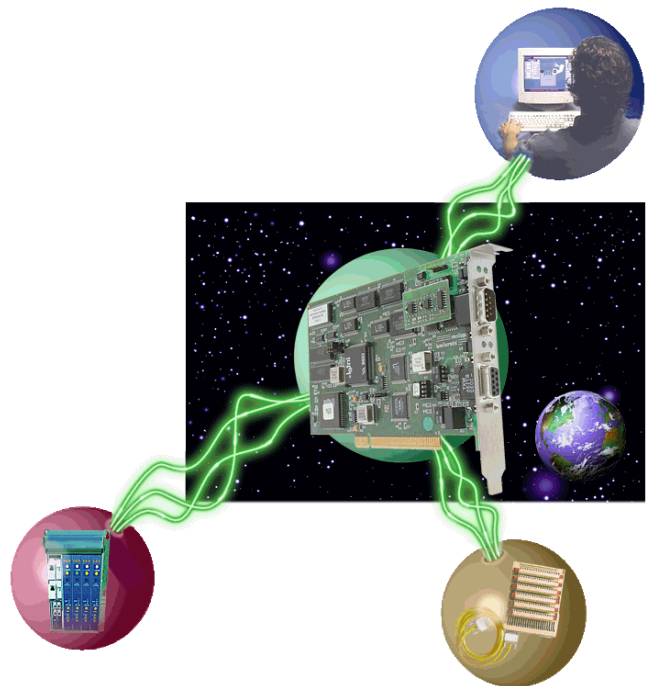


BradCommunications USB100PFB

Hardware Reference Guide

Document Edition: 1.0

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This document applies to the BradCommunications USB100PFB interface

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1 Preface

Preface Sections:

- Purpose of this Guide
- Conventions

Purpose of this Guide

This guide is the **BradCommunications** USB100PFB hardware reference guide. It is an OLE software component included within a system that can be used to configure and run diagnostics on Profibus DPV1 device (including PA).

The BradCommunications USB100PFB is used in conjunction with the CommDTM.

Conventions

This guide uses stylistic conventions, special terms, and special notation to help enhance your understanding.

Terminology

The following special terms are used throughout this guide:

BradCommunications USB100PFB

BradCommunications interface between Profibus network and USB connection.

DTM

Device Type Manager. OLE software component.

CommDTM
FDT concept.

OLE software component which is the interface with the network in the

Special Notation

The following special notations are used throughout this guide:



Warning

Warning messages alert the reader to situations where personal injury may result. Warnings are accompanied by the symbol shown, and precede the topic to which they refer.



Caution

Caution messages alert the reader to situations where device damage may result. Cautions are accompanied by the symbol shown, and precede the topic to which they refer.



Note

A note provides additional information, emphasizes a point, or gives a tip for easier operation. Notes are accompanied by the symbol shown, and follow the text to which they refer.

2 Interface overview

2.1 Interface features

The BradCommunications USB100PFB interface provides a single Profibus channel and allows to be connected to the computer by a USB connexion.

The BradCommunications USB100PFB interface is used by the BradCommunications PROFIBUS USB CommDTM.

An embedded CPU will manage the Profibus DPV1 Class2 messaging.

3 Hardware description



3.1 LEDs

There are three LEDs on the BradCommunications USB100PFB:

- one LED near the USB connector
- two LEDs near the Profibus connector

3.1.1 LED near the USB connector



Colour	Signification
OFF	No Connection established or Suspend mode
RED	USB Enumeration in process
GREEN	USB Enumeration Completed/Connection established

3.1.2 LEDs near the Profibus connector

There are two LEDs indicator lights



Meaning of LED A: bus fault

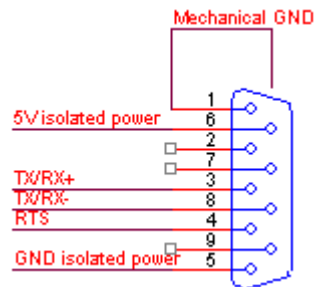
Colour	Signification
OFF	Communication not initialized
RED	Physical bus access error
GREEN	Network ready

Meaning of LED B: communication status

Colour	Signification
OFF	Communication not initialized
RED	Layer 2 error, init error or Data exchange error with a device
GREEN blink	New data exchange cycle
GREEN	Communication ready

3.2 Connecting a Profibus Network

The connection to the PROFIBUS network is made by a reversed female D-Sub 9-pin connector ready to be directly connected to the protocol line.



Note

The BradCommunications USB100PFB contains a DC100PFB card.

3.2.1 Termination

Always refer to PROFIBUS documentation for proper network termination and wiring directions.

3.3 Profibus Connector and cable

To maintain compliance with the limits and requirements of the EMC Directive, it is required to use quality interfacing cables and connectors when connecting to this device.

Woodhead industries propose cable and connectors. Information on these can be found on the Website <http://www.woodhead.com/>

4 Technical Specifications

4.1 Environmental specifications

Ambient Conditions	Storage temperature:	-20degC to 70degC
	Operating temperature:	0 to 55 degC
	Humidity:	5 to 95%RH non-condensing
Typical Current Draw for USB connection	350mA	
Power on Profibus connector	100 mA maximum	
Galvanic isolation	500V (UTE C93-703 rules)	

4.2 USB requirement

USB host or hub must be compliant with USB 2.0 or 1.1 specifications, High-speed or Full-speed capable, support High-Power Bus-Powered USB device.

It is recommended to use USB cable supplied along with the product. If longer cable is required, the USB cable must be certified and capable of USB high-speed.

5 Warranty and Support

Appendix Sections:

- Reference Documents
- Technical Support

5.1 Reference Documents

For information on Profibus, refer to one of the following:

- Profibus standard DIN 19 245 parts 1 and 3. Part 1 describes the low-level protocol and electrical characteristics and Part 3 describes DP.
- European Standard EN 50170

5.2 Technical Support

Please ensure that you have the following information readily available before calling for technical support:

- Computer's make, model and hardware configuration
- Operating system type and version
- Details of the problem you are experiencing: application module type and version, target network, and circumstances that may have caused the problem
- Diag.log file which contains informations about the **Brad**Communications USB100PFB.
 - To do this, close any application, which uses the interface.
 - Run Diagnostic.exe from the install directory. In the menu, choose "9. Write information in Diag.log" . The Diag.log will be created in the install directory.

5.2.1 Getting Help

Technical support is available during regular business hours by telephone, fax or email from any Woodhead Software & Electronics office, or from [contact.pdf](#).

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