DCC503

USB TO HART

CONVERTER - ISOLATED

FEATURES

- Complete HART device interface
- Complies with HART physical layer
- Provide 2 KV isolation between PC and HART instrument that eliminate grounding effect
- No external power supply required
- Drivers for Windows 95/98/ME/2000/XP/2007/2008/2010
- Din rail and surface mount
- Sample program available to test HART functionality
- LEDs for indicating USB and TxD/RxD activity

ABOUT DCC503

DCC503 provides the hardware interface between Highway Addressable Remote Transducer devices (HART®) and a Windows® PC with a USB port.

The DCC503 USB to HART converter is used to configure any instrument with HART.

The PC port is isolated electrically from the instrument.

No external power supply is required.

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SPECIFICATIONS

All specifications at ambient of 25 °C, unless specified otherwise

USB INTERFACE

Compliance	USB 1.0/1.1 compliant, USB 2.0 compatible
USB cable length	1meter
Active current	30 mA max
Suspend current	Less than 200µA typical
Connector PC to DCC503	USB type A for RS232
Connector from DCC503 to HART device	Via two crocodile clips
Cable length	400mm (can be extend on user requirement)

ISOLATION

Between PC and HART device	2000 V AC RMS/1 minute

POWER SUPPLY

Supply voltage	No external power supply required

INDICATION

TXD	Green colour LED if communication occur from PC to HART device
RXD	Blue colour LED if communication occur from HART device to PC

SYSTEM REQUIREMENTS

Operating Systems	Windows 95/98/ME/2000/XP/2007/ 2008/2010
CPU	350 MHZ
Memory	Windows 95/98/ME : 65MB Windows 2000/XP : 128 MB
Resolution	800 x 600 pixel
Others	CD-ROM drive

ENCLOSURE

Housing	ABS + PC
Mounting	a) Snap on for 35 mm DINrail to DIN46277 b) Surface mount
Dimensions (in mm) (See Fig1)	30.1(H) x 48.3(W) x 83.5(D)

ENVIRONMENTAL CONDITIONS

Operating temperature	0 to 55°C (32 to 131°F)
Storage temperature	-20 to 70°C (-4 to 158°F)
Ambient relative humidity	5 to 95% (non-condensing)

HART INTERFACE

Connector	Crocodile Clips
Connection method	Transformer isolated, capacitor coupled
DC loop voltage	50 VDC max
Demodulation jitter	12% of 1 bit typ
Carrier detect threshold	100mV typ
Leakage to process loop	± 5µA max

INSTALLATION

To configure the USB port on the PC, install the software from the CD provided along with DCC503. Also download the Utility Software of the device to be connected to PC through DCC503.

The Tx/Rx LEDs will glow alternately if communication is working.

The HART protocol requires a loop resistance between 230 and 600 ohms, typical 250 ohms.

CONNECTIONS

radix®
www.radix.co.in

DCC503

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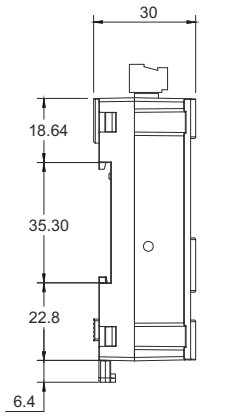
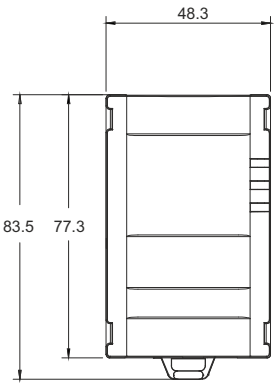
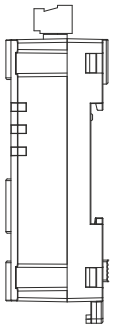
DIMENSIONS mm

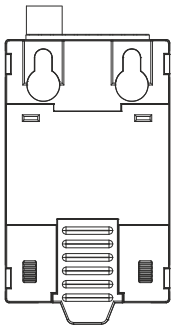


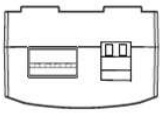
Left Side View



Front View


Right Side View


Rear View


Top View

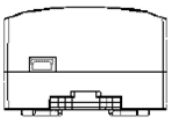
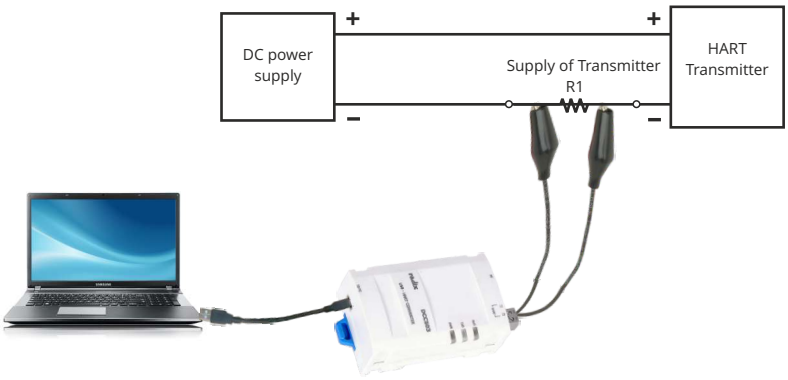

Bottom View

Fig 1

APPLICATION



No special attention has to be paid to polarity for the 2-pole tap

R1- loop resistance (230 to 600 ohms, typical 250 ohms)
Supply voltage to the transmitter should be according to the formula

Supply voltage = Vs + current *R1

Vs is minimum supply voltage required by transmitter to work.

IN THE BOX

DCC503 Converter pack includes

1. DCC503 HART Converter (Modem)
2. USB-A type to USB-B type Cable
3. Crocodile clip for HART communication
4. One CD containing:
   i. DCC503 USB drivers
   ii. HART test utility

ORDERING INFORMATION

ITEM	MODEL	ORDER CODE
USB TO HART CONVERTER - ISOLATED	DCC503	2556

CAT#515R5/A

ENQUIRIES
Instruments: sales@radix.co.in
Sensors: sensors@radix.co.in
Gauges: gauges@radix.co.in
Automation: automation@radix.co.in
Level: level@radix.co.in

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