

# NEIO-B1812 Quick Reference Guide

Ver. B (P/N: 60177B0345X00)

## Product Overview

NEIO-B1812 is a 16-ch digital input/16-ch digital output EtherCAT slave module. The input filter of NEIO-B1812 is 1 ms, and its normal input voltage is 24 V<sub>DC</sub>. Its normal output voltage is 24 V<sub>DC</sub>, and it supports three types of loads - resistive, inductive and capacitive. All of the NEIO modules are provided with high isolation protection, and verified by the EtherCAT conformance test tool. The mixed I/O module is usually used for fewer DI/O channels needed automation equipment. Mixed DI/O modules along with pure DI or DO modules provide more flexible module selection for users' applications.

## Hardware Specifications

Power Input	
Power Input Range	24 V <sub>DC</sub> (±20%)
Electrical Isolation	2.5 kV
Terminal Block	Spring type (3P, 5.00 mm)
Cross Sections	0.2 ~ 2.5 mm <sup>2</sup> / AWG 26 ~ 12
Digital Input	
Channels	16
Input Type	24 V <sub>DC</sub> (PNP / NPN)
Input Filter	1 ms
On-state Voltage, "1"	9 ~ 24 V <sub>DC</sub>

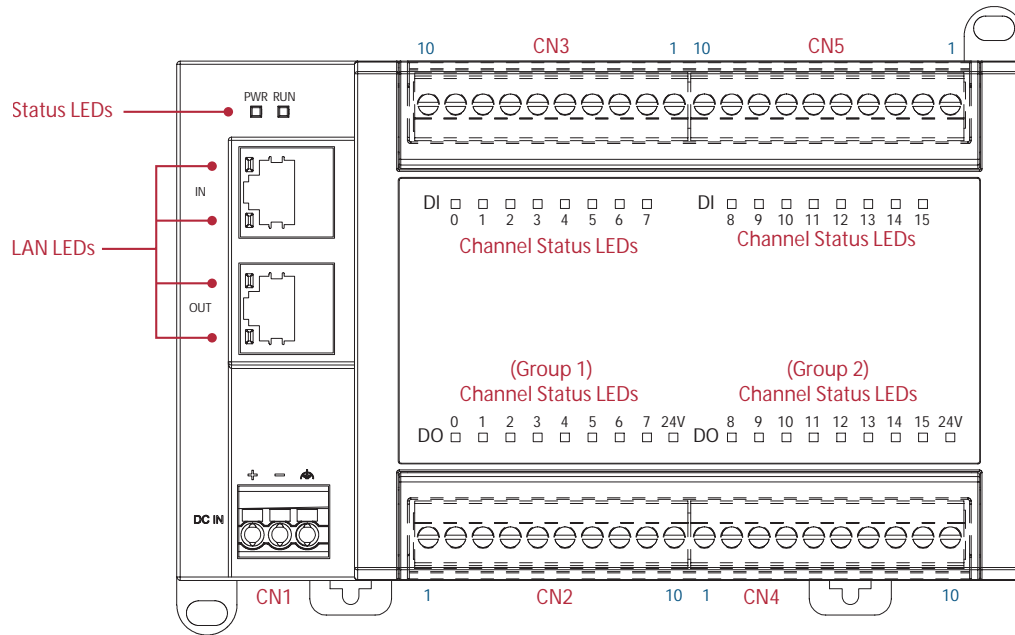
Off-state Voltage, "0"	0 ~ 8 V <sub>DC</sub>
Input Current	<6 mA/ch
Electrical Isolation	2.5 kV
Terminal Block	Detachable screw terminals (90°, 10P, 5.00 mm)
Cross Sections	Solid wire: 0.2 ~ 4 mm <sup>2</sup> / AWG 28 ~ 12 Stranded wire: 0.2 ~ 2.5 mm <sup>2</sup> / AWG 30 ~ 12
Digital Output	
Channels	16
Output Type	24 V <sub>DC</sub> (PNP)
Load Type	Resistive, Inductive and Capacitive
Output Current	Maximum: 500 mA/ch
Switching Time	OFF to ON - Maximum: 100 us ON to OFF - Maximum: 150 us
Output Protection	Over Current Limit Short Circuit Protection Reverse Voltage Protection
Terminal Block	Detachable screw terminals (90°, 10P, 5.00 mm)
Cross Sections	Solid wire: 0.2 ~ 4 mm <sup>2</sup> / AWG 28 ~ 12 Stranded wire: 0.2 ~ 2.5 mm <sup>2</sup> / AWG 30 ~ 12
General Specifications	
Dimensions (W x H x D)	155 x 95 x 57.4 mm
Weight	324 g (±20%)
Mounting	DIN-Rail (35 mm) / wall mount
Operating Temperature	0 ~ +55 °C



