Operating Instructions

for

HART®-USB Modem

Model: HARTCOM

We don't accept warranty and liability claims neither upon this publication nor in case of improper treatment of the described products.

The document may contain technical inaccuracies and typographical errors. The content will be revised on a regular basis. These changes will be implemented in later versions. The described products can be improved and changed at any time without prior notice.

1. Contents

Manufactured and sold by:

Kobold Messring GmbH
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Internet: www.kobold.com

2. Note

Please read these operating instructions before unpacking and putting the unit into operation. Follow the instructions precisely as described herein.
The instruction manuals on our website www.kobold.com are always for currently manufactured version of our products. Due to technical changes, the instruction manuals available online may not always correspond to the product version you have purchased. If you need an instruction manual that corresponds to the purchased product version, you can request it from us free of charge by email (info.de@kobold.com) in PDF format, specifying the relevant invoice number and serial number. If you wish, the operating instructions can also be sent to you by post in paper form against an applicable postage fee.

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

The devices are only to be used, maintained and serviced by persons familiar with these operating instructions and in accordance with local regulations applying to Health & Safety and prevention of accidents.

When used in machines, the measuring unit should be used only when the machines fulfil the EC machinery directive.

3. Instrument Inspection

Instruments are inspected before shipping and sent out in perfect condition.
Should damage to a device be visible, we recommend a thorough inspection of the delivery packaging. In case of damage, please inform your parcel service / forwarding agent immediately, since they are responsible for damages during transit.

Scope of delivery:
The standard delivery includes:
- HART®-USB Modem model: HARTCOM

4. Regulation Use

Any use of the device, which exceeds the manufacturer's specification, may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

5. Application

The HARTCOM modem establishes communication between HART®-capable field devices and a process controller computer. The HARTCOM modems are applicable for all HART®-capable transmitters that use standard HART® communication.
Depending on the design the following versions can be ordered:
– HART®/USB modem, normal type;
– HART®/USB modem with power supply for transmitter and switchable HART® terminal resistor;
– The modem ensures galvanic isolation for the transmitter from the process controller system and it is powered by a USB interface or a USB power bank.

6. Communication Options

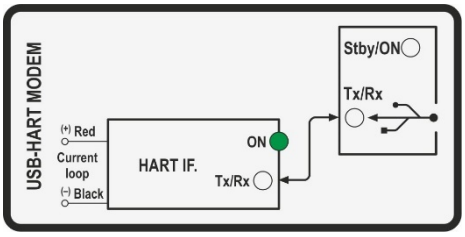
The modem meets the HART® communication standards and applicable for all HART®-capable transmitters that use standard HART® communication. To enable communication through the USB 1.1. or USB 2.0. port of the PC a driver program (FT 232 RL) is needed, which can be downloaded from www.kobold.com product page.

7. Wiring, Operation

The modem should be connected to a HART® field device by 2 pieces of KLEPS2 measuring clamps. The HARTCOM does not have surge protection, thus use of an adequate lightning protection that does not affect standard HART® signal transmission is advised.

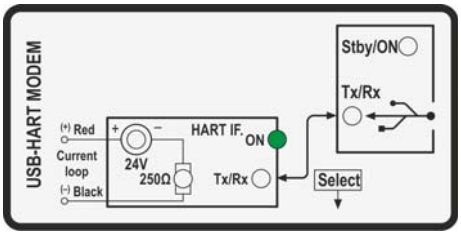
7.1 HART®/USB Interface Function

The clips should be positioned in accordance with polarity. When the USB cable and the clips are connected to the PC, the modem turns on, and switches to the basic state marked with an asterisk (*). The following states are displayed during operation:



Interface	LED		
	Name	State	
USB		not lit	turned off (inactive mode)
	Stby/ON	yellow	turned on (standby mode)
		* green	turned on (active mode)
	TX/RX	red	PC send
		green	PC receive
		* not lit	no data transfer
HART®	ON	not lit	turned off (inactive mode)
		* green	turned on (active mode)
	TX/RX	red	transmission to HART®
		green	reception from HART®
		* not lit	no data transfer

7.2 Current Loop Power Supply 24 V, additional Function (only for model HARTCOM-1)



After turning on, the modem starts working in basic mode (marked with an asterisk (*)). Then, in addition to the states described in 7.1, the following modes can be set by pressing the “Select” button for a short time (<1 s).

Number of short (<1 s) button press	LED		
	Name	State	
1st	250 Ω	yellow	HART® resistor ON
	24 V	not lit	Power supply OFF
2nd	250 Ω	yellow	HART resistor ON
	24 V	yellow	Power supply ON
3rd	250 Ω	* not lit	HART® resistor OFF
	24 V	* not lit	Power supply OFF
4th	Same as in 1st row above		

Turning on/off the modem by pressing the “Select” button for a long time (>5 s).

Number of long (>5 s) button press	LED		
	Name	State	
1st	Every LED	not lit	Modem OFF
2nd	LEDs according type	Basic state according type	Modem ON
3rd	Same as in 1st row above		

8. Maintenance and Repair

The device does not require regular maintenance. The warranty card contains the terms and conditions. Before returning the device for repairs, it must be cleaned thoroughly. The parts in contact with the medium may contain harmful substances; therefore, they must be decontaminated. The device must be sent back with a declaration of decontamination. A statement must be provided in the declaration that the decontamination process was successfully completed and that the device is clean from any hazardous substances.

9. Storage Conditions

Ambient temperature:–25…+55 °C (–13…+131 °F)
Relative humidity: max. 98%

10. Technical Information

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

11. Order Codes

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

12. Dimensions

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

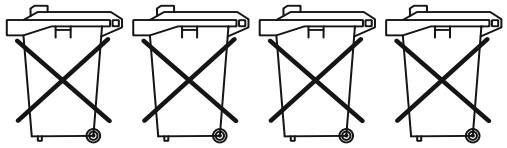
13. Disposal

Note!

- Avoid environmental damage caused by media-contaminated parts.
- Dispose of the device and packaging in an environmentally friendly manner.
- Comply with applicable national and international disposal regulations and environmental regulations.

Batteries

Batteries containing pollutants are marked with a sign consisting of a crossed-out garbage can and the chemical symbol (Cd, Hg, Li or Pb) of the heavy metal that is decisive for the classification as containing pollutants:



1. „Cd" stands for cadmium
2. „Hg" stands for mercury
3. „Pb" stands for lead
4. „Li" stands for lithium

Electrical and electronic equipment

14. EU Declaration of Conformance

We, KOBOLD Messring GmbH, Nordring 22-24, 65719 Hofheim, Germany, declare under our sole responsibility that the product:

HART®-USB Modem **model: HARTCOM**

to which this declaration relates is in conformity with the following EU directives stated below:

2014/30/EU	**EMC Directive**
2011/65/EU	**RoHS** (category 9)
2015/863/EU	Delegated Directive (RoHS III)

Also, the following standards are fulfilled:

EN 61326-1:2021 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements

EN 61326-2-3:2021 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning

EN 61010-1:2010 + A1:2019 + A1:2019/AC:2019 Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements

EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Hofheim, 01 July 2024

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