

Viator USB HART Interface with PowerXpress

HM-PF-USB-PWRX-
010031P

Manual



Your automation, our passion.

 **PEPPERL+FUCHS**

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1 Introduction

1.1 Content of this Document

This document contains information that you need in order to use your product throughout the applicable stages of the product life cycle. These can include the following:

- Product identification
- Delivery, transport, and storage
- Mounting and installation
- Commissioning and operation
- Maintenance and repair
- Troubleshooting
- Dismounting
- Disposal

Note



This document does not substitute the software manual and/or instruction manual.

Note



For full information on the product, refer to the software manual and/or instruction manual, and further documentation on the Internet at www.pepperl-fuchs.com.

The documentation consists of the following parts:

- Present document
- Instruction manual
- Datasheet

Additionally, the following parts may belong to the documentation, if applicable:

- EU-type examination certificate
- EU declaration of conformity
- Attestation of conformity
- Certificates
- Control drawings
- Additional documents

1.2 Manufacturer

Pepperl+Fuchs Group Lilienthalstraße 200, 68307 Mannheim, Germany
Internet: www.pepperl-fuchs.com

1.3 Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismounting lies with the plant operator.

Only appropriately trained and qualified personnel may carry out mounting, installation, commissioning, operation, maintenance, and dismounting of the product. The personnel must have read and understood the instruction manual and the further documentation.

Prior to using the product make yourself familiar with it. Read the document carefully.

1.4 Symbols Used

This document contains symbols for the identification of warning messages and of informative messages.

Warning Messages

You will find warning messages, whenever dangers may arise from your actions. It is mandatory that you observe these warning messages for your personal safety and in order to avoid property damage.

Depending on the risk level, the warning messages are displayed in descending order as follows:



Danger!

This symbol indicates an imminent danger.
Non-observance will result in personal injury or death.



Warning!

This symbol indicates a possible fault or danger.
Non-observance may cause personal injury or serious property damage.



Caution!

This symbol indicates a possible fault.

Non-observance could interrupt the device and any connected systems and plants, or result in their complete failure.

Informative Symbols



Note

This symbol brings important information to your attention.



Action

1. This symbol indicates a paragraph with instructions. You are prompted to perform an action or a sequence of actions.

2 Overview

The Viator USB HART interface with PowerXpress allows you to power and communicate with HART instruments using a personal computer's USB port and HART communication software or an external modem / handheld communicator.

The interface is isolated and fully HART compliant. It utilizes the power available from your PC's USB 2.x port and converts it to 24 VDC to provide 2-wire power and/or modem communications for HART field devices. The power supply includes the necessary HART communication load resistance and provides a quick modem and/or milliamp meter connection. With this setup, all the necessary connections to the device are made with a single pair of test clips.

The interface is enclosed in a compact, rugged polycarbonate housing, suitable for industrial environments. It connects to your computer with a short-integrated cable that terminates in a USB A connector. The interface connects to field devices with an integrated 6-foot cable that terminates in 2 test clips. For power-only mode, you can use the PC USB port or the enclosed wall power adapter.

For the most recent version of this document, visit www.pepperl-fuchs.com.

3 Directive Conformity

Europe	
Directive 2014/30/EU	EN 61326-1:2013 EN 62368-1:2014-08
Directive 2011/65/EU (RoHS)	EN IEC 63000:2018

4 Label

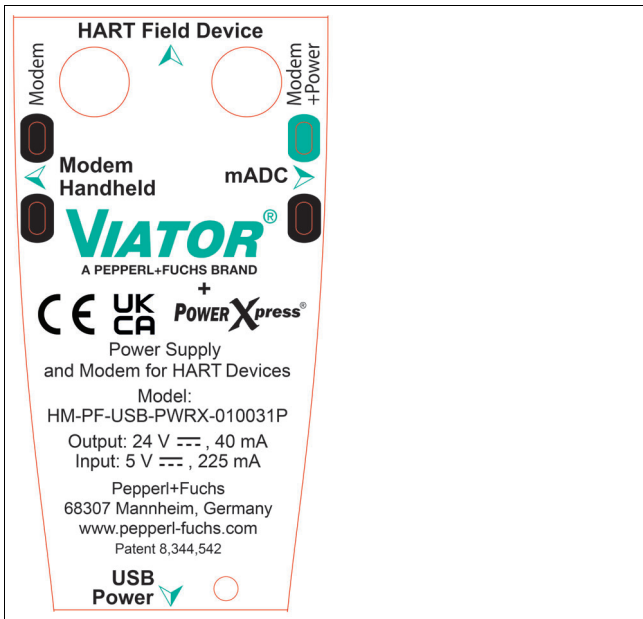


Abbildung 4.1

5 Technical Data

Supply	
Input current	30 mA at 5 V for modem only, 255 mA at 5 V with device power and modem
Power supply	Powered by USB port, No external power required

