

Description

The Holjeron Stacked Light Controller provides users the ability to add stacked lights to a DeviceNet™ system. The Stacked Light Interface uses a single address on the network while providing four outputs for lamps and/or audible alarms.

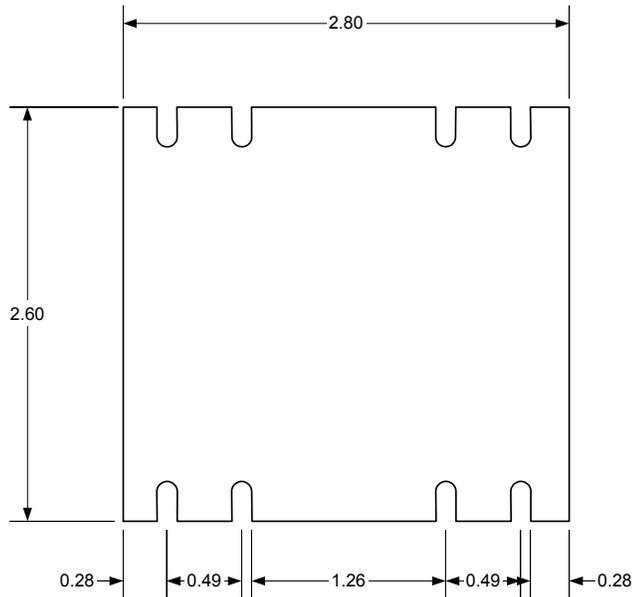
A complete stacked light node includes:

- Holjeron Stacked Light Controller card
- Stacked light with black lens

Specifications

Part Numbers	Relay Outputs	SLC-DNT204		
Electrical	DeviceNet™ Voltage Range	12-24 VDC		
	Current Consumption	50 mA		
	Data Rates	125, 250, and 500 kbps		
Outputs	Type	Relay		
	Number	Four (4)		
	Voltage Range	10-25 VDC, 24-240 VAC		
	Maximum Current	1 Amp		
Environmental	Temperature	Storage	-30° to 70° C (-22° to 158° F)	
		Operating	0° to 60° C (32° to 140° F)	
	Humidity		5-95% RH, non-condensing	
	Vibration		2G at 10 to 500 Hz	
	Shock		10G	
Physical	Dimensions	2.8" H x 2.8" W (Card Only)		
	Weight	8 oz		
	Mounting	Nylon ties to posts		
	Terminations	DeviceNet™	5 Pin Plug-in Terminal Block	
		I/O	5 Pin Plug-in Terminal Blocks	
	Indication	Power	Green	
		Error	Red	
DeviceNet™		Green		

