

STT 3000 Series STT250 / 150 SURGE PROTECTION DEVICE

Honeywell Part Number : 46188660-001

EN2I-6061 07/00

PRODUCT SPECIFICATION SHEET

Introduction

This device is designed to give the Smart Temperature Transmitter maximum protection against surges such as those generated by lightning strikes. It mounts right on the top of the STT250 or STT150 terminal block, providing easy field wiring and also protection for the integral meter if used. The compact mounting allows the use of a variety of housings including the popular Honeywell explosion proof field mount housing (Table II selection "E - "). The device can be used in both intrinsic safety and flame/explosion proof applications, refer to the STT250/ STT150 safety certificates for the detailed specifications.



Fig. 1 STT250 module with Surge Protection

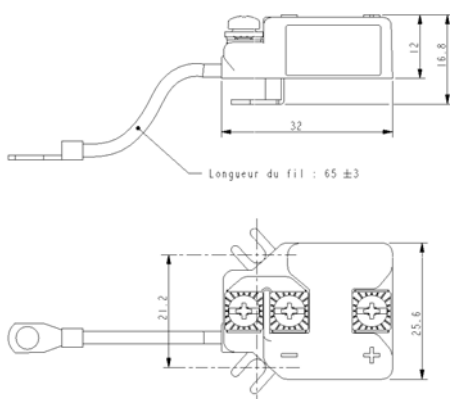
Specifications

The surge protection is based on a gas-filled discharge tube and solid state electronics. It does not affect the transmitter wiring, since less than 1 Ohm is added to the loop resistance. The protection is designed to limit the voltage that can occur between lines and between lines and earth, therefore the unit will not pass a di-electrical strength test.

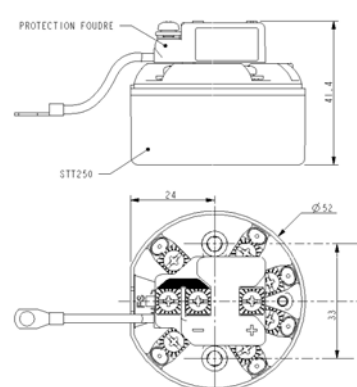
Parameter *	Reference Condition	Rated Condition	Operative Limits	Transportation And Storage
Ambient temperature °C	23 °C ± 2	-40 to +85	-40 to +85	-50 to +100
Humidity % RH	10 to 55	5 to 95	5 to 100	5 to 100
Supply voltage	Up to 35 Vdc at the surge protection terminals			
Series resistance	Less than 1Ω			
Vibration	Maximum of 4g over 15 to 200Hz			
Shock	Maximum of 40g.			
Leakage current	0,1 microAmp (0,3 microAmp over full temperature range)			
Impulse rating				
8/20 us waveform	3.000 Amps (10 strikes)	10.000 Amps (single strike)		
Material	Red coloured ABS, all electronic part are encapsulated in poly-urethane potting material			
Connection screws	M3 Nickel plated brass			
Weight	20 g			

* All specifications are gives for reference condition unless otherwise stated

Surge Protector Dimensions



STT250 with Surge Protector (STT150 similar)



Installation

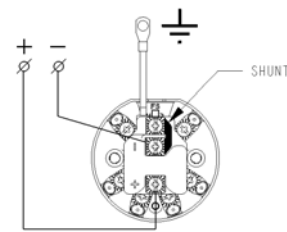
If an indicating meter is used, remove the shunt on the surge protection. In all other cases, the shunt must be present.

- Remove the cover/cap of the housing (if applicable). The device fits on the top of the transmitter module terminal block and the transmitter output screws (+ and -) fix mechanically the device.
- Attach the grounding wire to the ground screw in the housing. Good grounding is mandatory for the correct functioning of the protection.
- If an indicating meter is used, wire according to the drawings beside.
- Connect the 4 – 20mA loop to the + and – terminal screws of the surge protection and close the cap of the housing.

Maintenance

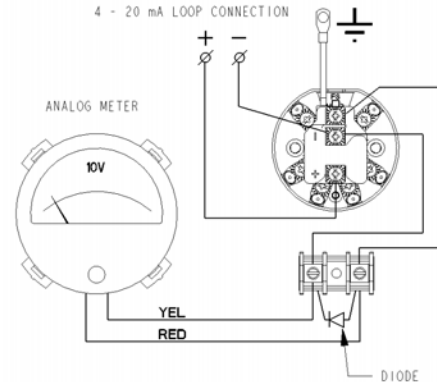
The unit is designed to give a long “normal” service life. However, if exposed to a large number of high energy transients beyond the capability of the unit, it may fail. The unit has been designed so that, under excessive surge conditions (more than 10 KA), it should fail, protecting the transmitter. If the unit has failed, it can be replaced in the field – the process for removal in the reserve of that for installing the unit. If a replacement 46188660-001 is not immediately available, it is possible to bypass the unit by wiring directly to the transmitter; however, it should be remembered that, in this case, the transmitter will be unprotected from surges.

WITHOUT METER



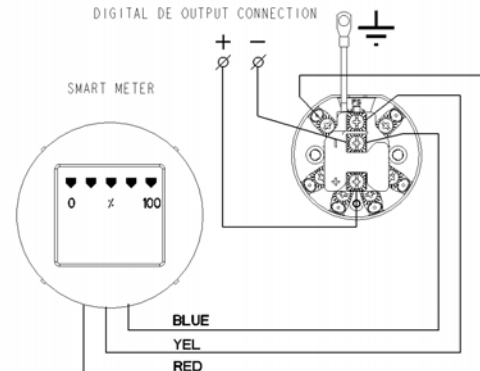
OPTIONAL INTEGRAL ANALOG METER

4 – 20 mA LOOP CONNECTION



OPTIONAL SMART METER

DIGITAL DE OUTPUT CONNECTION



Honeywell

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