

## Description

The Holjeron Stacked Light Interface provides users the ability to add stacked lights, such as General Electric's Light Tower™, to the Smart Distributed System network. 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 Interface card
- Stacked light with terminal block option (black lens)

## Specifications

<b>Part Numbers</b>	10-30 VDC Outputs	SLC-SDS104
	Relay Outputs	SLC-SDS204
<b>Electrical</b>	SDS Voltage Range	11-25 VDC
	Current Consumption	50 mA
	Data Rates	125, 250, 500 and 1000 kbps
<b>Outputs -SDS104</b>	Type	Current Sinking
	Number	Four (4)
	Voltage Range	10-30 VDC
	Maximum Current	200 mA
<b>-SDS204</b>	Type	Relay
	Number	Four (4)
	Voltage Range	10-25 VDC, 24-240 VAC
	Maximum Current	1 Amp
<b>Environmental</b>	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
<b>Physical</b>	Dimensions	2.8" H x 2.8" W (Card Only)
	Weight	8 oz
	Mounting	Nylon ties to posts
	Terminations	SDS: 5 Pin Plug-in Terminal Block I/O: 5 Pin Plug-in Terminal Blocks
	Indication	Power: Green Error: Red SDS: Green

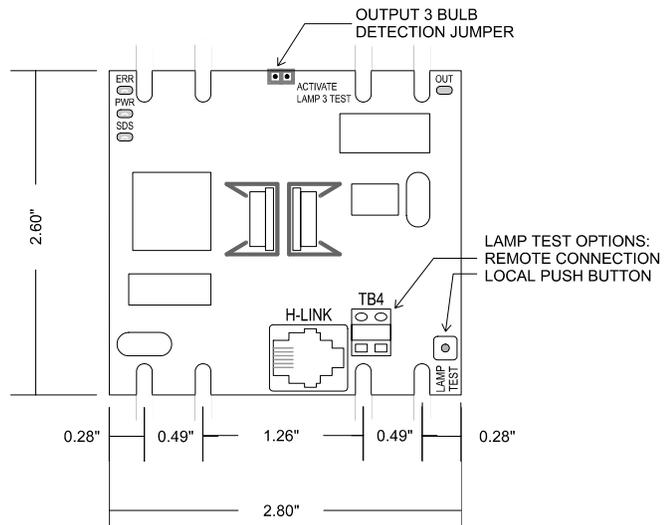
## Warranty/Remedy

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.

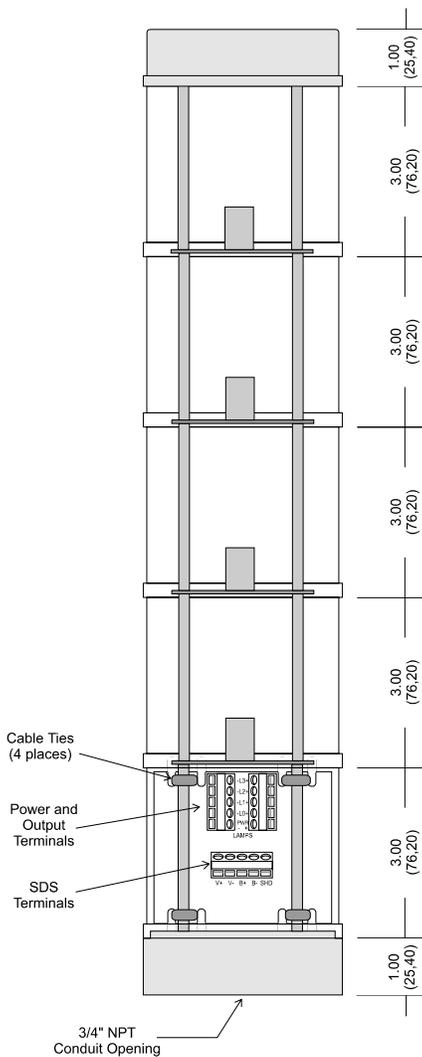
While Holjeron provides application assistance, personally and through our literature, it is up to the customer to determine the suitability of the product in the application.

