



Stauff Programmable Temperature Transmitter

STC

User Manual

Version 1.0



Contents

1. Introduction.....	3
2. Transmitter Description.....	4
3. Start of Operation.....	4
4. Programming.....	5
5. Technical Data.....	7
6. CE Conformity.....	8
7. Maintenance.....	8
8. Disposal.....	8

1. Introduction

Thank you for purchasing a Stauff model STC programmable temperature transmitter. We appreciate your business and look forward to working with you.

These operating instructions have been created for the most general user of this product. Each and every application can be different, and if you feel that these instructions do not meet your requirements please feel free to contact us, and we will be happy to assist you.

Scope

These instructions apply to the STC units with a programmable 4-20mA output.

Safety Instructions and Warnings

Please read these instructions before installation and startup. Failure to follow these instructions will make all warranty claims null and void.

- Only qualified persons are permitted to install the equipment and make the electrical connection. The correct tools must always be used.
- Please ensure that the pressure switch is suitable for your application.
- Under regular working conditions the surface temperature of the housing can become warmer than the ambient temperature. High ambient temperatures can result in surface temperatures which make a protection against contact necessary.
- Please note that the STC unit can be effected by or damaged by strong magnetic fields.
- The STC unit must not be opened, painted (coated) or modified.
- The STC unit must not be used if damaged. If damaged during operation, suitable measures must be taken to prevent persons or property from being put at risk by the damaged unit.
- The STC unit must only be repaired by Stauff

2. Transmitter Description

The STC programmable temperature transmitter unit will have one output option:

1. One programmable 4-20mA output

The 4-20mA output can be programmed by the USB interface and software or by request at the time of order.

Correct Purpose of Use

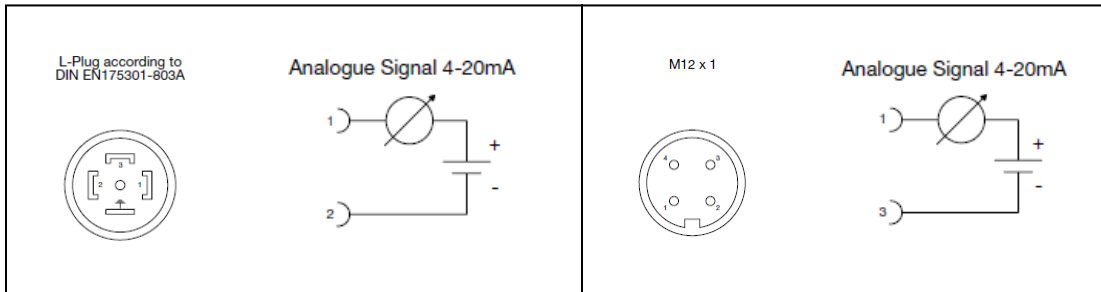
The equipment is only authorized for proper use for its correct purpose. Failure to do this will invalidate all warranties and will release Stauff Corporation from all responsibility.

3. Start of Operation

The accepted technical regulations must be complied with during installation and dismantling. The system component must be depressurized prior to installation and dismantling. All safety regulations must be complied with, particularly when working on an electrical system. All connections to external electrical equipment must be made in accordance with technical regulations.

- The power to the system must always be switched off when the STC unit is being connected.
- The electrical connection is made via the DIN right angle plug or the M12 plug.
- The plug-in electrical connection must be protected in accordance with the manufacture's specifications.

Wiring diagram



4. Programming

The STC unit is programmed prior to installation by way of the USB interface and programming software.



In order to set the measuring range the following steps must be taken

1. The plug connector must be removed
2. The measuring insert has to be taken out of the housing
 - a. Electronic assemblies are at risk from ESD. (electrostatic discharge) Precautionary measures are to be taken to ensure protection during handling.
3. The USB connection must be established
 - a. The USB driver must be installed prior to programming
4. Launch the programming software on your PC
5. Select the language preference



The message “PT-C is Connected” appears when the device is properly connected. The available measuring range is displayed with the chosen temperature unit by selecting the “Read Parameter” button. The default values are the maximum range of the sensor. (-50 to +392°F) The sensor’s current temperature is displayed as well.

The values for “Tmin” and “Tmax” may be altered within the preset measuring range limits. These values are written over to the device by selecting the “Write Parameter” button.

When the desired measuring range has been saved you may simply disconnected the USB connection and reassemble the STC unit.

