



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.

## Analog Output Module

4 or 8 Channels;  $\pm 10V$  DC & 0-20mA Outputs

### 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
- LED channel status indication
- 12 bit resolution
- Short circuit protection
- 0-20 mA and  $\pm 10$  Vdc measurement ranges



### 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.

### Analog Output Module

The BradControl analog output module has 4 or 8 analog output channels that are used for controllable components (servo-valve, frequency converter, servo-booster, etc.).

The BradControl BCB-FAO-041 has 4 channels for  $\pm 10V$ .  
The BradControl BCB-FAO-042 has 4 channels for 0-20mA, and 4 channels for  $\pm 10V$ .

A labeling field is available for every channel.

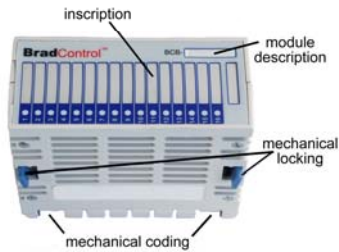
## Analog Output Module



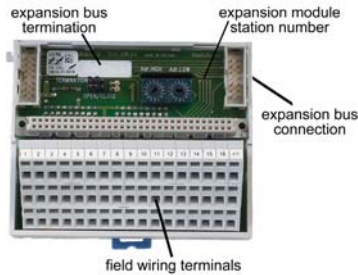
### Components

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

#### Function Module:



#### Terminal Module:



### Hardware Specifications

Part Number	BCB-FAO-041	BCB-FAO-042
Supply Voltage	18 – 30 V DC	
Current Consumption BradControl™ bus (+5V)	40 mA typical maximum 70 mA	
Current Consumption Terminal Block	< 65 mA	<70 mA
Number of Channels	4	2 x 4
Output Voltage	± 10 V DC	
Output Current	---	0 – 20 mA
Resolution	(12 Bit) 5mV/Bit	(12 Bit) 5mV/Bit voltage (12 Bit) 5µA/Bit current
Load Capacity	> 100 kΩ	> 100 kΩ voltage output
Analog Channel Precision	0.4% of the output quantity	Burden 0Ω ±2.5% Burden 50Ω ±2% Burden 500Ω ±0.5%
Load Capacity of the Voltage Output	> 100 kΩ	
Load Capacity of the Current Output	---	Maximum burden 500Ω
Short-circuit Protected Voltage Output	Yes	
Transient Time of the Voltage Output	< 50 µs	
Transient Time of the Current Output	An 500 Ω < 50 µs	
Operating Temperature	0 – 60°C (32 - 140°F)	
Relative Humidity	0 – 95% non-condensing	

### Ordering Information

Part Number	Product Description
BCB-FAO-041	Analog output module – 4 channels, +/- 10V
BCB-FAO-042	Analog output module – 4 channels, +/- 10V 4 channels, 0-20mA
BCB-TAO-022	Terminal module required for modules listed above