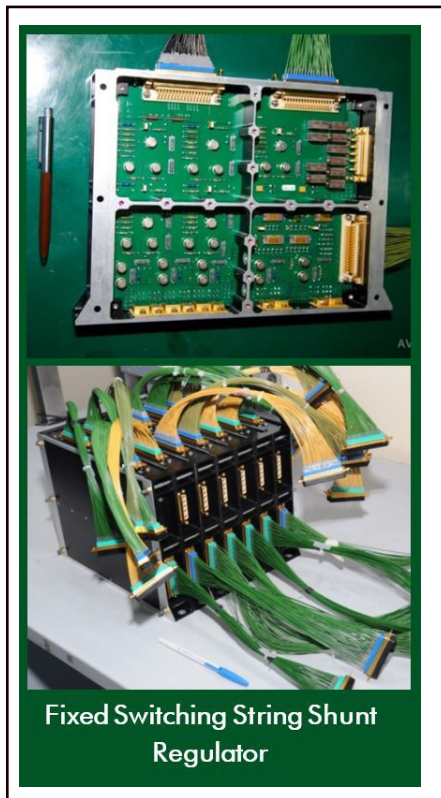


## Fixed Switching String Shunt Regulator

U R Rao Satellite Centre (URSC) of Indian Space Research Organisation (ISRO) has developed a Fixed Switching String Shunt Regulator (FS3R) which can handle power levels up to 15kW. It regulate the Bus voltage to 71V using Ripple regulated bus concept. It achieves Coarse regulation by On/Off strings and Fine regulation by a fixed switching strings.



### Salient Features

- ✦ Bus voltage is regulated to 71V using Ripple regulated bus concept with UTP/LTP.
- ✦ Coarse regulation by On/Off strings.
- ✦ Fine regulation is by a fixed switching string.
- ✦ Fixed switching strings concept with hot redundancy.
- ✦ Designed to support 40 Strings.
- ✦ Modular concept (Horizontally stacked) & scalable according to power requirement, each module can support up to 2kW.
- ✦ Employs dedicated Majority Voting logic (MVL).
- ✦ Dedicated scalable Battery charging modules using charger string concept, controlled by FPGA.

## Major Specifications

✦ Output Voltage (V)	: $71 \pm 0.5$
✦ Output Power (W)	: Up To 15kW
✦ Concept	: Ripple Regulated
✦ Efficiency (%)	: 98%
✦ Telemetry Analog	: Duty Cycle Of Switching Strings
✦ Telemetry Digital	: Inclusion/Exclusion Status Of Strings
✦ Package Dimensions	: 286*70*212 (mm*mm*mm)/Module
✦ Package Mass	: 1.2kg/Module

## Technology Transfer

URSC/ISRO offers to transfer this technology of Fixed Switching String Shunt Regulator developed by URSC to industries in India with adequate experience and facilities. Industries interested in obtaining knowhow may write giving details of their present activities, infrastructure and facilities.

Technology Transfer & Industry Coordination Division (TTID),  
Programme Planning and Evaluation Group (PPEG),

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🌐 <https://www.ursc.gov.in/industry/index.jsp>