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.

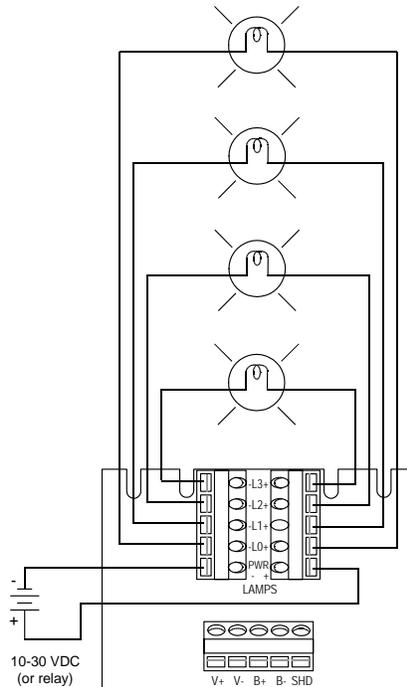
## Dimensions



### Dimensions



### Wiring



#### Note:

**When using an audible alarm with an SLC-SDS104 it must be wired to Lamp 3 Output and the jumper marked "Lamp 3 Test" must be removed.**

### Configuration

The Stack Light Controller can be configured using several tools. The information below summarizes the configuration tools available and hardware requirements for each tool.

#### Honeywell hand-held activator

The Honeywell activator does not supply enough power by itself. The SDS bus must have external power applied.

#### PC Control/Network Manager

Requires a Honeywell PC Interface Card with separate bus power.

#### Holjeron Device Manager for SDS

Requires an HSIM Portable (RS-232 to CAN converter) that connects to the serial port of a personal computer. The bus OR the HSIM Portable must have power.

### Quick Start

The Quick Start is the minimum configuration required to use a Stack Light Controller on an SDS network.

#### Set Device Address

Using one of the tools described above, change the device address from the default. All units are shipped from the factory as address 126.

#### Note:

**Set the address before attaching a Stack Light Controller to a complete bus. Otherwise, the entire bus will be configured with devices at address 126.**

#### NOTICE:

**The stack light base must be connected to earth ground to protect against EMI and RFI.**

## Configuration Options

The following functions are available to enhance the operation of the Stack Light Controller.

### Output Watchdog Timer

An important I/O function is the **Output Watchdog Timer (attribute 50)**. When set to some value other than **0** the Output Watchdog Timer will cause the physical output to be set to a normalized state if there are no SDS messages to the Stack Light Controller in the time allotted (value in Attribute 50 times 10 milliseconds). The normal state is off.

### Flasher Mode

Each output can be configured to flash using one of two methods, as determined by the **Flasher Mode (attribute 59)**. When enabled (**1**), the output variable will be displayed as four (4) bits. Each output can be flashed by turning on the output and the flashing bit for that output. For example, output 0 would flash when bit 0 and bit 2 are both on. When Flasher Mode is disabled the output variable only contains two bits. An output can be configured to always flash by turning on a corresponding bit in the **Flasher Mask (attribute 64)**.

*Note that changes to the flasher mode do not take effect unless power is cycled on the Stack Light Controller.*

The rate at which an output flashes is set in the **Flasher Timer (attribute 63)**. The value entered can be from **0** to 255 and is in ten (10) millisecond increments. For example, a flash rate of 1/2 second (500 milliseconds) would require a value of 50.

### Burnt Bulb Detection

The Stack Light Controller is equipped with circuitry to test for burnt or missing bulbs. This feature can be enabled/disabled using the **Bulb Test Mask (attribute 65)**. If a bulb is found to be missing, the corresponding bit in the **Failed Bulb Register (attribute 66)** will be set high and a diagnostic event will be generated to the host controller.

*Note that the burnt bulb detection is not available on the SLC-SDS204 (relay outputs)*

### Baud Rate

Verify the **Baud Rate (attribute 1)** is configured correctly for the application. In most cases the default value (autobaud) will provide the desired results. The following are the possible values for the baud rate:

#### Baud Rate (Attribute 1)

Value	Baud Rate
<b>0</b>	<b>Autobaud</b>
1	1 megabaud
2	500 kilobaud
3	250 kilobaud
4	125 kilobaud

### Tag Name

**Tag Name (attribute 56)** is a 32-character string that the user can enter to describe the functionality and/or location of the Stack Light Controller.

