Application	Low/medium data rate, large networks, short to medium distance
Frequency	2,4Ghz (optional 868Mhz, 900Mhz)
Latency time (typical)	0,1->2s
Distance (best case)*	M<= 5 km (2,4Ghz) Standard <= 20 km (868Mhz) Optional, not standard Tranberg TTC <= 32 km (900Mhz) Optional, not standard Tranberg TTC

* Distance specified is best case. Distance will be affected by: line of sight, type of antenna used and the configured data rate.



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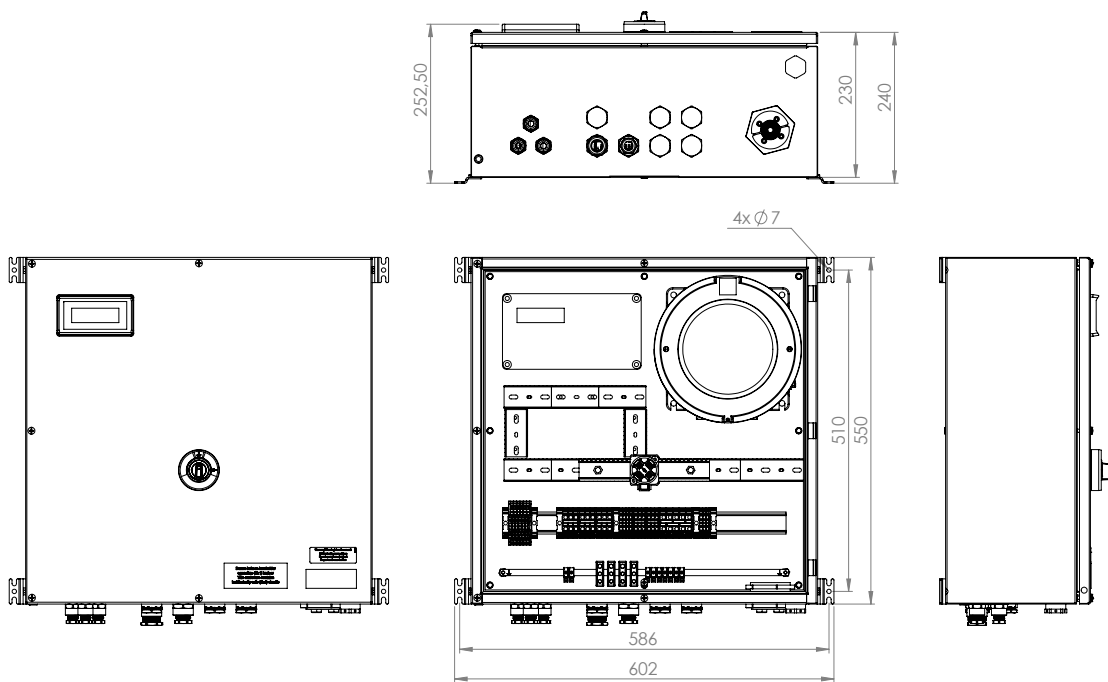
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Description	Part No.
Tranberg ThermoConnect - TTC/C/Trusted Wireless - Controller - w/1x Switch 16A 2pol	81502357
Tranberg ThermoConnect - TTC/CL/Trusted Wireless - Controller/Limiter - w/1x Switch 16A 2pol	81502358

Accessories	Part No.
Raychem Temp-sensor MONI-PT100-260/5 (Ø6x60mm element) w/5 meter D4,5mm PTFE Cable and M16 Gland	50239111
Raychem Temp-sensor MONI-PT100-260/10 (Ø6x60mm element) w/10 meter D4,5mm PTFE Cable and M16 Gland	50239112
Raychem Temp-sensor MONI-PT100-260/25 (Ø6x60mm element) w/25 meter D4,5mm PTFE Cable and M16 Gland	50239113
Connection kit for temperature element PT100, Wall mounted	9178045
PT100 Temperature sensor replica (Fixed 100 ohm resistor)	9179182

Dimensions



106A118182



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