# Interface Control Document

## RockSat-X Power

**Revision:** 07-28-2014

## Interface Type Description Specification

### Mechanical

Customers will be provided power and ground for flight operations through the RockSat-X Power Connector.

- **Connector Type:** 15 Pin Cannon (D-Sub)
- **Gender:** Male (pins)

## Constraints

Wallops and COSGC maintain the right to remove payloads not meeting these specifications.

- **Current:** GSE and Timed Event lines are limited by WFF. Please see the diagram tab for clarification on limits.
- **Flight Power Off:** All decks will lose power at “T+6” minutes (“T+330” seconds)
- **Capacity:** Can not payload space has been allotted their own 1 Ah battery

## Electrical, Ground (GND)

Wallops will supply a current return ground connection.

- **Pins:** 5 - 8 and 12 - 15 on RS-X Power Connector
- **Max Current:** 1 Amp max per line

## Electrical, Ground Support Equipment (GSE)

Wallops shall supply power lines capable of activation prior to launch.

- **Pins:** 1 and 9 on RS-X Power Connector
- **Voltage/Polarity:** 28 +/- 6 V nominal per line
- **Max Current:** See diagram on "Diagram" tab

**Special Considerations for GSE lines**

- **All go active at T-3 and remain active for duration of flight.** Also, see additional comment above.
- **GSE 1 Activation Time Prior to Launch:** From T-10 to T-3 minutes (Customer Defined)
- **GSE 2 Activation Time Prior to Launch:** From T-10 to T-3 minutes (Customer Defined)

## Electrical, Timed, Non-redundant (TE)

Wallops shall supply three non-redundant lines capable of activation post launch.

- **Pins:** 4, 10, and 11 on RS-X Power Connector
- **Voltage/Polarity:** 28 +/- 6 V nominal per line
- **Max Current:** See diagram on "Diagram" tab

**Special Considerations for TE lines**

- **TE-1 Activation Time Post Launch/Dwell Time:** From T+0.1 to T+6 minutes (Customer Defined) with Dwell Time from 1 second to flight
- **TE-2 Activation Time Post Launch/Dwell Time:** From T+0.1 to T+6 minutes (Customer Defined) with Dwell Time from 1 second to flight
- **TE-3 Activation Time Post Launch/Dwell Time:** From T+0.1 to T+6 minutes (Customer Defined) with Dwell Time from 1 second to flight

## Electrical, Timed, Redundant (TE-R)

Wallops shall supply a single redundant line capable of activation post launch.

- **Pins:** 2 and 3 on RS-X Power Connector (Customers connect together)
- **Voltage/Polarity:** 28 +/- 6 V nominal per line
- **Max Current:** See diagram on "Diagram" tab

**Special Considerations for TE-R lines**

- **TE-RA/RR Activation Time Prior to Launch/Dwell Time:** From T+0.1 to T+6 minutes (Customer Defined) with Dwell Time from 1 second to flight

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