



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.

## Digital Input Modules

8 & 16 24V DC Inputs

### Features

- Expandable in-cabinet IP20 I/O
- 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-density design
- Ribbon cable connections between modules
- User markable identification
- 8 or 16 digital input channels (PNP sensor compatible)
- LED input status
- Optional high speed counter function
- Optional incremental encoder function



### 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.

### Digital Input Modules

These BradControl™ digital input modules have either 8 or 16 inputs. Together with the labeling fields for the individual inputs, green LEDs show the signal status.

The BradControl BCB-FDI-162 module also has 8 inputs which can be configured as counter or encoder inputs.

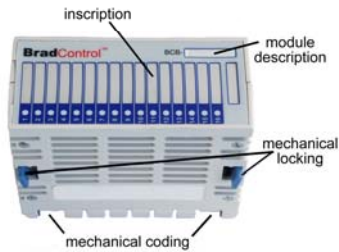
## Digital Input Module



### Components

The modular I/O is a combination of the function and terminal modules.

#### Function Module:



#### Terminal Module:



### Hardware Specifications

Part Number	BCB-FDI-081	BCB-FDI-161	BCB-FDI-162
Number of Inputs	8	16	
Expansion Module Address Range	00-3F Hexadecimal (0-63)		
Current Consumption Expansion bus (+5V)	Typical 30 mA maximum 40 mA		Typical 60 mA maximum 90 mA
Sensor Supply Voltage	18 - 30 V DC externally provided & protected		
Load Current per Input	5 mA at 24V		
Switching Threshold	11 V typical		
Maximum Input Voltage for Logic 0	8 V		
Minimum Input Voltage for Logic 1	14 V		
Input Delay	5 ms typical		Inputs 1-8 = 50µs Inputs 9-16 = 5ms (typical)
Status Delay	Green LED		
Interrupt Capable	No		Inputs 1-8 rising / falling
Counter Module	No		8 x 8 bit Single counter or incremental encoder function (4x resolution)
Operating Temperature	0 – 60°C (32 – 140°F)		
Relative Humidity	0 – 95% non-condensing		

### Ordering Information

Part Number	Product Description
BCB-FDI-081	Digital input module – 8 inputs 24 V DC
BCB-FDI-161	Digital input module – 16 inputs 24 V DC
BCB-FDI-162	Digital input module – 8 inputs 24 V DC plus – 8 high speed counter/interrupt inputs, – 4 incremental encoder inputs,
BCB-TDI-011	Terminal module for BCB-FDI modules listed above

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