



The BradControl™ Block I/O system provides an IP20 I/O interface solution for open network fieldbuses such as PROFIBUS®, DeviceNet™ and Ethernet. Features include expandability, high-density design & DIN rail mounting.

PROFIBUS Adapter Module

Features

- Expandable in-cabinet IP20 I/O
- Supports PROFIBUS Slave DP-V0 in accordance with EN 50170
- Comprehensive selection of digital and analog I/O interfaces
- Easy field replacement of modules
- Direct wire couplings for assembly cost savings
- Space-saving construction
- High-packaging density
- DIN rail mountable

Typical Applications

- Machine tool industry
- Filling and packaging



Overview

The BradControl IP20 Block I/O system is an effective way to connect industrial I/O devices to a PLC or PC controller over an industrial fieldbus network such as PROFIBUS. The BradControl I/O interface solution is comprised of a network adapter and up to 32 expansion modules mounted in an enclosure close to the field devices. The ribbon cable based expansion bus, which handles inter-module communication, operates at 11 Mbd, is permitted to be 6.5 meters in length, and accommodates a maximum of ten groups of modules.

A wide range of control system interface requirements are met with the availability of 24 VDC powered digital input, digital output, relay output, analog input and analog output modules.

PROFIBUS Adapter Module

The BradControl PROFIBUS adapter module operates as a slave device in the PROFIBUS control system, gathering signals and data from local field devices through the expansion modules. The adapter module manages all communications with the expansion modules, and supplies DC power to the attached local processors. Using the provided GSD file, the PROFIBUS master device is configured to recognize the network adapter module and the attached expansion modules.



Diagnostics

Net:

- Green - PROFIBUS communication
- Red - PROFIBUS network fault

I/O:

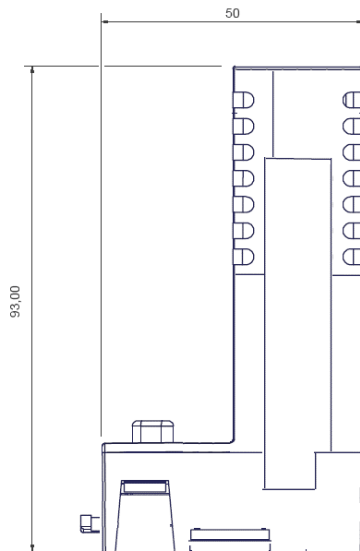
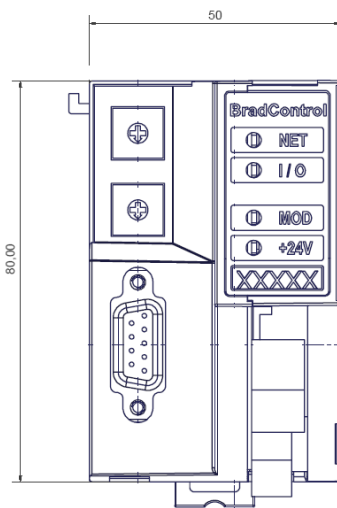
- Green - expansion bus OK
- Red - fault

MOD:

- Off - no adapter fault
- Blink red- adapter fault

24V:

- Green - power present
- Off - no external power



Hardware Specifications

Part Number	BCB-APB-001
Power Connection	2-pole screw terminal
External Voltage Supply	24 V DC (+/- 5%)
Supply Current Draw	Maximum 1.0 Amps
Adapter Module Current	≤ 100 mA
Expansion Module Connection	7-conductor ribbon cable
Output Voltage	Minimum +5V, maximum +5.35V
Current of Connected Modules	Maximum 1.5 Amps
Expansion Module Capacity	32 expansion modules (note 5V supply and process data limitations)
Maximum Process Data	64 bytes input, 64 bytes output
Fieldbus Specification	PROFIBUS Slave DP-V0 in accordance with EN 50170
PROFIBUS Connection	9-pin female D-Sub
PROFIBUS Address / Baud Rate	0-99 by rotary switch, 0-126 by software, 9600 to 12Mbaud (auto baud)
Approvals / Certifications	CE, UL, CUL, PNO
Mounting	35mm DIN rail per EN50022-35
Dimensions W x H x L (mm)	50 x 80 x 93
Protection	IP20 according to IEC 60529
EMC	IEC 61000-6-2
Shock / Vibration	10G, 11ms, 3 axis per IEC 68-2-27 IEC 68-2-6 conformance
Operating / Storage Temperature	0 to +55°C / -20 to +85°C
Relative Humidity	0 – 95% non-condensing

Ordering Information

Part Number	Product Description
BCB-APB-001	BradControl Block IO PROFIBUS DP adapter module
Refer to the referenced data sheets (DWxxxxx) for detailed information on specific expansion modules	Digital inputs – DW2006144
	Digital outputs – DW2006146
	Digital inputs / outputs – DW2006145
	Relay outputs – DW2006147
	Analog inputs – DW2006142
	Analog outputs – DW2006143

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