

Sensor Termination Box/Separation Kit Model STB Series

APPLICATION

The Model STB Series Termination Box/Separation Kit is intended for use in hazardous locations. It is recommended for ease of sensor wiring and also allows the sensor to be mounted remotely from the associated transmitter/control device. The STB is available in aluminum or stainless steel and contains the required connectors for proper field wiring. Models are available to accommodate CGS combustible gas sensors, C706X electrochemical sensors, NTMOS, GT3000 gas sensors, as well as components of the Eagle Quantum Premier® System.

SPECIFICATIONS

TERMINALS—

Rated for 14-22 AWG or 2.5-0.33 mm² wire.

ELECTRICAL RATING—

Input Voltage: 18 to 36 Vdc.

Input Power: 0.5 watt maximum.

Output Power: 20 watts maximum load.



TEMPERATURE RANGE (See Certifications)—

Operating: -40°F to +167°F (-40°C to +75°C).

Storage: -67°F to +185°F (-55°C to +85°C).

HUMIDITY RANGE—

0 to 99% RH, non-condensing.

THREAD OPTIONS—

3/4 inch NPT, M25 or M20.

WIRING—

Refer to Figure 1 for examples of Model STB Termination Boxes in various wiring configurations.

DIMENSIONS—

See Figure 2.

