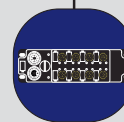# Compact 30mm I/O Modules

- 8 inputs
- 4 inputs / 4 outputs

BradControl™ IP67 Compact 30mm I/O modules for DeviceNet™ provide a reliable solution for connecting industrial controllers to I/O devices in harsh environments.

Contained in a 30mm wide housing rated for IP67 environments, BradControl I/O modules can be machine mounted and are able to with-stand areas where liquids, dust or vibration may be present. This makes them ideally suited for many applications including material handling equipment and automated assembly machinery.

To facilitate input and output device wiring, two versions of the BradControl Compact 30mm I/O modules for DeviceNet are available; an 8 port format using M8 style connectors and a 4 port format using standard M12 threaded connectors or the new BradConnectivity™ Ultra-Lock™ connection system, a "push-to-lock" method that provides a fast, simple and secure connection between the I/O module and I/O devices. With the Ultra-Lock connection system, performance and reliability are designed right into the connector! The unique radial seal design provides a reliable, operator independent seal each and every time. There's no chance for under– or over-tightening. When you hear and feel the connector click, you know it's locked in – there's no guesswork.

- Rated IP67 for harsh environments
- Designed for space savings in direct machine mount applications
- 4 port format uses standard M12 threaded connectors or BradConnectivity Ultra-Lock connection system
- Standard mounting hole pattern for interchangeability with popular I/O modules
- Supports PNP and NPN inputs
- Visible LEDs provide maintenance personnel with the ability to easily determine I/O, module and net-work status
- Rotary switch addressing 0-63
- Supports ADR and Quick-Connect
- Supports ODVA Group 2 Server Slave functionality
- Auto baud communication support

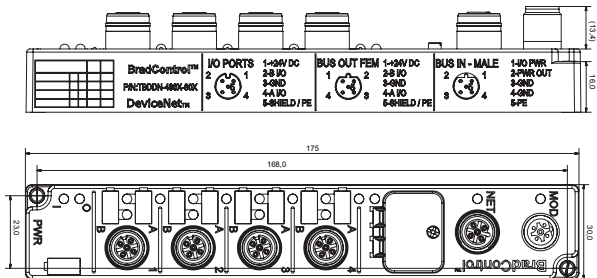## MODULE DIMENSIONS

4 Port Format without Auxiliary Power
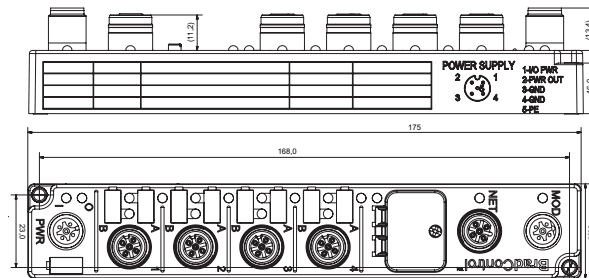

FIG 1

4 Port Format with Auxiliary Power

FIG 2

MODULE DIMENSIONS

8 Port Format without Auxiliary Power

FIG 3

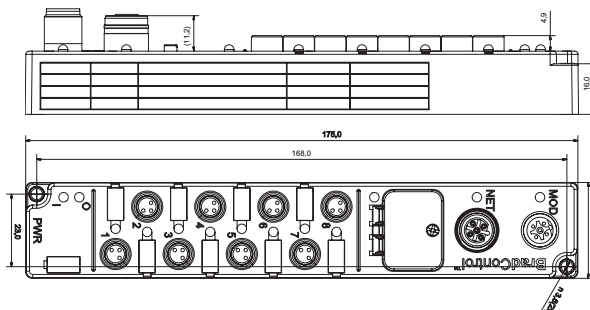BradControl™
from Woodhead Industries

I/O CONFIGURATIONS	8 inputs 4 inputs / 4 outputs
I/O CONNECTORS – 4 PORT	MICRO-CHANGE® 5-POLE M12 FEMALE BRADCONNECTIVITY™ ULTRA-LOCK™, INTERNALLY THREADED
I/O CONNECTORS – 8 PORT	NANO-CHANGE® 3-POLE THREADED M8 FEMALE
BUS CONNECTORS	MICRO-CHANGE 5-POLE M12 MALE (NETWORK IN) MICRO-CHANGE 5-POLE M12 FEMALE (NETWORK OUT)
AUXILIARY POWER CONNECTOR	MICRO-CHANGE 5-POLE M12 MALE (POWER IN)
EXTERNAL POWER REQUIREMENTS	MODULE & INPUT POWER: 24 Vdc, INPUT DEVICES + MODULE OUTPUT POWER: 24 Vdc (13 TO 28V), 4A MAX PER MODULE
BAUD RATE SETTINGS	AUTO BAUD 125, 250, 500 KBaud
ADDRESS SETTINGS	0 – 63 USING ROTARY SWITCHES OR SOFTWARE
INPUT TYPE	COMPATIBLE WITH DRY CONTACT AND PNP OR NPN 3-WIRE SWITCHES. ELECTRONIC SHORT CIRCUIT PROTECTION.
INPUT DELAY	3 ms
INPUT DEVICE SUPPLY	140 mA PER PORT AT 25°C
OUTPUT LOAD CURRENT	MAXIMUM 1.0 A PER CHANNEL ELECTRONIC SHORT CIRCUIT PROTECTION
MAXIMUM SWITCHING FREQUENCY	200 Hz
HOUSING DIMENSIONS	30 X 175 X 20 mm (1.18 X 6.89 X 0.78 INCHES)
MOUNTING DIMENSIONS	23 mm (0.91 INCHES) HORIZONTAL ON CENTERS 168 mm (6.61 INCHES) VERTICAL ON CENTERS CENTER HOLE
I/O DATA	POLLED, CYCLIC, COS, BIT STROBE
OPERATING TEMPERATURE	-20ºC TO 70ºC (-4°F TO 158°F)
STORAGE TEMPERATURE	-25ºC TO 85ºC (-13°F TO 185°F)
RH OPERATING	5 TO 95% NON-CONDENSING
EMC	IEC 61000-6-2
PROTECTION	IP67 ACCORDING TO IEC 60529
VIBRATION	IEC 60068-2-6 CONFORMANCE
SHOCK	10G, 11ms, 3 AXIS
APPROVALS	ODVA, UL, CUL, CUE

LED Indicators

DeviceNet Network Status (NET):
Green – running
Flash Green – connection not allocated
Flash Red – recoverable network error
Red – bus off; unrecoverable network error
Off – auto bauding

I/O Module Diagnostics (MOD):
Green – baud rate established, block OK
Flash Green – auto bauding
Red – configuration error

Auxiliary Power (PWR):
Green – auxiliary power present
Red – reverse polarity
Off – auxiliary power not connected

Input / Output:
(4 Port – 1A to 4B)
(8 Port – 1 to 8)
Green – input / output on
Red – input / output fault

Ordering Information

PART NUMBER	PRODUCT DESCRIPTION	FIGURE
TBDDN-480P-80U	4 PORT M12, 8 INPUT PNP	1
TBDDN-480N-80U*	4 PORT M12, 8 INPUT NPN	1
TBDDN-444P-88U	4 PORT M12, 4 INPUT PNP 4 OUTPUT SOURCING	2
TBDDN-444N-88U*	4 PORT M12, 4 INPUT NPN 4 OUTPUT SINKING	2
TBDDN-880P-804	8 PORT M8, 8 INPUT PNP	3
TBDDN-880N-804*	8 PORT M8, 8 INPUT NPN	3

*Call for availability