Dimensions



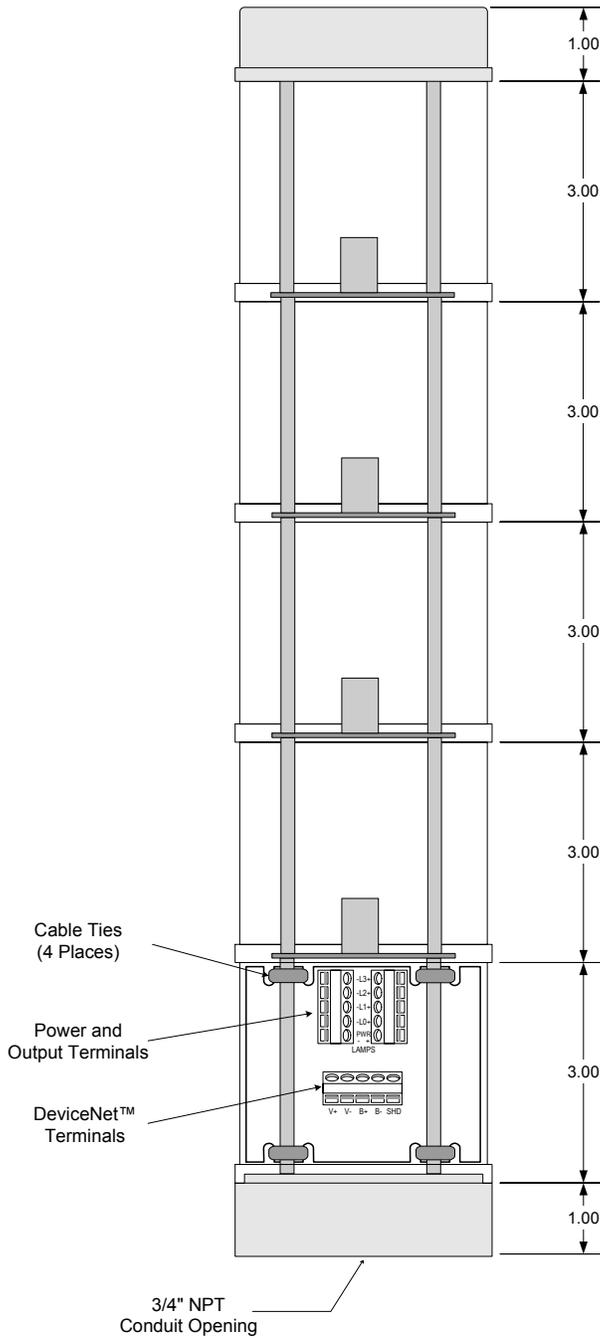
Warranty/Remedy

Seller warrants its products to be free from defects in design, material and workmanship under normal use and service. Seller will repair or replace without charge any such products it finds to be so defective on its return to Seller within 18 months after date of shipment by Seller. **The foregoing is in lieu of all other expressed or implied warranties (except title), including those of merchantability and fitness for a particular purpose.** The foregoing is also purchaser's sole remedy and is in lieu of all other guarantees, obligations, or liabilities or any consequences incidental, or punitive damages attributable to negligence or strict liability, all by way of example.

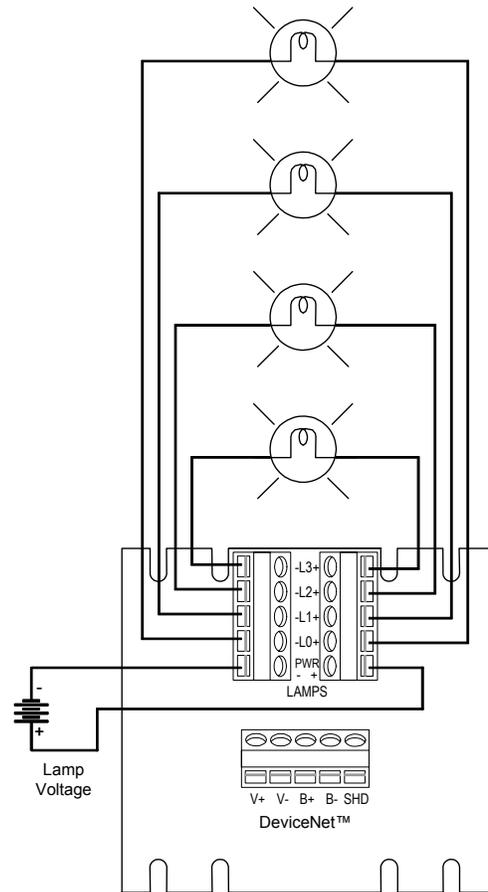
While Holjeron provides application assistance, personally and through our literature, it is up to the customer to determine the suitability of the product in the application.

All information contained herein, including illustrations, specifications and dimensions, is believed to be reliable as of the date of publication, but is subject to change without notice.

Assembly Dimensions



Wiring



Configuration

A Stack Light Controller can be configured using several tools. Please consult the documentation for the specific tool for details.

Quick Start

The following steps are the minimum steps to configure BusBlock module. Default values are shown in bold type-face.

Set MAC ID

Using one of the tools described above, change the device address from the default. All units are shipped from the factory as **MAC ID 63**.

Note

Set the address before attaching any component to a complete bus. This will help prevent duplicate MAC IDs on a bus.

Operation

The Stack Light Controller is a general purpose discrete I/O device functioning as a "Group 2 Only Server". In addition to explicit messaging, polled I/O and change-of-state/cyclic I/O is supported for the transfer of input and output information. Once a polled connection is established, the module expects a poll at least every 10 seconds, otherwise the module will time out and take action as specified in the watchdog timeout action attribute. The connection timeout can be altered by changing the Expected Packet Rate (EPR) for the polled connection, which is contained in Object 5, Instances 1, attribute 9.

The Stack Light Controller also supports Offline Connection Set messaging.

Output Variable

The Output Variable is contained in the **Assembly Object (Object 4, Instance 34)** and is a collection of discrete outputs as defined by the **Discrete Output Object (Object 9, Instance 1-4)**.

Bit	Name
0	Output 0
1	Output 1
2	Output 2
3	Output 3
4	Flasher 0
5	Flasher 1
6	Flasher 2
7	Flasher 4

Discrete Output Object

Output State (Attribute 3)

The current state of the output.

This attribute maps to bits 0-3 in the output variable.

Fault Action (Attribute 5)

If the Fault Action is set to 0 when a fault occurs, the output will be set to the state defined in the Fault Value. When set to 1, the outputs will be held at their last state.

Fault Value (Attribute 6)

The value for the output when a fault occurs and the Fault Action is set to 0.