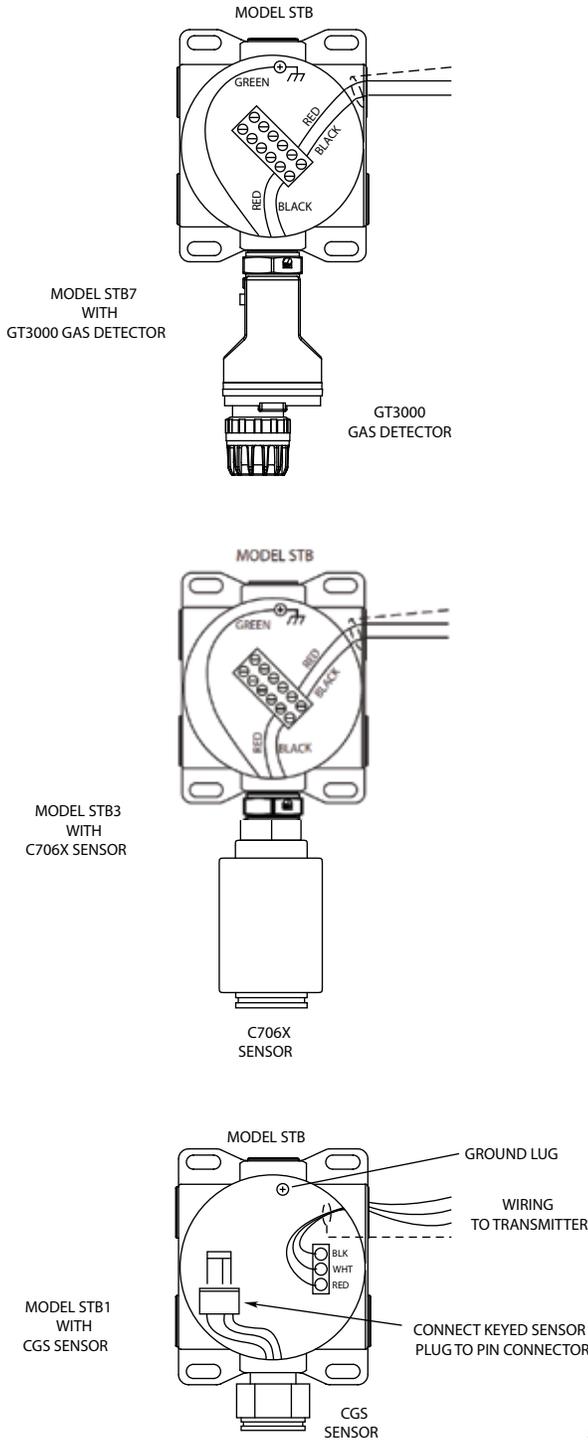


Figure 1—Examples of Typical STB Wiring

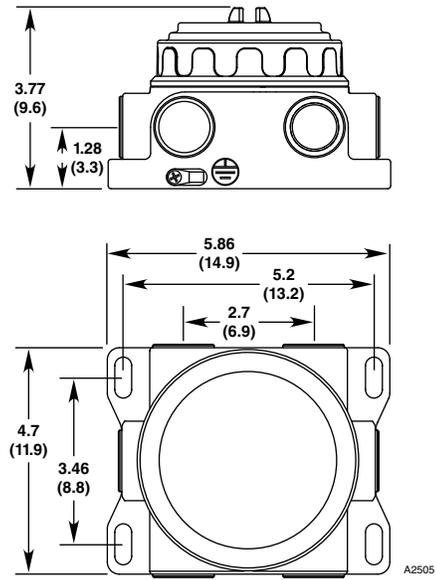


Figure 2—Dimensions of STB Termination Box in Inches (CM)

CERTIFICATION—

FM: Class I, Div. 1, Groups B, C & D (T6)
Class I, Div. 2, Groups A, B, C & D (T4)
Class II, Div. 1, Groups E, F, & G (T6)
Class II, Div. 2, Groups F, & G
Class III
Tamb = -40°C to +75°C
Enclosure NEMA/Type 4X.



CSA: Class I, Div. 1, Groups B, C & D
Class I, Div. 2, Groups A, B, C & D (T4A)
Class II, Div. 1, Groups E, F, & G
Class II, Div. 2, Groups F, & G
Class III
Tamb = -40°C to +75°C
Enclosure NEMA/Type 4X.



ATEX: **CE** 0539 **Ex** II 2 G
Ex II 2 D
Ex db IIC T4-T6 Gb
Ex tb IIIC T65°C...T130°C Db
EN 60079-29-1
DEMKO 02 ATEX 131324X
T6 (Tamb -55°C to +60°C)
T5 (Tamb -55°C to +75°C)
T4 (Tamb -55°C to +125°C)
T65°C (Tamb -25°C to +60°C)
T80°C (Tamb -25°C to +75°C)
T130°C (Tamb -25°C to +125°C)
IP66.



* Type 3 not CE compliant

EN Standards: EN 50270:2015
EN IEC 60079-0:2018
EN 60079-1:2014
EN 60079-31:2014
EN 60529: 1991+A1:2000
EN 60079-29-1:2016.

IECEX: IECEX UL 21.0019X
Ex db IIC T4-T6 Gb
Ex tb IIIC T65°C...T130°C Db
T6 (Tamb -55°C to +60°C)
T5 (Tamb -55°C to +75°C)
T4 (Tamb -55°C to +125°C)
T65°C (Tamb -25°C to +60°C)
T80°C (Tamb -25°C to +75°C)
T130°C (Tamb -25°C to +125°C)
IP66.



IEC Standards: IEC 60079-0: 7th Edition
IEC 60079-1: 7th Edition
IEC 60529, 2.1.ed.+Corr. 1
IEC 60079-31: 2nd Edition
IEC 60079-29-1: 2nd Edition

Russia: VNIIFTRI
CERTIFICATE OF CONFORMITY to
TP TC 012/2011
1ExdIICT6/T5/T4 IP66
T6 (Tamb -55°C to +60°C)
T5 (Tamb -55°C to +75°C)
T4 (Tamb -55°C to +125°C).



INMETRO: UL-BR 15.0314X
Ex db IIC T4-T6 Gb
Ex tb IIIC T65°C...T130°C Db
T6 (Tamb -55°C to +60°C)
T5 (Tamb -55°C to +75°C)
T4 (Tamb -55°C to +125°C)
T65°C (Tamb -25°C to +60°C)
T80°C (Tamb -25°C to +75°C)
T130°C (Tamb -25°C to +125°C)
IP66.



