

2-WIRE UNIVERSAL TEMPERATURE TRANSMITTER (HART communication, Low temp. drift)

MODEL **B3HU2**

Using the HART Communicator

The B3HU2 can be programmed using a HART Communicator.

If your communicator is not equipped with the Device Description for the B3HU2, you need to update it with the B3HU2 DD. The B3HU2 DD is available on the HART Foundation's Device Driver Library Release August 2014 and later.

This section contains the instructions for programming the B3HU2 temperature transmitter using a HART Communicator that has been loaded with the B3HU2 DD.

Fig 1 shows a tree view of the programming menus for the configuration process.

A. Online Menu

The Online Menu displays the current process value (PV), % value (PV % range), the actual output current (PV loop current), the lower and upper range values (PV LRV, PV URV). Use the Device Setup to configure the B3HU2.

B. Configuring the Input Sensor

In the "Select sensor" Menu, the type of input sensor (Voltage, TC, RTD, Resistance) including the number of input wires can be configured. For TC, 1 input or 2 input (average, backup or differential) can be chosen. The B3HU2 supports the user-defined customer TC (TC Spec) and customer RTD (RTD Spec). For using the TC Spec or the RTD Spec, you must predefine and configure the data for the customer TC or RTD by using the "B3HU2 PC Configurator Software (model: B3HU2CFG)".

C. Configuring the Input Properties

In the "Re-range" Menu, you can configure the Input Sensor Type, the sensor's upper and lower range values and the units.

In the "Signal condition" Menu, you can configure the sensor's upper and lower range values, the damping time and the Xfer Function. In the "Basic setup" Menu, you can configure the sensor's upper and lower range values, the units, the damping time and Xfer Function. The B3HU2 supports the user defined special curve for the Xfer Functions. For using the special curve, you must predefine and configure the data by using the "B3HU2 PC Configurator Software (model: B3HU2CFG)".

D. Configuring the Analog Output Properties

In the "Analog output" Menu, you can perform the burnout setting, output mode setting, output loop test and output fine adjustment. With Loop test, 4 mA, 20 mA and arbitrary current can be output irrespective of input signal. With D/A trim, fine adjustment is performed by writing actual measurement current value at the time when 4 mA and 20 mA are output.

E. Configuring the HART Output

In the "HART output" Menu, you can configure a polling address between 0 and 63, and for each of burst 0 to burst 2, burst ON/OFF, burst data selection and burst detailed setting.

F. Configuring the Device Information

In the "Device Information" Menu, you can display the current device information and configure for the following items: Tag, Long Tag, Descriptor, Date, Message, and Final Assembly Number.

G. Calibrating the Input Sensor

In the "Sensor calibration" Menu, you can perform the zero and span calibrations for a non-calibrated sensor. With "Cal. sensor", you can choose the sensor to calibrate (Sensor 1 or Sensor 2). "Sensor zero cal." adjusts the offset value at the zero point. "Sensor span cal." adjusts the gain value against the zero point. The Zero and Span calibration can be applied to any particular point within the measurable range.

In the "Reset cal." menu, you can reset the transmitter to the factory settings. When the sensor type has been changed, sensor calibration data is reset to factory settings.

H. Performing the Diagnostics

In the "Test device" Menu, you can perform the Master reset, the Self Test and display the additional device status. Clearing "More status available flag" is available.

I. Checking on the Transmitter's Settings

In the "Review" Menu, you can check on the transmitter's settings.

Figure 1. B3HU2 HART Communicator Menu Tree

