

# SmartLink-III™ Series

# SL-1953X-X

## 4 Channel Cabin Temperature Readout Module

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

---

### Features and Functions

- SmartLink-III™ System Interface
- Lightweight, modular design
- Temperature averaging and reporting every 5 seconds on discrete output ports and/or SmartLink-III™ bus
- Self-calibrating and self-compensating Digital Temperature Sensor
- High accuracy of temperature measurements
- Supports up to (4) independent temperature zones
- All (4) temperature zones read and reported simultaneously
- Redundancy design for high reliability



### Description

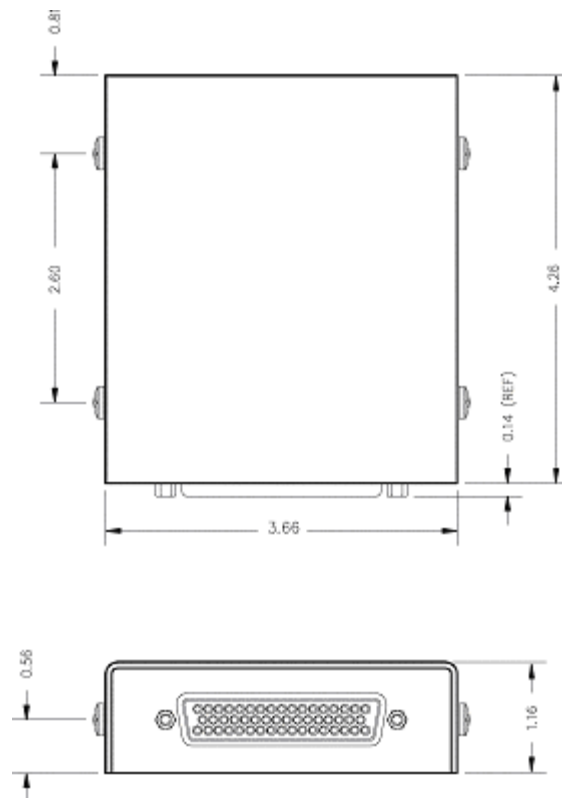
The SL-1953 4-Channel Cabin Temperature Readout Module provides temperature sensing and averaging at 5-second intervals for up to four (4) separate control zones within the aircraft. The unit uses (1) digital, 3-wire thermometer sensor per control zone. The temperature sensors are accurate and respond quickly to changing temperatures within the cabin. The module itself is compact and lightweight and interfaces with the SmartLink-III™ Cabin Management System.

### Application

- Temperature readout to a discrete-driven display
- Temperature readout to a display or switch panel connected to the SmartLink-III™ Cabin Management System

### Mechanical Specification

- All dimensions are in Inch
- Material 5052-H32 Aluminum
- Chem-Film Finish
- Weight 10 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
- **Connector:** D-Sub Series with #4-40 Jackscrew ('P' suffix with Positronic's V3 Tab)
- **Temperature Measurement Channel:** 4
- **Temperature Measurement Sensor:** DPI P/N [530-501](#)
- **Temperature Measurement Range:** -52°F to 202°F in 1°F increments
- **Temperature Measurement Duration:** 5 Second Average
- **Temperature Measurement Accuracy:** < 1°F
- **Discrete Temp Output Channel:** 2
- **Discrete Temp Output Format:** 8 Bit Binary Active Ground Logic, 100mA Max. Sink Current

## Connector Pinouts

J2 D-Sub 50 pin Plug (Male)					
PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION
1	BIT [0] DISCRETE OUTPUT, CH.1	18	BIT [1] DISCRETE OUTPUT, CH.1	34	BIT [2] DISCRETE OUTPUT, CH.1
2	BIT [3] DISCRETE OUTPUT, CH.1	19	BIT [4] DISCRETE OUTPUT, CH.1	35	BIT [5] DISCRETE OUTPUT, CH.1
3	BIT [6] DISCRETE OUTPUT, CH.1	20	BIT [7] DISCRETE OUTPUT, CH.1	36	DISCRETE RETURN (GND)
4	GND	21	GND	37	DISCRETE RETURN (GND)
5	BIT [0] DISCRETE OUTPUT, CH.2	22	BIT [1] DISCRETE OUTPUT, CH.2	38	BIT [2] DISCRETE OUTPUT, CH.2
6	BIT [3] DISCRETE OUTPUT, CH.2	23	BIT [4] DISCRETE OUTPUT, CH.2	39	BIT [5] DISCRETE OUTPUT, CH.2

7	BIT [6] DISCRETE OUTPUT, CH.2	24	BIT [7] DISCRETE OUTPUT, CH.2	40	N.C.
8	N.C.	25	RESERVED	41	RESERVED
9	SENSOR POWER, CH.1	26	SENSOR DATA, CH.1	42	SENSOR GROUND, CH.2
10	SENSOR GROUND, CH.1	27	SENSOR DATA, CH.2	43	SENSOR POWER, CH.2
11	DEVICE I.D. [8 HEX]	28	DEVICE I.D. [1 HEX]	44	DEVICE I.D. [4 HEX]
12	DEVICE I.D. [2 HEX]	29	FRAME GROUND	45	FRAME GROUND
13	FRAME GROUND	30	GND	46	POWER RETURN (GND)
14	SL-SHIELD (GND)	31	SL - DATA HI	47	DEVICE I.D. RETURN (GND)
15	SL - DATA LO	32	SENSOR DATA, CH.4	48	SENSOR GROUND, CH.4
16	SENSOR DATA, CH.3	33	SENSOR POWER, CH.4	49	SENSOR GROUND, CH.3
17	POWER INPUT (+28VDC)	-	-	50	SENSOR POWER, CH.3

### 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.



1350 Arrow Highway La Verne CA 91750  
 Voice (909) 392-5777 Fax (909) 392-0277 <http://www.dpilabs.com>  
 Copyright © 2002-2004 DPI Labs, Inc. All rights reserved  
 All data subject to change without notice.