Idle Action (Attribute 7)

When the BusBlock I/O Module is in an idle state (unallocated) and the Idle Action is set to a value of 0, the associated output will be set to the state defined in the Idle Value. If set to a value of 1 the output will be held in its last state.

Idle Value (Attribute 8)

The value for the output when idle and the Idle Action is enabled.

Flasher Enable (Attribute 10)

When the Flasher Enable is set to a value of 1 the associated output will flash when turned on.

This attribute maps to bits 8-15 in the output variable.

Flasher Rate (Attribute 11)

The Flasher Rate is the frequency which the output will flash when enabled and on. The rate is Hertz (cycles per second).

Common Services

Common Services are explicit messaging services for DeviceNet™ with request/response parameters and a defined behavior. Not all Common Services are supported by every object.

Service Code	Service Name	Description
5 (05 _{hex})	Reset	Invokes the reset service for the device. Request data includes the object, instance and a single parameter.
14 (0E _{hex})	Get_Attribute_Single	Returns the value of a specific attribute within an object. Request data includes the object, instance and attribute number.
16 (10 _{hex})	Set_Attribute_Single	Modifies the value of an attribute within an object that is defined with GET/SET access. Request data includes the object, instance, attribute number and the new value.

Identity Object

Class 1, Instance 1

The Identity Object provides status and general information about a device. The Identity Object is required in all DeviceNet™ products.

Attributes

Attribute	Description	Data Type	Access	Default Value
1	Vendor ID	UINT	Get	693
2	Device Type	UINT	Get	
3	Product Code	UINT	Get	
4	Revision	USINT [2]	Get	1,1
5	Status	WORD	Get	See table below
6	Serial Number	UDINT	Get	
7	Product Name	STRING	Get	Stack Light Controller

Attribute 5 - Status

Bit	Name	Bit Meaning	
		0	1
0	Owned	Not Owned	Allocated
1	Reserved		
2	Configured		
3	Reserved		
4	Reserved		
5	Reserved		
6	Reserved		
7	Reserved		
8	Minor Recoverable Fault	No Fault	Fault
9	Minor Unrecoverable Fault	No Fault	Fault
10	Major Recoverable Fault	No Fault	Fault
11	Major Unrecoverable Fault	No Fault	Fault
12	Reserved		
13	Reserved		
14	Reserved		
15	Reserved		

Message Router Object

Class 2, Instance 1

There are no defined attributes for the Message Router Object in the Stack Light Controller, nor are there any Common Services.

DeviceNet Object

Class 3, Instance 1

Attributes

Attribute	Description	Data Type	Access	Default Value
1	MAC ID (0-63)	USINT	Get/Set	63
2	Baud Rate	USINT	Get/Set	0 (125K)
3	BOI	BOOLEAN	Get/Set	1
4	Bus-Off Counter	BYTE	Get/Set	
5	Allocation Information	BYTE [2]	Get	

Assembly Object

Class 4, Instance 34 (Outputs)

Attributes

Attribute	Description	Data Type
3	Output Variable	See the section on Output Variable for mapping and configuration.

Connection Object

Class 4,
Class 5, Instances 1, 2 and 4

Attributes

Attribute	Description	Data Type	Access	Default Value
1	State	BYTE	Get	01h
2	Instance Type	BYTE	Get	01h
3	Transport Class Trigger	BYTE	Get	82h
4	Produced Connection ID	BYTE	Get	
5	Consumed Connection ID	BYTE	Get	FFFFh
6	Initial Communications Characteristics	BYTE	Get	01h
7	Produced Connection Size	INTEGER	Get	
8	Consumed Connection Size	INTEGER	Get	
9	Expected Packet Rate	INTEGER	Get/Set	00
12	Watchdog Timeout Action	BYTE	Get/Set	00
13	Produced Connection Path Length	UINT	Get	
14	Produced Connection Path		Get	
15	Consumed Connection Path Length	UINT	Get	
16	Consumed Connection Path		Get	
17	Production Inhibit Time	UINT	Get/Set	00

Discrete Output Object

Class 9, Instances 1-4

Attributes

Attribute	Description	Data Type	Access	Default Value
3	Output State	BOOLEAN	Get/Set	
5	Fault Action	BOOLEAN	Get/Set	0 [Fault Value attribute]
6	Fault Value	BOOLEAN	Get/Set	0
7	Idle Action	BOOLEAN	Get/Set	0 [Idle Value attribute]
8	Idle Value	BOOLEAN	Get/Set	0
10	Enable Flash	BOOLEAN	Get/Set	0 [disabled]
11	Flash Rate (Hertz)	BYTE	Get/Set	