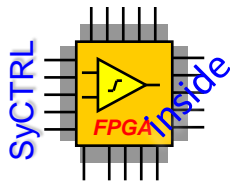
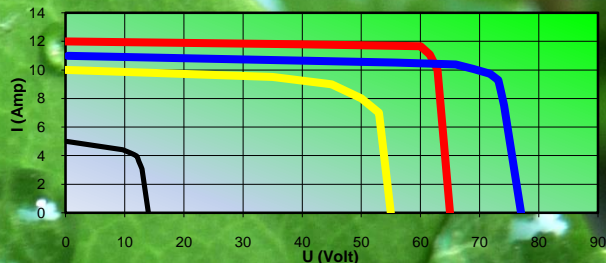


# ➤ Solar Array Power Simulator



Offers and expertise

The Solar Array Power Simulation SCOE provides a highly safe simulation of solar arrays electrical power provision based on COTS items (Power supplies, I/O units, PC).

As a baseline, it provides an adaptable and independent number of solar array power sections, delivering up to 2 KW per section, each of them fitted with standard over voltage and over current protection. It performs standard sunlight / eclipse simulation.

As options, it can be fitted with:

- second level over voltage / over current protection per section or per wing
- output impedance adaptation
- specific sensor simulation (thermistor, cell sample, deployment switch, ...)



# > Solar Array Power Simulator

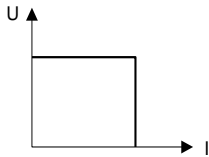
Offers and expertise

## Function

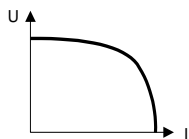
- Simulation of solar array power provision
- Sunlight / Eclipse transition simulation
- Solar array sensor simulation (thermistor, deployment switch, ...)
- Over-voltage, over-current, under-voltage, reverse-over-current protection
- Remote and local control mode
- Self test capability
- Safety loop signal management (Inhibit input & Fault output signals)
- Interface cable to spacecraft

## Implementation

- Power simulation by current sources



or by solar array power simulator



- Independent protection features based on SyCTRL
- Ethernet TCP/IP interface for remote control
- Windows man machine interface for local control
- 19" rack integrated

## Performance

- Unlimited number of sections
- Maximum power per section: 2KW
- Protection reaction time: <50  $\mu$ sec

## Used technology

- Agilent solar array power supplies (E4360B)
- Clemessy's SyCTRL second level protection and TM/TC features
- LXI interface with power supplies
- Software controlled Sunlight / Eclipse