## Operation

### Output Variable

Attribute 19 contains the information for the outputs. When an output is changed in the host controller the SDS master will formulate the appropriate message and write it to attribute 19.

Note that bits 4 through 7 only exist when the Flasher Mode is enabled.

#### Output Variable Bit Definitions

Bit	Name	Description
0	Output 0	Controls the state of Lamp 0 Output
1	Output 1	Controls the state of Lamp 1 Output
2	Control 2	Controls the state of Lamp 2 Output
3	Control 3	Controls the state of Lamp 3 Output
4	Flash 0	Puts Lamp 0 in Flasher Mode
5	Flash 1	Puts Lamp 1 in Flasher Mode
6	Flash 2	Puts Lamp 2 in Flasher Mode
7	Flash 3	Puts Lamp 3 in Flasher Mode

## Diagnostics

The Diagnostics Register (attribute 9) is two bytes and contains the minimum diagnostics required for the Smart Distributed System and a couple additional diagnostics relevant to the Stack Light Controller.

#### Diagnostic Register Bit Definitions

Byte	Bit	Name	Description
1	0	CHKSUM	ROM checksum error
	1	WDOG	Output watchdog timer expired
	2	BUSOFF	Off bus communications error
	3	DEVERR	Fatal component error
	4	NODE	Missing node detected
	5	RSVD	Reserved
	6	RSVD	Reserved
2	7	EPRM	EEPROM error detected
	8	Reserved	
	9	FBULB	A bulb test has failed. Attribute 66 contains which output has failed.
	10	Reserved	
	11	Reserved	
	12	Reserved	
	13	Reserved	
	14	Reserved	
	15	Reserved	

**Attributes**

ID	Description	R/W	Data Type	Size	Count	Default
0	Network Data Descriptor	R	Unsigned	Byte	6	
1	Baud Rate	R	Unsigned	Byte	1	0 [autobaud]
2	Object Model	R	Unsigned	Byte	5	
3	Vendor Id	R	Unsigned	Word	1	9 [Holjeron]
4	Logical Address	R	Unsigned	Word	1	125
7	Software Version	R	Character	Undef	12	
8	Diagnostic Counter	R	Unsigned	Byte	1	
9	Diagnostic Register	W	Unsigned	Byte	2	
11	Serial Number	R	Unsigned	Long	1	
12	Date Code	R	Character	Undef	4	
13	Catalog Listing	R	Character	Undef	32	Dependent on module
14	Vendor	R	Character	Undef	32	Holjeron
15	Description	W	Character	Undef	32	Stack Light Controller
19	Output Variable	W	Boolean	Undef	4/8	Dependent on Attr 59
50	Output Watchdog Timer	W	Unsigned	Word	1	0 [disabled]
55	Manufacturing Codes	R	Unsigned	Byte	1	
56	Tag Name	W	Character	Undef	32	
59	Flasher Mode	W	Boolean	Undef	1	1
63	Flasher Timer	W	Unsigned	Byte	1	0
64	Flasher Mask	W	Boolean	Undef	4	00h
65	Bulb Test Mask	W	Boolean	Undef	4	00h
66	Failed Bulb Register	R	Boolean	Undef	4	

**Actions**

ID	Description	Request Data	Response Data
0	NOOP	---	---
1	Change Address	New logical address	
2	Self Test	---	---
6	Clear All Errors	---	---
8	Enroll Logical Device	Address	Vendor Id, Serial Number
10	Change Baud Rate	New baud rate (0...4)	
53	Read Attribute Descriptor	Attribute Id	Attribute ID, Attribute Descriptor
57	Password	Password	
60	Reset Factory Defaults		

**Events**

ID	Description	Event Data
0	Diagnostic Event	Number of enabled diagnostic bits in attribute 9
7	NOOP	---