RADIATION ENVIRONMENT MONITOR FOR SPACECRAFT

REMS

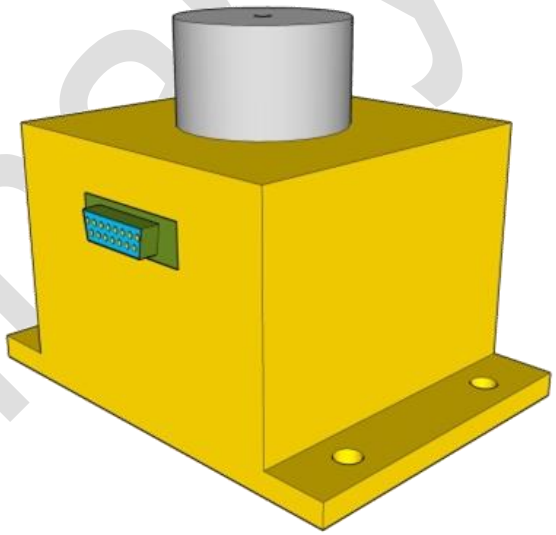
REAL-TIME RADIATION ENVIRONMENT MONITORING

INVOCON, INC. **TECHNOLOGY PROFILE 0615**

Invocon's Radiation Environment Monitor for Spacecraft (REMS) is a real-time active radiation monitor designed for mounting externally on spacecraft. REMS is designed to simplify radiation monitoring for satellites and other vehicles for scientific data collection as well as root cause analysis for anomalous behavior. It accomplishes this by providing real-time feedback of the radiation environment and by using simple interfaces.

Specific radiation information provided by REMS includes:

- Dose
- Dose rate
- Impact angle
- Radiation spectrum
  - Alpha
  - Beta
  - Gamma
  - X-Rays
  - Heavy Ions
  - Neutrons (optional)



REMS Sensor Unit

The REMS device has internal processing capability that provides radiation dose and dose rate information immediately upon communicating with its host platform. Alarms can be set to indicate when specific thresholds are exceeded.

The simple interface requires minimal effort to integrate. The low-power nature of the device, its small footprint, and its low mass minimize the resources required from the host platform. The standard communication interface further simplifies its integration.

REMS features include:

- On-board processing provides immediate feedback
- Low power minimizes host requirements
- Small size and weight simplifies integration

Specifications for REMS

Electrical	
Input voltage	28 VDC
Mechanical	
Size (L x W x H)	10 x 10 x 10 cm (plus mounting tabs)
Weight	16 Ounces
Case material	Alodine coated aluminum
Environmental	
Operating Temperature	-40° to 85°C
Radiation Tolerance	TID > 100krad (Si)

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