

Q&A English Webinar – HART is simpler than it seems

QUESTIONS & ANSWERS

Below we present the list of Questions and Answers from the HART webinar on Dec, 04th.

Issue	Question	Answer
Communication	Does HART communicate using a 4-20 mA signal?	The HART protocol uses two communication signals in the same current loop cable pair, the 4-20 mA analog signal and the superimposed digital signal: The 4-20 mA signal transmits the main measured value using the 4-20 mA current loop. The digital signal contains information from the HART device, such as device status, diagnostics and configuration values.
Communication	What is NOVUS' transmitters HART version and what is the difference between the others versions?	The version of the HART protocol that NOVUS uses is 7. The differences between this version and 5, for example, is that some commands that were optional or did not exist in version 5 are now required in version 7. The number of addresses was 15 (HART V5), on HART V7 is 63.
Communication	HART is a one-way communication?	No, HART has two-way communication, but it is half-duplex, that is, it communicates one way at a time to send and receive data through the digital signal.
Communication	Is it possible to use an indicator in the HART communication loop?	Yes, it's totally possible. Indicators will not interfere with HART communication. We suggest indicators as N1500 or N1540 for this kind of application.
Communication	NOVUS have an interface Modbus-HART?	We do not currently have an interface Modbus-HART, but we appreciate your suggestion. We'll add the suggestion to be evaluated in the product pipeline.
Communication	Can I communicate with these devices through USB?	Yes, using the modem TxConfig-HRT, it uses the USB micro B standard.
Housing	What is the difference between the TxIsoRail-HRT and TxIsoBlock-HRT?	They are basically the same device, the difference is that the TxIsoBlock-HRT is suitable for mounting on protection heads and the TxIsoRail-HRT for mounting on DIN rails.
Housing	NOVUS have any plans for Field Mounted HART temperature transmitters?	We do not currently have a field mount temperature transmitter, but we appreciate your suggestion. We'll add the suggestion to be evaluated in the product pipeline.
Software	What are DD files in HART?	It is a file that defines the description of the HART device parameters. The communication and diagnostics software interprets the DD file and determines how a device appears in the application and what its parameters are.
Software	Any software can configure any HART device or there is a need to have specific software to each device?	Standard software will work regardless of manufacturer as long as they use HART-certified Electronic Device Descriptor (EDD) as the basis for identifying the device and its parameters. Each HART certified device will have an associated EDD for use.
Electrical Connections	Why do I need to use a resistor?	A minimum current loop impedance is required before the HART signal can be picked up by a modem or handheld. The resistor inserted in the loop generates a minimum required voltage drop that allows communication from a HART modem.
Electrical Connections	Should I only use a 250 Ohms resistor?	Not necessarily, the minimum impedance required is 250 ohms and the maximum impedance is 1280 ohms for a power range between 13.8 and 36V.
Electrical Connections	How should the resistor be connected to the current loop?	The resistor should be connected in series on the loop, regardless of its polarity or position in the loop.