

MicroLink™
HART Protocol Modem - RS-232 Interface

101-0005



***Installation
Operation &
Specifications
Manual***



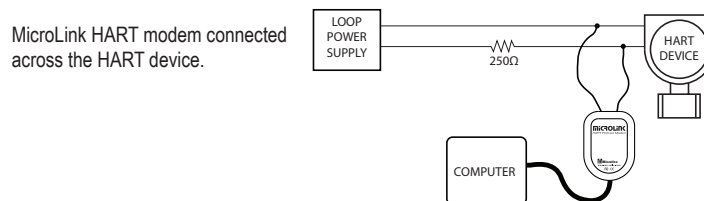
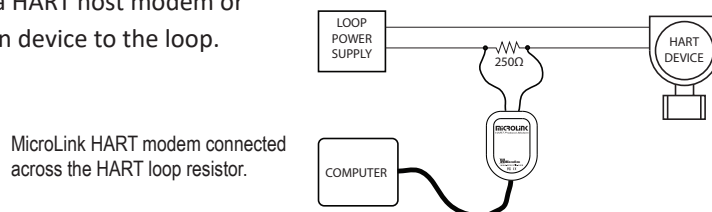
General Description

The MicroLink 101-0005 is an RS-232 serial port to HART® modem. It provides the hardware interface between Highway Addressable Remote Transducer devices (HART) and a computer with an RS-232 serial port, such as a Windows® PC. The rugged design makes MicroLink an ideal choice for field engineers and technicians who service HART devices in an industrial environment. MicroLink is compatible with all registered HART devices and all leading HART configuration and monitoring software that use an RS-232 serial port for the interface.

For a HART modem with a USB interface, Microflex offers the 101-0027.

Connecting to the HART Device

Connect the two mini-clips to the HART device or HART loop. MicroLink provides electrical isolation between the HART loop and the PC. It is safe to ignore grounding and polarity issues when making the HART connections. The HART protocol requires a loop resistance between 230 and 600 ohms, typically 250 ohms. Refer to your equipment installation instructions for details on connecting a HART host modem or configuration device to the loop.



Two common methods for connecting the HART modem to a loop powered device.

Software Setup


Make sure your HART software is set to use the same COM port that the MicroLink modem is connected to. There are no hardware settings required by the MicroLink modem and modem power is provided by the RS-232 port handshake lines. All other settings, such as BAUD rate, are taken care of by your HART software.


Safety Considerations


FC Conformity in accordance with Part 2, and Part 15, Subparts A and B of the Federal Communications Rules and Regulations, and ICES-003 of the Industry Canada standards.


⚠ This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by Microflex could void the user's authority to operate this equipment.

- CE Emissions EN55022: 1998
- Electrostatic Discharge EN61000-4-2: 1995, A1: 1998, A2: 2001
- Radiated Immunity EN 61000-4-3: 2002
- Safety Compliance EN 60950-1: 2002

 This device does not have protection from over-voltages which may exist on RS-232 ports of computers and relies on the protection existing in a host computer.

 This device is not intended for connection to the phone line through the appropriate converters and shall not be connected to telecommunication lines because it has no protection against over-voltages which may exist in these lines.

 The user shall ensure the protection of the operator from access to areas with hazardous voltages or hazardous energy in their equipment.

 The user shall ensure that the connection port of the field device and the modem is separated at least by basic insulation from any primary circuit existing in the field device.

MicroLink Specifications

Enclosure

Molded Buna-N 90 Durometer Rubber with
Stainless Steel Cover
Weight 5 ounces
Modem Dimensions 1.75" x 2.375" x 0.625"

RS-232 Serial Port

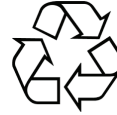
Connector 9-Pin Female D-Shell
Cable Length 6 feet (3 Meters)
(Can be extended up to 25 feet)
Receive Data Pin 2
Transmit Data Pin 3
Data Terminal Ready (DTR) Pin 4
Ground Pin 5
Request To Send (RTS), Selects Transmit/Receive Pin 7
Clear To Send (CTS), Internally shorted to Pin 7 Pin 8

HART

Termination Pamon Electronics Mini-Clips
Leads 1 Foot High Flexibility Test Lead Wire
Connection Method Transformer Isolated, Capacitor Coupled
DC Loop Voltage 50Vdc Max
Demodulation Jitter 12% of 1 bit Typical
Carrier Detect Threshold 100mV Typical
Leakage to Process Loop ±10µA Max

Environmental

Operating Temperature -20°C to 50°C (-4°F to 122°F)
Storage Temperature -40°C to 85°C (-40°F to 185°F)
Humidity 0 to 99% (non-condensing)



Limited Warranty

Microflex, LLC warrants this unit against defects in materials and workmanship for a period of one year from the date of shipment. Microflex, LLC will, at its option, repair or replace equipment that proves to be defective during the warranty period. This warranty includes parts and labor.

A Return Authorization (RA) number must be obtained from the factory and clearly marked on the outside of the package before equipment will be accepted for warranty work.

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