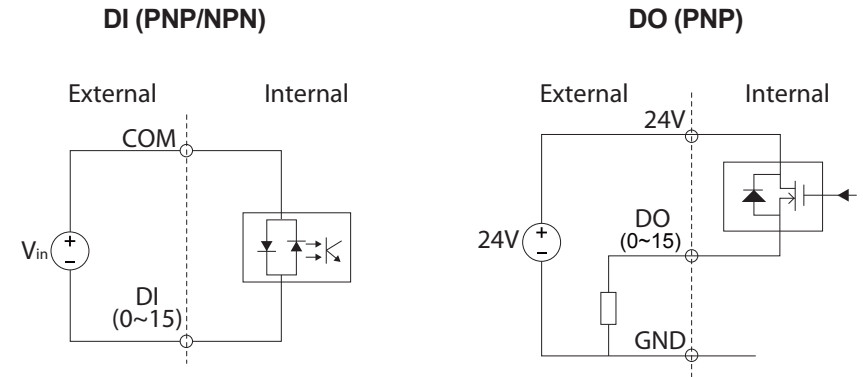
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## Product Appearance



## Wiring Diagram



## Pin Assignments

### CN1: Power

Pin	Description
1	V+
2	V-
3	GND

### CN3: Digital Input

Pin	Description
1	COM
2	COM
3	DI 7
4	DI 6
5	DI 5
6	DI 4
7	DI 3
8	DI 2
9	DI 1
10	DI 0

### CN5: Digital Input

Pin	Description
1	COM
2	COM
3	DI 15
4	DI 14
5	DI 13
6	DI 12
7	DI 11
8	DI 10
9	DI 9
10	DI 8

### CN2: Digital Output

Pin	Description
1	DO 0
2	DO 1
3	DO 2
4	DO 3
5	DO 4
6	DO 5
7	DO 6
8	DO 7
9	24V
10	GND

### CN4: Digital Output

Pin	Description
1	DO 8
2	DO 9
3	DO 10
4	DO 11
5	DO 12
6	DO 13
7	DO 14
8	DO 15
9	24V
10	GND



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
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## LED Indicators

### Status LEDs

LED	Status	Color	Description
PWR	On	Green	power on (Power input range: 24 V <sub>DC</sub> , ±20%)
	Off	-	Power off
RUN	On	Green	The module is in the Operational state
	Single Flash	Green	The module is in the Safe-operational state
	Blinking	Green	The module is in the Pre-operational state
	Off	-	The module is in the Initial state

### LAN LEDs

LED	Communication Speed	Link	Act
	0	Off	Off
	10 Mbps	Off	Blinking (Yellow)
	100 Mbps	On (Green)	Blinking (Yellow)

### Channel Status LEDs

LED	Status	Color	Description
DI0 ~ DI 15	On	Green	On-state voltage: 9 ~ 24 V <sub>DC</sub>
	Off	-	Off-state voltage : 0 ~ 8 V <sub>DC</sub>
DO0 ~ DO 15	On	Green	Digital output signal is set
	Off	-	No digital output signal
24V	On	Orange	24 V <sub>DC</sub> external power supply for each DO group is connected
	Off	-	24 V <sub>DC</sub> external power supply for each DO group is not connected

Note: NEIO series digital output module all requires a 24 V<sub>DC</sub> external power supply for each DO channel group.  
With the DO 24 V<sub>DC</sub> LEDs you can diagnostic the status of external power supply.