

# SmartLink-III™ Series

## SP00-X SmartPack™

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### Features and Functions

- SmartLink-III™ System Interface
- Lightweight, modular design
- 3 local relay functions & 2 local input discrete functions
- Power-up state of all relay contacts configurable
- Firmware download capability
- Ability to report status of relays in diagnostic utility software
- Fully Programmable discrete control
- Backlighting control
- Redundancy design for high reliability



### Description

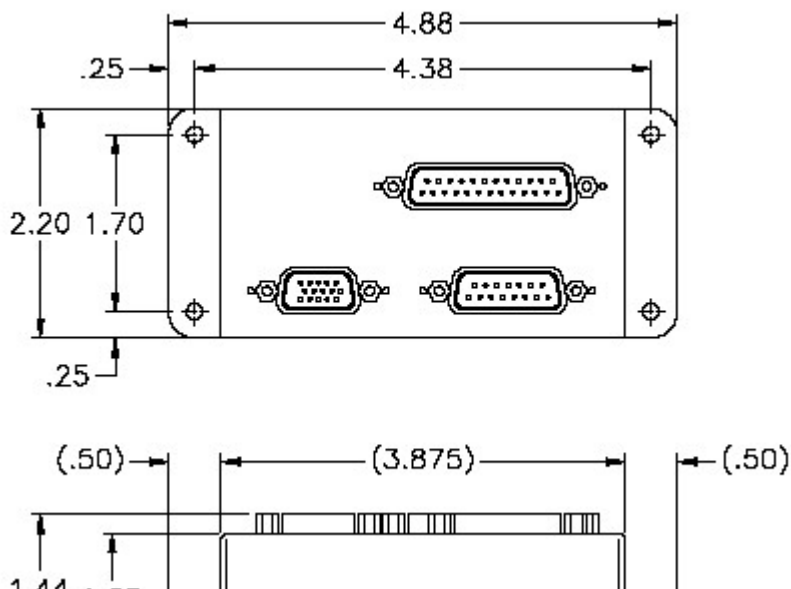
The SP00 SmartPack™ is one of three modules offered by DPI Labs Inc. that connects any remote switch panel into our SmartLink-III™ Cabin Management System. The SP00's (3) relays and (2) discrete inputs can be used to control a wide variety of local functions such as reading lights, table lights, motorized shade control, and motorized tables. Local relay control is not limited to the switch panels connected directly to the SmartPack™. Other remote panels on the aircraft can be configured to access the same relays – no extra wiring required! Due to its compact design, a SmartPack™ can be located very close to the loads it controls, keeping harness weight low and wire runs short, a big plus in the tight confines of today's corporate aircraft. Its unique redundancy design keeps all local functions online in the event of a buss failure. With the SP00's firmware download capability, local switch panel controls can be quickly reconfigured, making your customers happy and future expansion of your cabin management system easier than ever before.

### Application

- Functions as remote electronics for any DPI Labs switch panel series such as the 9000 series
- Lighting Control (on/off) for reading lights, table lights, etc.
- Motorized shade control
- Any local relay control functions

### Mechanical Specification

- All dimensions are in Inch
- Material 5052-H32 Aluminum
- Chem-Film Finish
- Weight 10 OZ



## Electrical Specification

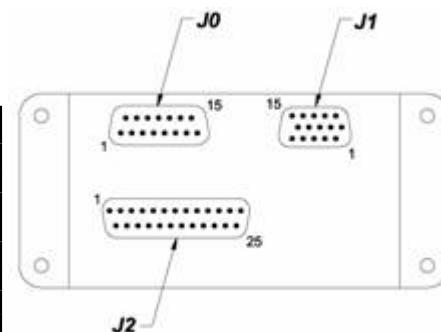
- **Operating Voltage:** 17 ~ 32 VDC
- **Operating Current:** 0.2 ~ 0.8 Amps
- **Operating Temperature:** -10 ~ +55 °C
- **System Interface:** SmartLink-III Compliant Firmware Upload Re-configurable
- **Connector:** D-Sub Series with #4-40 Jackscrew ('P' suffix with Positronic's V3 Tab)
- **Relay Output:** 2x 5Amps Resistive Form-C Relay Contacts (#6,#7), 1x 2Amps Resistive Form-A Relay Contacts (#5)
- **Discrete Input:** 2x Ground Activate Discrete Inputs, 1mA Source
- **Panel Interface:** 0.8Amps Max. Remote Panel Interface Power
- **Support Function:** 22 Keys, 2 Display Drive Capabilities

## System Interconnect Connector

Label	Description	Connector Type
<b>J0</b>	<b>Remote Panel Interface</b>	D-Sub 15 pin Socket (Female)
<b>J1</b>	<b>SmartLink System Interface</b>	High Density D-Sub 15 pin Plug (Male)
<b>J2</b>	<b>Input /Output Interface</b>	D-Sub 25 pin Plug (Male)

## Connector Pinouts

J0 D-Sub 15 pin Socket (Female)			
PIN	FUNCTION	PIN	FUNCTION
1	Frame Ground	9	Shift Clock
2	Back Lighting Control	10	Reserved
3	Panel Reset	11	Reserved
4	Panel Data Out	12	Reserved
5	Reserved	13	HeadPhone Audio Right*
6	Panel Power Return (GND)	14	HeadPhone Audio Common*
7	Panel Power +5VDC	15	HeadPhone Audio Left*
8	Panel Data In	-	-



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 25 pin Plug (Male)			
PIN	FUNCTION	PIN	FUNCTION
1	HeadPhone Audio Right	14	Reserved
2	HeadPhone Audio Common	15	Reserved
3	HeadPhone Audio Left	16	Discrete Return (GND)
4	Reserved	17	Discrete Input #1
5	Reserved	18	Discrete Input #2
6	Reserved	19	Reserved
7	Reserved	20	Reserved
8	Discrete Return (GND)	21	Relay #5 Common
9	Relay #6 Common	22	Relay #5 N.O.
10	Relay #6 N.O.	23	Relay #7 N.C.
11	Reserved	24	Relay #7 Common
12	Relay #6 N.C.	25	Relay #7 N.O.
13	Reserved	-	-

## ***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.
- Multiple Panels “J0” (D-Sub 15 Pin) may be connecting to a single Smart-Pack™ ‘J0’ via parallel ‘Y’ jumper cable (“star” interconnect) assembly.
- All “J0” inter-connects must be shielded. The maximum length per branch shall not be exceed 30’.
- HEADPHONE AUDIO R/COM/L: Connection to Headphone Jack Audio source connection, if so equipped. Triple Twisted Shielded
- If more than one panel is connected do not run headphone trough SmartPack (UNLESS INSTRUCTED TO).
- RELAY#5: 2 Amp relay contacts.
- RELAY#6, #7: 5 Amp relay form-‘C’ contacts.
- "J1" - pin 4 & pin 5: Double Twisted Shielded.



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