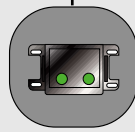


Active I/O Modules

- 2 output • 1 x 2 input / 1 output
- 1 input / 1 output • 2 x 2 input

The Brad Harrison® small I/O count active modules are a family of DeviceNet products which connect to a variety of DC PNP and NPN sensors, dry contacts or actuators. These modules are specifically designed for industrial use such as conveyance and material handling applications where IP67 rated devices are the norm. Four configurations accommodate a variety of DeviceNet system configurations. Input circuits are provided with auto-configuration sensing to accommodate either PNP and NPN sensors. Outputs are overload protected at 1A. A variety of LEDs including network, module, input and output status and auxiliary power indicators assist in diagnosing and troubleshooting the network. The node address of the blocks can either be software or dip switch selected.



- Autosensing PNP/NPN input circuit allows any combination of switches to be connected for maximum system flexibility
- Software and hardware addressable for easy retrofits and block swapping
- Short circuit protection on I/O protects blocks from damage, maximizing uptime

Active I/O Modules

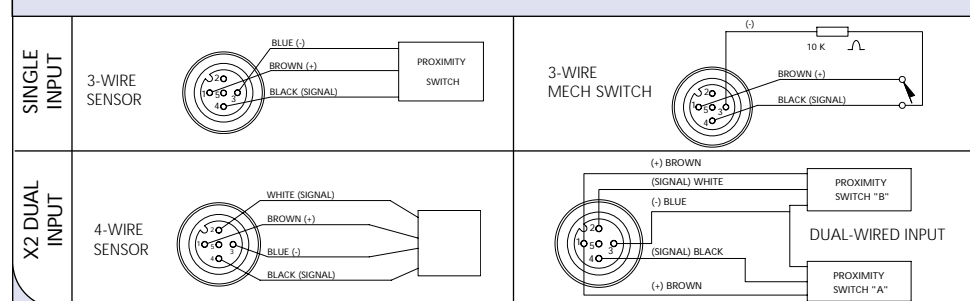
Specifications

	TDN-220-108	TDN-240-108	TDN-221-108	TDN-202-108
2 X 1 INPUTS				
SUPPLY VOLTAGE	11 – 25V DC	11 – 25V DC	11 – 25V DC	11 – 25V DC
BUS POWER:	35mA	35mA	35mA	35mA
INTERNAL CURRENT CONSUMPTION:	4	0	2	1
INPUT CIRCUITS:	10 – 25V DC	—	10 – 25V DC	10 – 25V DC
INPUT VOLTAGE:	150mA MAX	—	150mA MAX	150mA MAX
SENSOR CURRENT:	0	2	1	1
OUTPUT CIRCUITS:	—	11 – 25V DC	11 – 25V DC	11 – 25V DC
OUTPUT VOLTAGE:	—	250mA/OUTPUT	250mA/OUTPUT	250mA/OUTPUT
OUTPUT CURRENT:	—	≤100HZ	≤100HZ	≤100HZ
MAXIMUM SWITCHING FREQUENCY INPUT:	125K, 250K, 500K	—	—	—
AUTO BAND DETECTION:	GROUP 2 ONLY SLAVE	SUPPORTS POLLING,	CYCLICAL AND CHANGE	OF STATE MESSAGING
COMMUNICATION RATE:	0 – 63 VIA SOFTWARE OR HARDWARE	0-63 VIA SOFTWARE OR HARDWARE	0-63 VIA SOFTWARE OR HARDWARE	0-63 VIA SOFTWARE OR HARDWARE
PROTOCOL CAPABILITIES ADDRESSING:				
LED INDICATORS MODULE/NETWORK STATUS				
OFF:	NO POWER	NO POWER	NO POWER	NO POWER
FLASHING GREEN:	DEVICE IN STANDBY	DEVICE IN STANDBY	DEVICE IN STANDBY	DEVICE IN STANDBY
	NEEDS COMMISSION	NEEDS COMMISSION	NEEDS COMMISSION	NEEDS COMMISSION
	DEVICE OPERATIONAL	DEVICE OPERATIONAL	DEVICE OPERATIONAL	DEVICE OPERATIONAL
	RECOVERABLE FAULT	RECOVERABLE FAULT	RECOVERABLE FAULT	RECOVERABLE FAULT
	CRITICAL FAILURE	CRITICAL FAILURE	CRITICAL FAILURE	CRITICAL FAILURE
	OR DUPLICATE MAC ID	OR DUPLICATE MAC ID	OR DUPLICATE MAC ID	OR DUPLICATE MAC ID
INPUT STATUS				
OFF:	INPUT OFF	INPUT OFF	INPUT OFF	INPUT OFF
SOLID AMBER:	INPUT ON	INPUT ON	INPUT ON	INPUT ON
SOLID RED:	INPUT FAULTED	INPUT FAULTED	INPUT FAULTED	INPUT FAULTED
OUTPUT STATUS				
OFF:	OUTPUT OFF	OUTPUT OFF	OUTPUT OFF	OUTPUT OFF
SOLID AMBER:	OUTPUT ON	OUTPUT ON	OUTPUT ON	OUTPUT ON
SOLID RED:	OUTPUT FAULTED	OUTPUT FAULTED	OUTPUT FAULTED	OUTPUT FAULTED
MECHANICAL				
MATERIAL-HOUSING:	BLACK P87	BLACK P87	BLACK P87	BLACK P87
CONTACT PLATING:	GOLD OVER NICKEL PER ODVA SPECS	GOLD OVER NICKEL PER ODVA SPECS	GOLD OVER NICKEL PER ODVA SPECS	GOLD OVER NICKEL PER ODVA SPECS
SHELL MATERIAL:	NICKEL-PLATED BRASS	NICKEL-PLATED BRASS	NICKEL-PLATED BRASS	NICKEL-PLATED BRASS
ENVIRONMENTAL				
PROTECTION:	IP67	IP67	IP67	IP67
OPERATING TEMP:	32° TO 140° F (0° TO 60° C)	32° TO 140° F (0° TO 60° C)	32° TO 140° F (0° TO 60° C)	32° TO 140° F (0° TO 60° C)
HUMIDITY:	5-95% RH NON-CONDENSING	5-95% RH NON-CONDENSING	5-95% RH NON-CONDENSING	5-95% RH NON-CONDENSING
APPROVAL				
ODVA:	COMPLIANT	COMPLIANT	COMPLIANT	COMPLIANT