The STC Programming Software

Temperature at 4mA

Temperature at 20mA

Temperature displayed in °F or °C

Write parameter to STC unit

Read parameter from STC unit

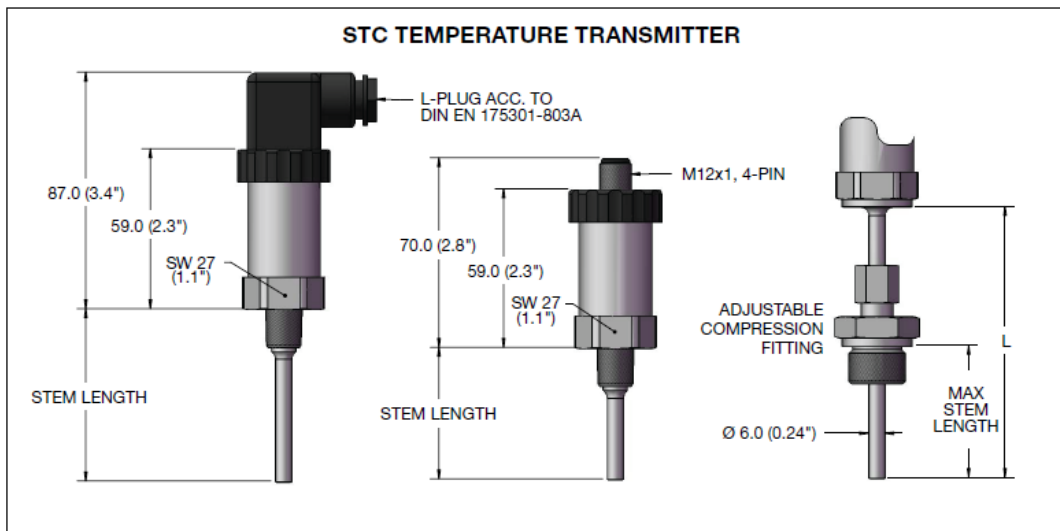
Display current temperature

5. Technical Data (Includes data for the fixed output version)

Specifications			
Materials	Housing	Stainless Steel 1.4571 (316 Ti)	
	Process Connection		
	Stem		
Output Signal and Supply Voltage		Signal Output	Supply Voltage
		4-20mA, 2 wire	10-30 V DC, ripple <10%
		0-10 V, 3 wire	12-30 V DC, ripple <10%
Error Signal		23mA Sensor Burnout	
		3.3 mA Sensor Short Circuit	
Accuracy	STC-0/XXX	0.5% of Measuring Range	
	STC-MIN/MAX	0.2% (Related to Maximum Temperature Range)	
Temperature Range		-50°C up to +200°C (-58°F up to 392°F)	
Measuring Range (selected range)		Minimum Range	Maximum Range
	STC-0/XXX	50k	250k
	STC-MIN/MAX	30K	Temperature Range
Thread Connections		1/4 NPT, 1/2 NPT, 1/4 BSP, and 1/2 BSP	
Electrical Connections		L-Plug acc. To DIN EN 175301-803 form A	
		M12x1, 4-pin	
Stem Length and Pressure Ranges ¹	STC-0/XXX	50 to 500mm: up to 40 BAR [580 PSI]	
	STC-MIN/MAX	50 to 1000mm: up to 40 BAR [580 PSI]	
Ambient Temperature		85°C [185°F] Max	
Storage Temperature		-40°C up to +85°C [-40°F up to 185°F]	
EMC-Resistance		Emitted Interference acc. DIN EN 61326	
		Breakdown Effect acc. To DIN EN 61326	
Protection Class		IP 65 with L-Plug Connection	
		IP 67 with M12x1 Connection	
Weight		Approx 0.14 kg/0.31lbs (Dependant on Stem Length)	

1 - Pressure ranges refer to static pressure.

Dimensional Data



6. CE - Conformity

The STC programmable temperature transmitter complies with all requirements of EN 61 326 with regard to interference emission and immunity for use in industrial areas and with the use of shielded cables. We recommend the use of shielded cables. Installation and cable routing must be carried out correctly in order to maintain the effective protection from electromagnetic interference.

7. Maintenance

The STC unit described in this manual is maintenance free. This unit will operate in a stable state for long periods, thus regular adjustment is not required.

Removal of this unit is recommended if any malfunctions occur. This device is not to be repaired by the customer. It is strongly recommended that the unit be replaced or returned to Stauff for additional testing.

8. Disposal

The packaging and end user parts must be disposed of in accordance with the regulations of the country in which the device is installed.

User Notes



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Note – This manual is subject to alteration without notice