



Industrial grade electronic voltage regulation in a small, efficient, easy to install package.



Discover the UST MiniEVR™

The MiniEVR™ protects electrical equipment from virtually all major power quality problems, including sags, brownouts, surges and swells, all without the heat, noise or high electric bills that come with traditional CVT voltage regulators. Conveniently sized for small, single-phase applications, the MiniEVR is compatible with all types of equipment and all power factors.

The MiniEVR utilizes microprocessor-based controls that electronically switch transformer taps to provide a tightly regulated output voltage. When the incoming voltage varies between +10% and -22% of the nominal input voltage, the Mini EVR™ responds within 1 cycle to provide an output within $\pm 3\%$ of the nominal output voltage.

The MiniEVR's high overload capacity eliminates the need to oversize for large inrush currents or fault clearing currents. And its small size, light weight, quiet operation, low heat rejection and optional enclosures for outdoor or hazardous locations make it very easy to accommodate and install.



Application

Size (kVA)	Single Phase	5, 7.5, 10 (for larger sizes see UST SureVolt™)	
Input / Output Voltages	1Ø/60Hz: 120, 208, 240, 480	1Ø/50Hz: 110, 220, 380, 400	Non-standard voltages available upon request.

Regulation / Operating Characteristics

Regulation	Nominal input voltage +10%/-22%, Nominal output voltage ±3 (other options available)
Regulation Variation	None – regulation constant for 0 to 100% load and any load power factor
Overload/Inrush Capability	1000% - 1 second, 500% - 5 seconds, 200% - 1 min. ; 1000% fault clearing
Minimum Load	No limitations, compatible with all load types
Load / Power Factor	No minimum or part load or power factor limitations, compatible with all load types.
Tap Switching	No load current interruption or waveform distortion on switching at any load or power factor
Zero Crossing Sensitivity	None, tap switching not dependent on determining load current zero crossing
Harmonic Distortion	No distortion added at any load or power factor
Response Time	1 cycle typical, regardless of load or load power factor
Efficiency	99% typical
Operating Frequency	± 3% of nominal frequency.

Protection / Bypass

Surge Suppression	Included, complies with ANSI/IEEE C62.41, UL 1449
Failsafe Electronic Bypass	Auto-actuation on high temperature, over-current, or component failure with no loss of load.

Construction

Technology	Electronically controlled tap-switching series transformer design.
Switching Semiconductors	Non-full power semiconductors. Individual SCRs are not required to carry full unit current.
Controls	No controls or programming required, no user-adjustable controls
Cooling	Natural convection, no cooling fans used
Transformer	Dry-type auto-transformer, copper wound
Enclosure	NEMA-1, ANSI 61 grey, other enclosure types & colors available (consult factory for specific requirements)
Monitoring	Contacts for remote indication of unit and surge suppression status are included
Audible Sound Level	Less than 65 dB @ 1 meter

Environmental Requirements

Temperature – Humidity	Ambient 32° to 104°F (0 to 40°C) – Relative humidity 0-95% non-condensing
Operating Altitude	0 to 3,300 ft (1000m)

Environmental Requirements

kVA	Height Inches (cm)	Width Inches (cm)	Depth Inches (cm)	Weight – 60Hz Lbs. (kg)	Weight – 50Hz Lbs. (kg)	Enclosure
5	20 (51)	20 (51)	10 (26)	85 (39)	94 (43)	M16
7.5	30 (76)	20 (51)	11 (28)	120 (55)	132 (60)	M20
10	30 (76)	20 (51)	11 (28)	150 (68)	165 (75)	M20

Easy to Install

Mini-EVR arrives completely assembled and requires no programming, testing, measuring, setting of switches, or internal wiring. It installs much like a dry-type transformer: simply place the unit and make the input and output wiring connections.

Ferroresonant Transformers, also known as constant-voltage transformers or simply Ferros, are an extremely reliable and nearly maintenance-free solution for protecting electrical loads. Unfortunately, Ferros are electrically inefficient.

The Ferro Alternative

The single-phase UST MiniEVR operates at an efficiency of 99%, regardless of the load. It is so efficient relative to ferroresonant transformers (aka constant-voltage transformers or ferros), that an ROI case can be made for replacing ferros, no matter how recently installed, in virtually all industrial applications.

See video: <https://ustpower.com/mini-evr/>

The MiniEVR™ automatic voltage regulator continuously conditions power with no operator or programming required. It is designed for frequent high-inrush current and low-power factor loads without the need to oversize the product or sacrifice reliability.



Power. Made Perfect.™

UST MINIEVR™ FEATURES

High overload capacity available for compatibility with all load types

High fault-clearing capacity available for reliable operation of protective devices

99% efficiency for all but the lowest end of the load range

Continuous load current – no load current interruption on tap switching

Quickly corrects under/over voltage, sags, and swells

Automatic failsafe electronic bypass to eliminate load current interruption in the event of a malfunction

Zero moving parts and fan-free design for increased reliability and no scheduled maintenance

Surge suppression standard

Natural convection cooling



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Utility Systems Technologies, Inc. (UST) is a world-leading designer and manufacturer of electronic voltage control and power-conditioning products. UST's products are in use worldwide at hospitals, factories, refineries, embassies, data centers and other critical facilities, mitigating the risk of damaging electrical surges, sags and swells, bridging brownouts, and providing a safe connection to the local grid.