

[POWER SYSTEMS]

Solid State Latching Power Switch (SSLPS)

RCC-Compliant Latching Power Switch

[PRODUCT OVERVIEW]

Solid State Latching Power Switch (SSLPS)

Invocon's Solid State Latching Power Switch (SSLPS) provides switching control over an external DC power source with a single power input, four mutually dependent switched power outputs, and an UMBI/TM connector for Ground Support Equipment (GSE) on/off control, status monitoring, and flight telemetry. The SSLPS was designed to the RCC 319-19 standard and is well-suited for Flight Termination System battery power distribution applications where reliable latching action and post-latch power dropout survivability are required.



[CAPABILITIES]

Features & Applications

Key Features

◆ Four Latching Outputs

Four mutually dependent outputs can be latched on or off together, allowing power distribution to multiple FTS or avionics subsystem loads.

◆ Nominal 28 Vdc Latching Control

On and Off control signals each require >15 Vdc and >10 mA to change state. Once the control signal is removed, the switch remains latched in that state.

◆ Power Dropout Survivability

Once latched on, the SSLPS remains in the on state through input power dropouts of up to 50 ms, preventing inadvertent de-powering during transient events.

◆ GSE UMBI Situational Awareness

UMBI feedback includes a 10 kΩ current-limiting resistor for GSE voltage-divider monitoring and a 2 kΩ resistor for illuminating a panel-mount power indicator LED.

◆ TM Status Output

0–5 Vdc telemetry status output provides real-time on/off state data for inclusion in the vehicle PCM telemetry stream.

◆ RCC 319-19 Compliant Design

Designed to RCC 319-19 range safety standard for compatibility with DoD range FTS power distribution requirements.

Typical Applications

- ◆ **FTS Battery Power Distribution**
Distributes FTS battery power to multiple FTS ordnance loads or receivers with single latch control.
- ◆ **Pre-Launch GSE Power Monitoring**
Enables ground crew situational awareness of vehicle power state at the UMBI during launch preparations.
- ◆ **Telemetry Power State Monitoring**
Reports on/off switch state on vehicle PCM telemetry for range safety and mission assurance review.

[TECHNICAL DATA]

Key Specifications

SPECIFICATION	VALUE
ELECTRICAL	
Output Channels	4 switched outputs, up to 4.8 A each (not exceeding 10.4A combined)
Input Voltage	20 to 45 Vdc
Input Current (max)	10.4 A
Control Signal Voltage (Nominal)	28 Vdc
Latch State Change Threshold	>15 Vdc and < 34Vdc, >10 mA
Power Dropout Survivability (latched on)	Up to 50 ms
UMBI Status	10 kΩ inline current-limiting resistor; 2 kΩ for LED indicator
TM Status Output	0–5 Vdc scaled for power on/off state monitoring
Standard Compliance	RCC 319-19
MECHANICAL	
Size (L × W × H)	6.5 x 4.0 x 2.0 inches (not including connectors)
Weight	Nominal 2.5 lbs
Case Material	Alodine coated 7075-T6 Aluminum
ENVIRONMENTAL	
Operating Temperature	-24° to 61°C (Acceptance Levels)
Qualification Temperature	-34° to 71°C (Qualification Levels)