



# LVR-50

## 60Hz LOW VOLTAGE REGULATOR

The LVR-50 represents the latest in low voltage regulation technology based on 23 years of R&D and field experience with 20 utilities, the US military, and commercial customers. We have about 3000 regulators installed on 3 continents. 1600, 20 kVA versions of this regulator have been in continuous operation in the Australian outback on SWER networks for 14 years now.

The point of judgment for voltage compliance is moving from the MV network to the LV network due to the influence of smart meters. The LVR regulator is a cost-effective solution for maintaining voltage compliance in urban networks due to feeder line VVO, the integration of DER, or in rural applications with long high impedance feeders.

Series voltage regulation efficiently produces consistent, stable results without the need for a complex control network. The results do not depend on the x/r ratio of the circuit, or the reactance of the load. Series regulation is more efficient than shunt regulators (VAR control). Up to 10 times more efficient dependent on the circuit reactance. VAR control simply will not adequately control the voltage on many LV circuits.

Insertion of our regulators has virtually zero effect on THD, power factor, impedance, phase angle. The sub-cycle regulation reduces flicker by ~66%. Series voltage regulation works autonomously, consistently, and reliably on all circuits under all conditions, regardless of load reactance or power factor. It is simple to apply wherever you have voltage compliance issues for whatever reason.

## FEATURES

- 120/240V 50 kVA Rating
- 8.3% Buck/Boost Correction
- Sub-cycle Regulation
- Bi-directional Power Flow
- Bluetooth or optional WAN
- Data Collection
- High Efficiency 99.6%
- Series Injection Design
- Variable Setpoints
- Power Interactive Regulation
- External Control Switch
- Quick Dove Tail Mounting
- Compact 21"W x 25"H x 13"D
- Light Weight 124 lbs

# LVR-50 PQ Pilot Program

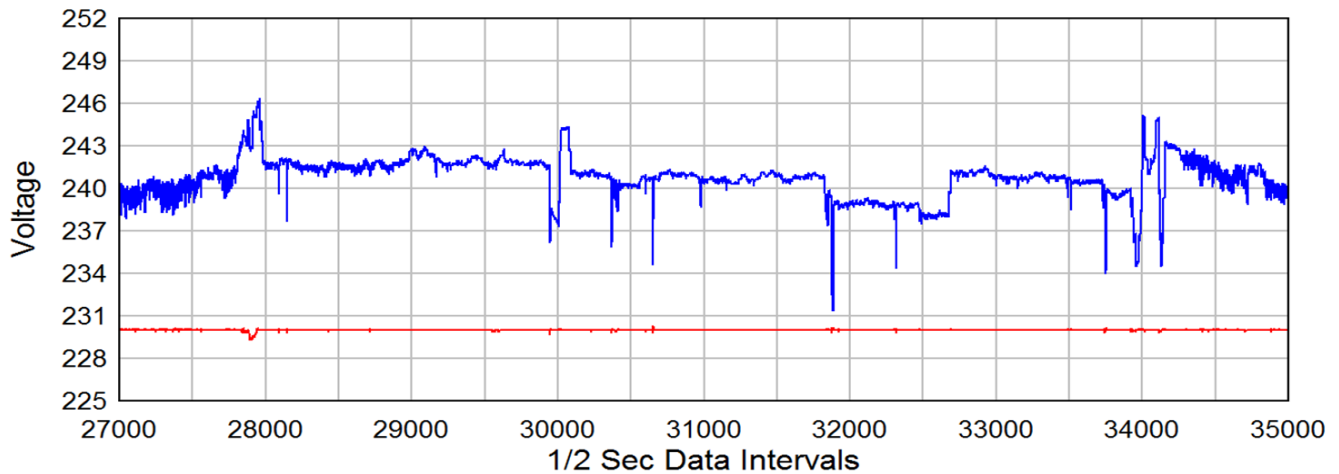


## Power Quality issues on a rural feeder

- A lumber and truss operation was causing Flicker, Sags, & Swells on the circuit primary
- Residential customer (who is a commercial electrician) persistently complained to the PUC
  - High voltage was shutting down PV inverters
  - Flicker & deep Sags tripping off appliances



PGE LVR 420002\_8/6/20  
CU 1



**Blue line is input --- Red line is output**