

# HART USB Interface for PC

## HI321

### DataSheet

**HART®**  
Fieldbus  
Profibus  
*Intrinsic Safety*  
**Configuration Tools**  
Semiconductors  
Training  
*Custom Design*



#### Features

- Interface your PC to a HART network
- Works with HART products from multiple manufacturers
- System powered: no external power supply required
- Tested isolation of 1500V DC between the field instrument and USB adaptor pins
- 6 foot cable with pinch connectors for easy access to the HART line
- Very low leakage (Max 10  $\mu$ A @ 35V dc) current to the process network
- Standard USB connector

**Functional Description**

The HI321 HART Universal Serial Bus Interface provides a complete physical link between a HART® Field Instrument and any PC with USB ports. The interface is fully self contained, and requires no direct power supply.

direct interface between a standard USB port on a PC and a HART® network. The HI321 is compatible with HART® communication environments.

The HI321 is designed for use with SmarResearch's CONF401 HART® Configuration Software.

The SMAR HI321 provides a

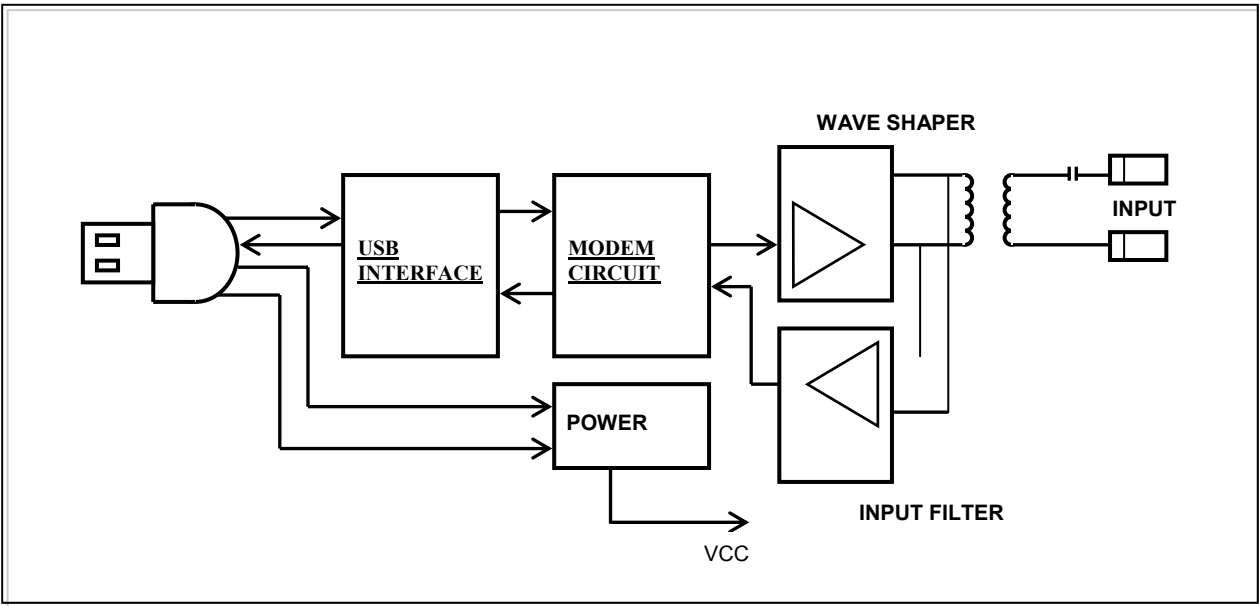


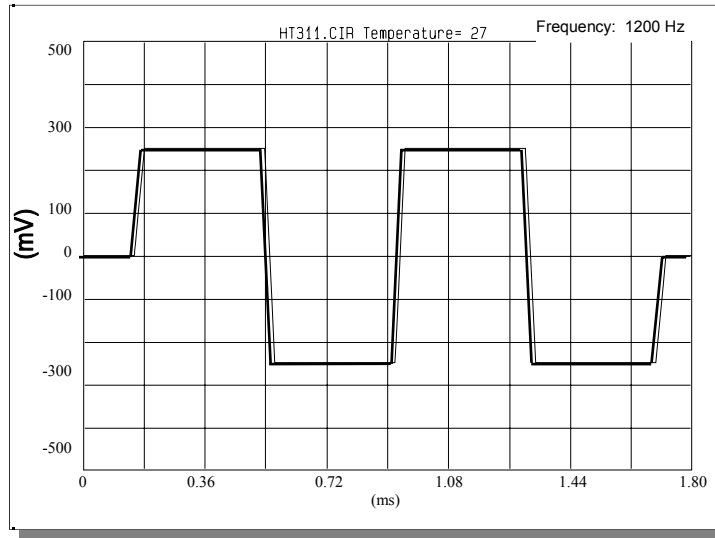
Figure 1 - Block Diagram

**Signal Definitions**

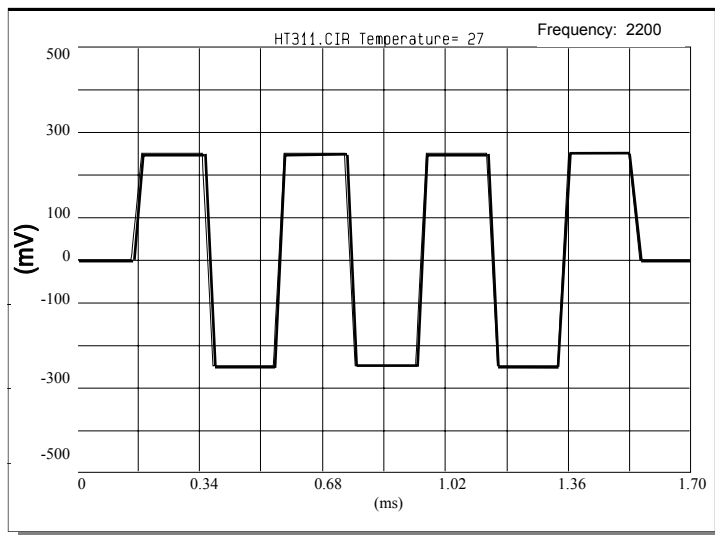
Figures 2 and 3 below give the operating characteristics of the HART modulator at 1200 Hz and 2200 Hz. Both were plotted using an HP digitizing oscilloscope connected to a 24Vdc power

supply, a 250 Ohm shunt resistor, and a pressure transmitter.

Figure 4 shows the test circuit.



*Figure 2 - 1200 Hz*



*Figure 3 - 2400 Hz*

## Connection Example

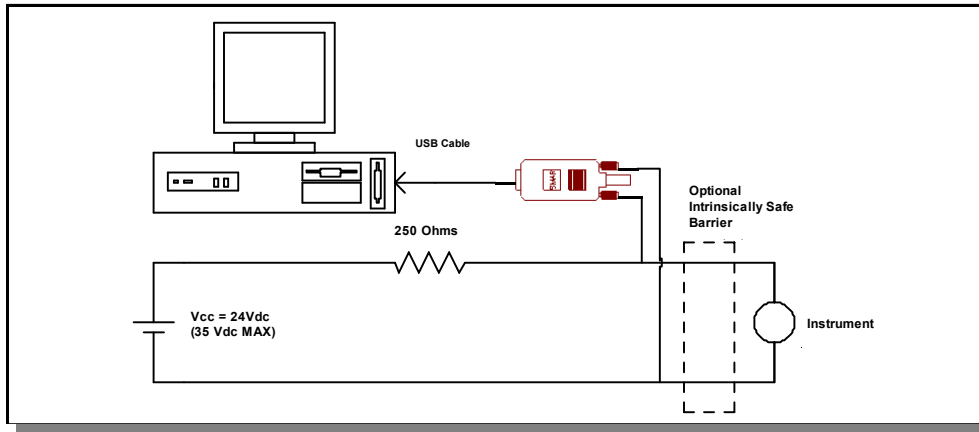


Figure 4 - Circuit Example

## Mechanical Specifications

### Dimensions

Length: 4.25"  
 Width: 1.25"  
 Depth: 0.75"

### Connections

Computer: USB Type A Connector  
 HART Side: Clamp Probes

### Cable

6' max. length (including probes).

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