



IMPORTANT!

Read this instruction carefully before installing the product

TRANBERG

STAHL

THE STRONGEST LINK.

TRANBERG® WIRELESS THERMOSTAT

Trusted Wireless

TTC C Controller / TTC CL Controller Limiter

For 81502357 & 81502358

USER MANUAL

R. STAHL TRANBERG AS

Main office | Strandsvingen 6 | N-4032 Stavanger, Norway | T +47 51 57 89 00 | E info.no-st@r-stahl.com | stahl-tranberg.com
Oslo office | Luhrtoppen 2 | N-1470 Lørenskog, Norway | T +47 24 08 44 10 | E info.no-os@r-stahl.com | stahl-tranberg.com

USER MANUAL

Trusted Wireless

TTC C Controller / TTC CL Controller Limiter

General Information

Manufacturer

R. STAHL TRANBERG AS

Web stahl-tranberg.com

Main office:

Strandsvingen 6
N-4032 Stavanger
Norway

T +47 51 57 89 00

E info.no@r-stahl.com

Oslo office:

Luhrtoppen 2
N-1470 Lørenskog
Norway

T +47 24 08 44 10

E info.no-os@r-stahl.com

About these operating instructions:

- Read these operating instructions, especially the safety notes, carefully before use.
- Observe all other applicable documents (See also further documents section).
- Keep the operating instructions throughout the service life of the device.
- Make the operating instructions accessible to operating and maintenance personell at all times.
- Pass the operating instructions on to each subsequent owner or user of the device.

Document no: TUM6959

R. Stahl Tranberg Revision: 0

1. Safety

1.1 General

Only qualified personel are allowed to perform installation and maintenance tasks to this equipment.

The junction box is equipped for termination of heat tracing cables and is ready for installation when leaving the production facilities of R. Stahl Tranberg AS.

Changes made to the product which do not confirm to the approvals of this equipment, is a safety violation.

The manufacturer is under no circumstances responsible for personal injuries, death or any other damage caused by such activities.

Any damage done to the equipment during transportation is not the responsibility of R. Stahl Tranberg AS.

If the content is not complete, file a claim to the producer immediately.

2. Maintenance

2.1 Maintenance

- Maintenance according to national regulations and company practice.
- Before opening the junction box make sure that the power is disconnected.
- Servicing the junction box is done by checking the intactness of the junction box, gasket and glands. If necessary lubricate the lid bolt threads with grease type Renolit Unitemp 2 from Fuchs.
- If repair or overhaul is necessary this may only be done with Tranberg spare parts.
- Modification of the JB or change of design are not permitted, except for installing additional glands and terminals according to the approval of the JB.

3. Safety Precautions

Only qualified personel are allowed to perform installation and maintenance tasks to this equipment.

The junction box is equipped for termination of heat tracing cables and is ready for installation when leaving the production facilities of R. Stahl Tranberg AS.

Changes made to the product which do not confirm to the approvals of this equipment, is a safety violation.

The manufacturer is under no circumstances responsible for personal injuries, death or any other damage caused by such activities.

Any damage done to the equipment during transportation is not the responsibility of R. Stahl Tranberg AS.

If the content is not complete, file a claim to the producer immediately.

4. Installation

4.1 Special Conditions For Safe Use

- Cable entry devices shall be suitably certified and maintain the IP66 minimum of the enclosure.
- Unused cable entries must be filled with suitable certified stopping plugs.
- Not more than one single or multiple strand wiring lead shall be connected into either side of the terminals.
- Leads connected to the terminals shall be insulated for the appropriate voltage and this insulation shall extend to within 1 mm of the metal of the terminal throat.
- When used in dust atmospheres any dust layers occurring shall have a maximum depth of no greater than 50 mm.
- The max permitted current of the Non IS alarm contacts is 3A.
- The earth pillar adjacent to the RTD connectors must be used only for RTD cable screens.
- The external RTDs must be capable of withstanding a 500V test to earth.

