

SmartLink-III™ Series

SL-8503X-X

Indirect Lighting & Temp Control Module

[Specification](#) | [Pinouts](#) | [Installation Note](#) |

Features and Functions

- SmartLink-III™ System Interface
- Lightweight, modular design
- Two Indirect Lighting Control Channels with 20A On/Off power relays
- 8-step, isolated, single-wiper pot on each lighting channel
- One Temperature control channel
- 16-step, isolated, dual-wiper pot on the temperature control channel
- (1) additional 20A & (3) additional 5A auxiliary relays built-in
- (4) programmable, discrete inputs built-in to control the temperature, auxiliary relays, & indirect lighting
- Redundancy design for high reliability



Description

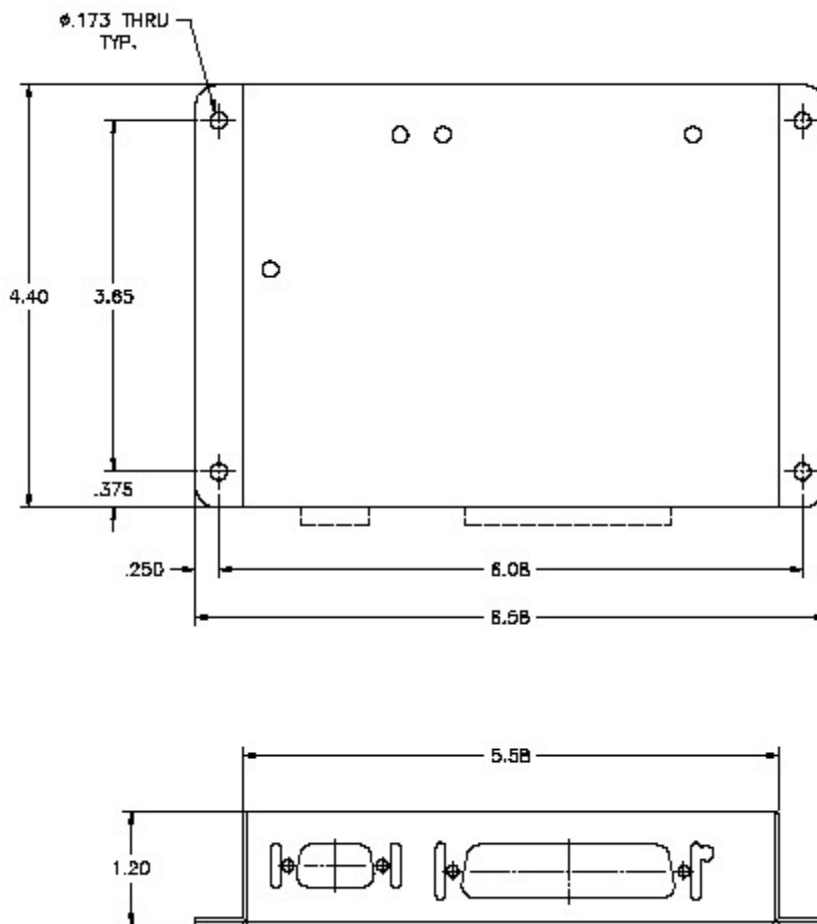
Our SL-8503 module offers indirect lighting and temperature control for your aircraft cabin. Lighting features offered with this module are (2) lighting control channels with 20A On/Off power relays. Each lighting channel has an 8-step, isolated, single wiper pot. The temperature control channel has a 16-step, isolated, dual wiper pot. In addition, (1) 20A & (3) 5A auxiliary relays are built into the SL-8503 to cover other control functions associated with the indirect lighting and temperature control. (4) discrete inputs are offered for controlling the indirect lighting, temperature & auxiliary relays and can be configured in any desired combination via SmartLink-III™ software. Ideally, the module would be placed in close proximity to the lights it is controlling, thus reducing wiring runs to the lights. The lighting functions of this module can be controlled from multiple, remote locations within the cabin interior. The relay module itself is very lightweight and compact, and can be easily installed within the tight confines of today's corporate aircraft. The module easily connects into the SmartLink-III™ wire bus with only a minimum of cable hook-ups required. The electronics utilize heavy-duty circuits, insuring the highest reliability.

Application

- Cabin Temperature Control
- All Indirect Lighting Control applications

Mechanical Specification

- All dimensions are in Inch
- Material 5052-H32 Aluminum
- Chem-Film Finish
- Weight 14 OZ

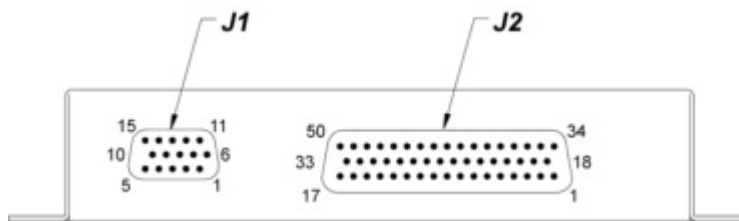


Electrical Specification

- **Operating Voltage:** 17 ~ 32 VDC
- **Operating Current:** 0.2 ~ 0.8 Amps
- **Operating Temperature:** -10 ~ +55 °C
- **System Interface:** SmartLink-III Compliant Firmware Upload Re-configurable
- **Connector:** D-Sub Series with #4-40 Jackscrew ('P' suffix with Positronic's V3 Tab)
- **Indirect Lighting Channel:** 2
- **Indirect Lighting Power:** Controlled via 20 Amps Resistive Relay Contacts (#1, #2)
- **Indirect Lighting Control:** 8 Steps 0~2Kohms Isolated Electronics Wiper (POT#1, POT#2)
- **Temperature Control Channel:** 1
- **Temperature Control:** 16 Steps 0~2Kohms Dual Isolated Electronics Wiper (POT#3, POT#4)
- **Aux Relay Output:** 1x 20Amps Resistive Form-A Relay Contacts (#3), 3x 5Amps Resistive Form-C Relay Contacts (#4~#6)