Interface	
Interface type	USB 2.0 port or higher

Output	
Signal	0.5 ± 0.1 V _{pp} trapezoidal wave at 1200/2200 Hz, 24 VDC at 40 mA to device

Galvanic isolation	
Output/interface	500 V DC

System requirements	
Operating system	32-bit and 64-bit Windows® 7, and Windows® 10

Viator USB HART Interface with PowerXpress

Technical Data

Ambient conditions

Operating temperature	-20 ... 50 °C (-4 ... 122 °F)
Storage temperature	-20 ... 60 °C (-4 ... 140 °F)
Relative humidity	0 ... 95 % non-condensing

Mechanical specifications

Degree of protection	IP20
Connection	USB (type A) Connector, red and black test clips
Material	Polycarbonate
Dimensions	96 mm x 47 mm x 24 mm
Cable length	1.8-m 2-strand wire terminating in 2 test clips, 15.2-cm cable terminating in 1 USB type A connector

General information

Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .
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5.1 USB Pin Connections

Pin No.	Type	Description
1	VBUS	5 V
2	Data D-	Differential full speed USB data at 12 MHz, normally low
3	Data D+	Differential full speed USB data at 12 MHz, normally high
4	GND	Ground

6 Getting Started

6.1 Hardware and Software Requirements

- Viator USB HART interface with PowerXpress, HM-PF-USB-PWRX-010031P Ñ
 - Computer with one ore more USB ports
 - Windows® operating system (32-bit and 64-bit Windows® 7, and Windows® 10)
 - HART application software for communication with HART field devices
-



Note

HART communication software must be capable of recognizing virtual COM ports. DOS and Windows NT-based applications do not recognize USB virtual COM ports and are therefore not supported.

6.2 Check Your Viator USB HART with PowerXpress Interface Package

Your interface package contains the Viator USB HART with PowerXpress interface.



Note

The Viator software can be downloaded from the Viator USB HART interface product page (<http://www.pepperl-fuchs.com/cgi-bin/db/doci.pl?ShowProductDocByPartNo=70138840&LangId=ENU>).

6.3 Connecting to a HART Field Device

The interface has an integrated USB cable with a male A plug for connection to the computer, and it has an integrated 6-foot cable with 2 test clips.

The interface connection to the HART network is transformer isolated and polarity insensitive. Transformer isolation allows you to connect the interface across the load resistor or across the HART device. Polarity insensitivity means that you may attach either test clip to either side of the HART device or load resistor.

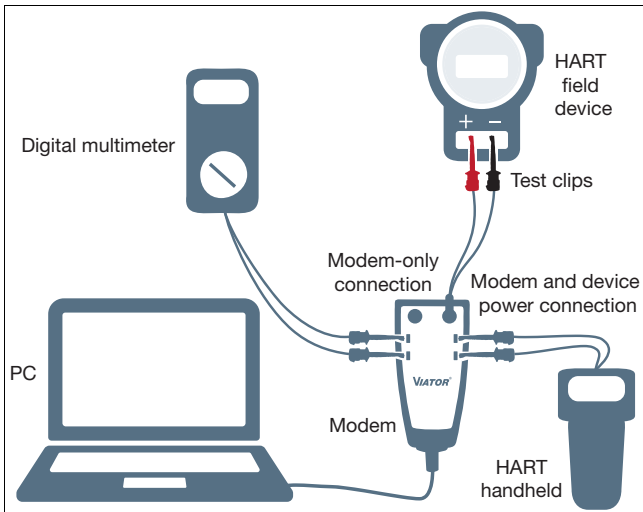


Abbildung 6.1



Connect the test clips

1. across the HART field device or
2. across the load resistor.



Caution!

Do not connect the Viator interface across the power supply!
This will not allow communication with the HART field device.

6.4 Standby and Hibernate Power Saving Modes

The Viator USB Interface driver supports all portable computer power saving modes. However, interruption of HART communication software by a standby or hibernate mode may necessitate restarting HART communication software to continue HART communications.

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Explosion Protection

- Intrinsic Safety Barriers
- Signal Conditioners
- FieldConnex® Fieldbus
- Remote I/O Systems
- Electrical Ex Equipment
- Purge and Pressurization
- Industrial HMI
- Mobile Computing and Communications
- HART Interface Solutions
- Surge Protection
- Wireless Solutions
- Level Measurement

Industrial Sensors

- Proximity Sensors
- Photoelectric Sensors
- Industrial Vision
- Ultrasonic Sensors
- Rotary Encoders
- Positioning Systems
- Inclination and Acceleration Sensors
- Fieldbus Modules
- AS-Interface
- Identification Systems
- Displays and Signal Processing
- Connectivity

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Download our latest policy here:

www.pepperl-fuchs.com/quality