Performance Testing to EN60079-29-1

The measuring function of the Sensor Termination Box, STB Series, according to Annex II paragraph 1.5.5, 1.5.6 and 1.5.7 of the Directive 2014/34/EU, is covered in this EC-type Examination Certificate in the following configurations:

1. Controller Model EQ3XXX with EQ22xxDCUEx and STB and CGS (tested as a gas detection system with methane applied to the CGS).
2. UD10 and AV10 Universal Display with CGS.
3. UD30, AV30, CTX10, and UD30 with CGS Universal Display Unit.

Special Conditions for Safe Use (X):

The Sensor Termination Box model STB has an ambient temperature rating for performance of -55°C to +75°C for Zone 1, and -25°C to +75°C for Zone 21 (T5).

See CERTIFICATION section of this manual for the ambient ranges for all temperature codes.

WARNING

Always ensure that the detector/termination box hazardous (classified) location ratings are applicable for the intended use.

Do not open the box when an explosive gas atmosphere may be present.

To avoid a potential electrostatic discharge (ESD), the painted surface of the junction box should only be cleaned with a damp cloth.

Installation Instructions

The field wiring connections in the terminal compartment are IECEX certified and accept wiring diameters from 14 AWG–22 AWG or 2.5 mm²–0.33 mm².

The cable entry devices shall be certified in type of explosion protection flameproof enclosure “d” for use with the terminal compartment in type of explosion protection flameproof enclosure “d”. They shall be IP66 rated, suitable for the conditions of use and correctly installed.

Unused entries shall be closed with suitable certified blanking elements.

The metal housing for the Model STB must be electrically connected to earth ground.

For ambient temperatures below -10°C and above +60°C use field wiring suitable for both minimum and maximum ambient temperatures.

NOTE

All cable entry devices and blanking elements shall be Brazil certified in the type of explosion protection, flameproof enclosure “d”, suitable for the conditions of use and correctly installed, with an ingress protection rating of IP66. A screw or cover lock is provided for a secondary means of fastening the cover.

MODEL STB SENSOR TERMINATION BOX AND SEPARATION KIT MODEL MATRIX

MODEL	DESCRIPTION	
STB	Sensor Termination Box	
	TYPE	COMPATIBILITY
	1	CGS for FlexVu UD10 or Model 505 Transmitter
	2	CGS for U9500A Transmitter or EQ22xxDCUEX
	3*	Model C706x Electrochemical Gas Sensor/Transmitter
	5	12 Terminal
	7	6 Terminal
	TYPE	MATERIAL
	A	Aluminum
	S	Stainless Steel
	TYPE	NUMBER OF PORTS, THREAD TYPE
	2M	2 PORT, M20/M25 at 90° Orientation
	2N	2 PORT, 3/4" NPT at 90° Orientation
	2S	2 PORT, M20 at 180 Degrees Vertical
	2U	2 PORT, 3/4" NPT at 180 Degree Vertical
	2X	2 PORT, M20 at 90 Degree Orientation
	2Y	2 PORT, M25 at 90 Degree Orientation
	3M	3 PORT, M20/M25
	3N	3 PORT, 3/4" NPT
	3Y	3 PORT, M25
	5Y	5 PORT, M25 (standard offering)
	5N	5 PORT, 3/4" NPT (standard offering)
	6Y	6 PORT, M25
	6N	6 PORT, 3/4" NPT
	TYPE	APPROVALS
	B	INMETRO (Brazil)
	R	Russia
	W	FM/CSA/ATEX/IECEX

* Not CE Compliant



Corporate Office
 6901 West 110th Street
 Minneapolis, MN 55438 USA
www.det-tronics.com

Phone: +1 952.941.5665
 Toll-free: +1 800.765.3473
 Fax: 952.829.8750
det-tronics@carrier.com