System Interconnect Connector

Label	Description	Connector Type
J1	SmartLink System Interface	High Density D-Sub 15 pin Plug (Male)
J2	Input /Output Interface	D-Sub 50 pin Plug (Male)



Connector Pinouts

J1 D-Sub High Density 15 pin Plug (Male)					
PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION
1	Frame Ground	6	Device ID (HEX bit 0)	11	Device ID (HEX bit 3)
2	Power Input +28VDC	7	Device ID (HEX bit 1)	12	Device ID (HEX bit 4)
3	Power Return (GND)	8	Device ID Return (GND)	13	Device ID (HEX bit 5)
4	SmartLink Data bus – HI	9	SmartLink – Shield (GND)	14	Device ID (HEX bit 6)
5	SmartLink Data bus – LO	10	Device ID (HEX bit 2)	15	Device ID (HEX bit 7)

J2 D-Sub 50 pin Plug (Male)					
PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION
1	IND-LTS CH.1 Power-IN (RLY#1 COM)	18	IND-LTS CH.1 POWER-IN (RLY#1 COM)	34	IND-LTS CH.1 POWER-IN (RLY#1 COM)
2	IND-LTS CH.1 Power-OUT (RLY#1 N.O.)	19	IND-LTS CH.1 POWER-OUT (RLY#1 N.O.)	35	IND-LTS CH.1 POWER-OUT (RLY#1 N.O.)
3	IND-LTS CH.2 Power-IN (RLY#2 COM)	20	IND-LTS CH.2 POWER-IN (RLY#2 COM)	36	IND-LTS CH.2 POWER-IN (RLY#2 COM)
4	IND-LTS CH.2 Power-OUT (RLY#2 N.O.)	21	IND-LTS CH.2 POWER-OUT (RLY#2 N.O.)	37	IND-LTS CH.2 POWER-OUT (RLY#2 N.O.)
5	AUX. RELAY #3 COM (RLY#3 COM)	22	AUX. RELAY #3 COM (RLY#3 COM)	38	AUX. RELAY #3 COM (RLY#3 COM)
6	AUX. RELAY #3 N.O. (RLY#3 N.O.)	23	AUX. RELAY #3 N.O. (RLY#3 N.O.)	39	AUX. RELAY #3 N.O. (RLY#3 N.O.)
7	AUX. RELAY #4 N.C. (RLY#4 N.C.)	24	RESERVED	40	RESERVED
8	AUX. RELAY #4 COM (RLY#4 COM)	25	TEMP CTRL Output#1 HI (POT#3 HI)	41	SHLD (GND)
9	AUX. RELAY #4 N.O. (RLY#4 N.O.)	26	TEMP CTRL Output#1 Wiper (POT#3 Wiper)	42	SHLD (GND)
10	AUX. RELAY #5 N.C. (RLY#5 N.C.)	27	TEMP CTRL Output#1 LO (POT#3 LO)	43	SHLD (GND)
11	AUX. RELAY #5 COM (RLY#5 COM)	28	TEMP CTRL Output#2 HI (POT#4 HI)	44	SHLD (GND)
12	AUX. RELAY #5 N.O. (RLY#5 N.O.)	29	TEMP CTRL Output#2 Wiper (POT#4 Wiper)	45	DISCRETE RETURN (GND)
13	AUX. RELAY #6 N.C. (RLY#6 N.C.)	30	TEMP CTRL Output#2 LO (POT#4 LO)	46	SET #1 DISCRETE INPUT
14	AUX. RELAY #6 COM (RLY#6 COM)	31	RESERVED	47	SET #2 DISCRETE INPUT
15	AUX. RELAY #6 N.O. (RLY#6 N.O.)	32	IND-LTS CH.1 BRT CTRL HI (POT#1 Wiper)	48	CLEAR #1 DISCRETE INPUT
16	IND-LTS CH.1 BRT CTRL LO (POT#1 LO)	33	IND-LTS CH.2 BRT CTRL HI (POT#2 Wiper)	49	CLEAR #2 DISCRETE INPUT
17	IND-LTS CH.2 BRT CTRL LO (POT#2 LO)	–	–	50	DISCRETE RETURN (GND)

Installation Notes:

- **FRAME GROUND:** Chassis Ground connection using 20AWG hookup wire minimum.
- **POWER INPUT AND POWER RETURN:** Power Pins
- **SL3 – HI/LO/SHLD:** SmartLink-III™ bus connection, using 22AWG (minimum) Shielded Twisted Pair cable with single ended shield terminated to SHLD pin.
- **RELAY#1~#4:** High Power relay contacts. Multiple pins connection required.



1350 Arrow Highway La Verne CA 91750
 Voice (909) 392-5777 Fax (909) 392-0277 <http://www.dpilabs.com>
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