USER MANUAL

Trusted Wireless

TTC C Controller / TTC CL Controller Limiter

Assembly of wall mounted type fig. 01

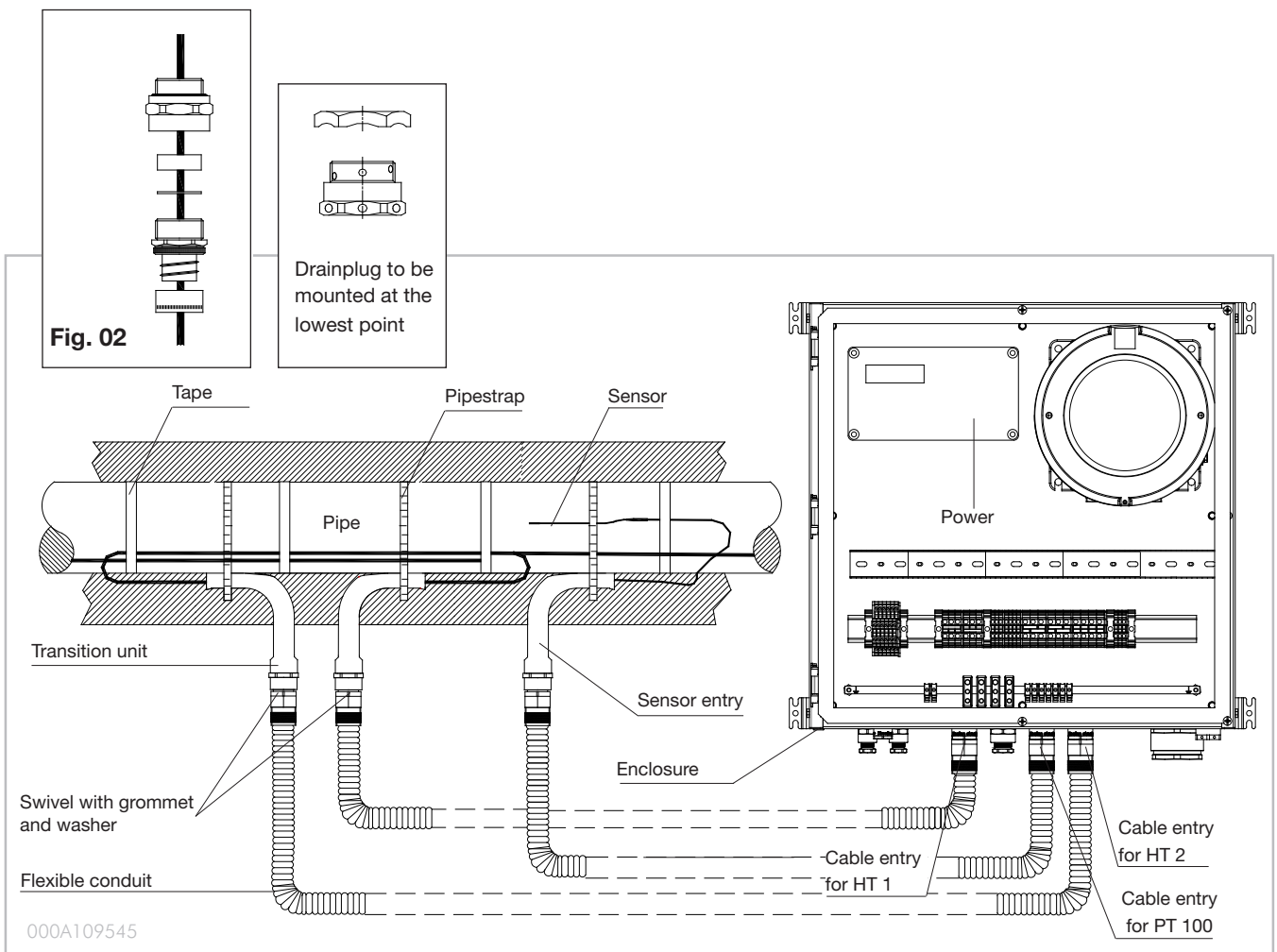
- Mount the thermostat junction box by at least 4 pcs. M6 bolts on a wall or on a proper supported rack.
- Remove dust protection or stopping plugs and install gland to be used. For holes not in use these must be inserted with stopping plugs. Only certified cable glands and blinds may be used. Gland has to be chosen according to cable diameter used.
- Strap the transition unit to pipe with pipestraps.

- Assembly the flexible conduit according to the special gland. see fig. 2

Temperature sensor

- The controller & controller limiter delivers up to 20 Ohm lead resistance compensation. Therefore any type of three wire DIN IEC 751 Class B PT100 resistance temperature devices can be used. Two temperature inputs are allocated to the temperature controller. The third is allocated for the temperature limiter

- The sensor should be strapped in good thermal contact with the pipe or equipment. In addition to general mechanical protection, the sensor should be protected so that the thermal insulation cannot be trapped between the sensor and the heated surface. The sensor is normally fixed to pipe or object by use of aluminium tape. Other methods could be thermowells suitable for the application.



RTD connections

Sensor connections may be extended using a three core

shielded or braided cable with a maximum length of up to

150m(3x1.5 mm² minimum required). The screen or braid

of the extension cable is to be grounded at the JB end only.

Termination

In order to maintain the mode of protection, the conductors will have to be connected with special care.

The isolation must reach up to the terminals and the conductor must not be damaged. Termination of heat tracing cables must be according to cable specification given by supplier of these.

Tighten all terminals, also those vacant.

Reinstall lid and tighten bolts to 4,5 Nm.

Over tightening may impair the protection category.

Area of use for TTC C/CL

Safety temperature limiters are required in all areas where thermal processes need to be prevented from overheating. In case of temperature upset they will put the system into a safe operating condition.

The safety function will invoke in the event of a fault, when the permissible temperature limit is reached or in case a fault occurs (such as probe break, probe short-circuit, component failure, or supply failure) even when the process conditions are within the permissible temperature range.

In all these cases the equipment is immediately switched off. If the fault is no longer present, then the safety temperature function must be manually reset before the unit goes back to normal operation.

The output of the unit will only be enabled when all conditions are safe; meaning that the temperature measured by the limiter RTD has dropped below the limiter set point and when there are no other faults being detected. In other words, the unit will only reset after the normal operating conditions have returned.

Communication and networking.

Tranberg PlantConnect™ Software is a Scada system for control and monitoring of Tranberg thermal units.

The controller& controller limiter units can be networked to **Tranberg PlantConnect™ Software via RS 485 serial interface.**

5. Technical Data

5.1 Technical Data

Type designation:	Stahl 8150/5, part number 81502357 (controller) / 81502358 (controller and limiter)	
Voltage range:	100-254V AC +/-10%, 50-60 Hz	
Maximum load:	16A	
Ingress protection:	IP66	
Weight:	35,5kg	
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



R. STAHL TRANBERG AS

Main office | Strandsvingen 6 | N-4032 Stavanger, Norway | T +47 51 57 89 00 | E info.no-st@r-stahl.com | stahl-tranberg.com

Oslo office | Luhrtoppen 2 | N-1470 Lørenskog, Norway | T +47 24 08 44 10 | E info.no-os@r-stahl.com | stahl-tranberg.com