

SAFE INSTALLATION MANUAL (CENELEC APPROVAL)
2-WIRE UNIVERSAL TEMPERATURE TRANSMITTER
 (HART communication, intrinsically safe)

MODEL B3HU
BEFORE USE
■ SAFETY PRECAUTIONS

This manual describes important points of caution for safe use of this product in potentially explosive atmosphere. Please read this manual carefully before installing and operating the product.

■ SPECIAL CONDITIONS FOR SAFE USE

Because the enclosure is made of plastic, if it is mounted in an area where the use of category 1 G apparatus is required, precautions have to be taken that the enclosure cannot be charged by static electricity.

When the Two-Wire Universal Temperature Transmitter model B3HU is installed in environments requiring a higher degree of ingress protection than IP20, it must be additionally protected by an enclosure, with a suitable degree of ingress protection in accordance with EN 60529.

■ MODEL NUMBER IDENTIFICATION

Model No. B3HU - 1

1) SAFETY APPROVAL _____

0 : None

2 : CENELEC intrinsically safe (ATEX)

■ MANUFACTURED DATE CODE IDENTIFICATION

The manufactured year and month can be identified by the serial number described on the specification label.

Serial No. Y M xxxxxx

YEAR _____

V : 2008 1 : 2011

W : 2009 : :

X : 2010 9 : 2019

MONTH _____

A : January

B : February

C : March

: :

L : December

- Verify the certification of the product described on the specification label on the product.
- Verify that the operating atmosphere of the transmitter is consistent with the appropriate hazardous locations certifications.
- Verify that the environmental temperature is within the temperature class required for the area.

Failure to follow these installation guidelines could result in death or serious injury:

- Make sure only qualified personnel perform the installation.

⚠ SAFETY FEATURES & CAUTIONS
■ INTRINSICALLY SAFE APPROVAL

- CENELEC / ATEX
 EC-Type Examination Certificate: KEMA 05ATEX1017 X
 Ⓢ II 1G Ex ia IIC T4, T5
- IS Data

U _i = 30V DC	U _o = 6.4V DC
I _i = 96mA DC	I _o = 30mA DC
P _i = 720mW	P _o = 48mW
C _i = 1 nF	C _o = 20 μF
L _i = 0 mH	L _o = 10 mH
- Prior to installation, check that the safety class of this unit satisfies the system requirements.
- A safety barrier must be installed between the unit and its power supply. Refer to "Installation Diagram" attached at the end of this manual when selecting a safety barrier.
- The power supply and the safety barrier must be located in a non-hazardous area.
- Environmental temperature must be within the following ranges depending upon the required temperature class.

T4 : -40°C ≤ Ta ≤ +80°C
T5 : -40°C ≤ Ta ≤ +55°C
- DO NOT RUB the surface of the plastic enclosure with a dry cloth. Electrostatic charge generated by the friction may cause an explosion.
- The wiring method must be in accordance with the electrical parameters described in this manual.
- Substitution of components may impair suitability for the hazardous location and may cause an explosion.
- When metal particles are present in the air, install the model B3HU inside an enclosure with proper ventilation.
- For installing the B3HU in an environment with a high relative humidity exceeding 0 to 95% RH or in a condensing atmosphere, install the unit inside an appropriate enclosure.

⚠ WARNING
Explosions could result in death or serious injury:

- The housing cover must not be removed under any circumstances.
- Before you remove the unit or mount it, or before you connect or disconnect the wiring, turn off the power supply and the input signal for safety. Do not disconnect unless the area is known to be non-explosive.
- Whenever you need to measure voltage across the terminals or apply a simulated input signal to the terminals, make sure that there is no danger of explosion in the atmosphere.
- Before connecting a HART communicator in an explosive atmosphere, make sure the instruments in the loop are installed in accordance with intrinsically safe field wiring practices.

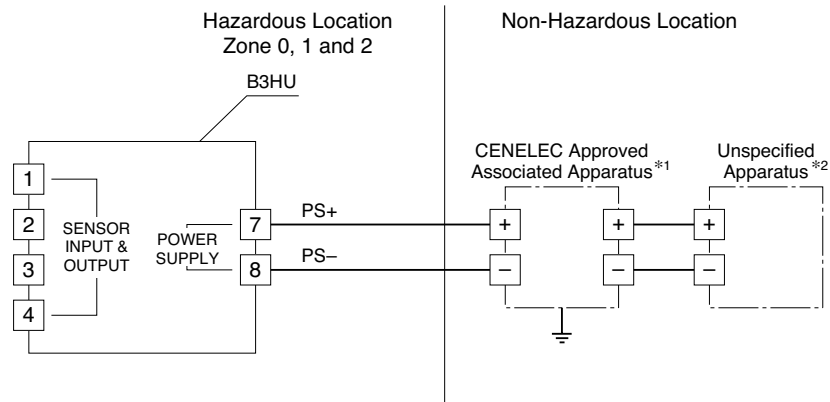
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INSTALLATION DIAGRAM for CENELEC INTRINSICALLY SAFE MODEL

ELECTRICAL DATA
Power Supply (7 and 8)

Maximum Input Voltage U_i : 30 V
 Maximum Input Current I_i : 96 mA
 Maximum Input Power P_i : 0.72 W
 Maximum Internal Capacitance C_i : 1 nF
 Maximum Internal Inductance L_i : 0 mH

Sensor Circuit (1 to 4)

Maximum Output Voltage U_o : 6.4 V
 Maximum Output Current I_o : 30 mA
 Maximum Output Power P_o : 48 mW
 Maximum External Capacitance C_o : 20 μ F
 Maximum External Inductance L_o : 10 mH

NOTES

- *1 : In any safety barrier, the output current of the barrier must be limited by a resistor 'R' such that $I_o = U_o / R$.
 The safety barrier must be certified by an EEC approved certification body to Ex ia IIC.
 In case of isolated barrier, the earth is not required.
- *2 : Apparatus which is unspecified except that it must not be supplied from nor contain under normal or abnormal conditions a source of potential with respect to earth in excess of 250 Volts RMS.