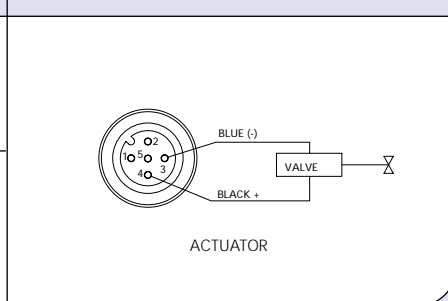
Wiring Information

		BUS IN MALE	BUS OUT FEMALE	INPUTS	OUTPUTS
2 X 1 IN 2 INPUTS AUTO-SENSING PNP/NPN	TDN-220-108				
2 X 2 IN 4 INPUTS AUTO-SENSING PNP/NPN	TDN-240-108				
1 X 2 IN 1 OUT AUTO-SENSING PNP/NPN	TDN-221-108				
2 X 1 OUT 2 DISCRETE BUS POWERED OUTPUTS	TDN-221-108				

TYPICAL INPUT CONNECTIONS



TYPICAL OUTPUT CONNECTION



MECHANICAL DIMENSIONS

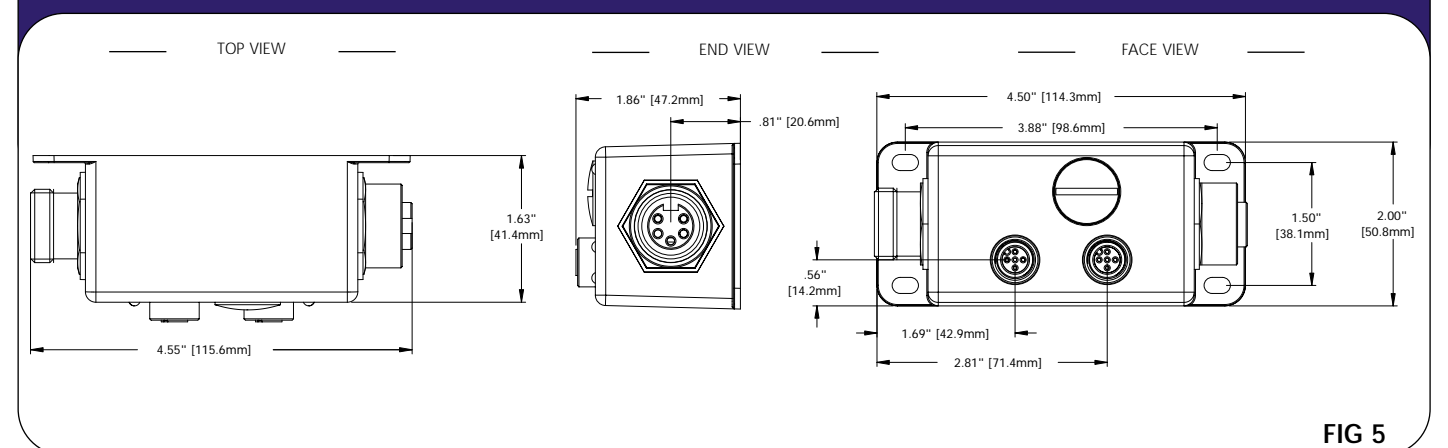


FIG 5

* For bus IN/OUT cordsets use DN11A-MXX – see pages 24-27

*** For dual I/O cordsets use 884F30A05M0X0 or see pages 154-157 of Brad Harrison Designer's Guide

**** For single I/O cordsets use Brad Harrison type 884030A09M0X0 or see pages 94-114 of Brad Harrison Designer's Guide