

Features

Reliability by Design

- Robust industrial duty
- High efficiency switch-mode design
- 250 W to 1500 W converters
- LC & HF front end filters
- 40 kHz MOSFET chopper 1st stage
- Full-wave diode rectifier 2nd stage
- LC & HF output filters
- Natural convection cooled



DC Inputs & Regulated DC Outputs

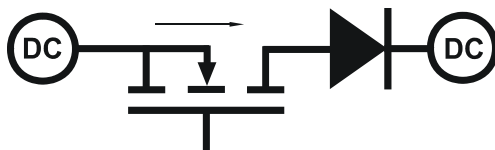
- Nominal 12, 24, 48 & 130 V
- Low noise (telecom filtered)
- Ideal for use from all battery types

Protection

- Input & output circuit breakers
- Inherent surge rejection
- Transformer isolation
- Output current limiting
- Failsafe output V control

DC System Capability

- Simple, parallel converter operation
- Complete DC systems solutions



DC V In	DC V Out	Output Amperes	Output Power (W)
240	130	5, 10	650, 1330
240	48	10, 20, 30	480, 960, 1440
240	24	20, 40, 60	480, 960, 1440
130	130	5, 10	650, 1330
130	48	10, 20, 30	480, 960, 1440
130	24	20, 40, 60	480, 960, 1440
48	130	5, 10	650, 1330
48	24	20, 40, 60	480, 960, 1440
48	12	20, 40, 60	240, 480, 720
24	130	5, 10	650, 1330
24	48	10, 20, 30	480, 960, 1440
24	12	20, 40, 60	240, 480, 720
12	48	10, 20, 30	480, 960, 1440
12	24	20, 40, 60	480, 960, 1440

Model Numbers

C 48 DC 25 C 40 A 43 18 R M ___

- | | | | | | | | | Options
- | | | | | | | | | Digital A meter
- | | | | | | | | | Rack mount
- | | | | | | | | | Height (cm)
- | | | | | | | | | Width (cm)
- | | | | | | | | | Output full load current rating
- | | | | | | | | | Telecom Filter (< 26 dBmC noise)
- | | | | | | | | | Nominal DC output voltage
- | | | | | | | | | Nominal DC input voltage

Warranty & Service

- 2 year comprehensive warranty
- 5 year major component warranty
- 25 year design life, easily field-serviced

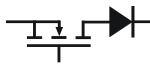
Options

- Input / output quick connectors Q
- Output blocking diode for parallel operation B

Contents

Specifications 2





Specifications

Switch-Mode Conversion Design

- LC & HF front-end noise filters
- 40 kHz MOSFET push-pull chopper
- Full-wave, silicon diode rectifier
- LC & HF output noise filters

Output Control

- Closed-loop, negative feedback control
- Analog circuitry (no digital electronics)
- High speed electronic V sensing
- PWM transistor shunt regulation

Steady-State V Regulation

- $\pm 0.5\%$ (full load, $\pm 25\%$ input V range)

Input & Output V Ranges

- Nominal V -13% , $+20\%$ input V range
- Nominal V $\pm 10\%$, output V adj. range

Dynamic V Response

- $\pm 5\%$ for 90% step-loads
- Recovery < 50 ms

Output Noise

- ≤ 26 dBnC (40 mV rms)

Parallel Converter Operation

- Load sharing within 10% unit I_{DC}
- Separate blocking diode required for parallel operation

Annunciation & Meters

- Standard annunciation & meters:
 Normal Output 1 green LED
 Output Fault 1 red LED, contacts
 Current Limit 1 red LED
 A Meter digital, 1% accuracy
 High impedance output V jacks

Full Load Efficiency (%)

- 85-90% efficiency (25-100% load)

Protection

- In bkr rated $I \approx 1.5 \times$ full in load I_{DC}
- Out bkr rated $I \approx 1.5 \times$ full out load I_{DC}
- Transformer electrical isolation (1500 V)
- $I^2 t$ breaker coordinated transistors
- Failsafe I limit (100 -120% of rated I_{DC})

Surge Tolerance

- Surge rejection via the filters & transformer is 2 kV peak for 8 ms(1Ø)

Audible Noise

- No detectable noise

Cabinets

- Rack mount, EEMAC / NEMA type 1
- Front accessible, side cable entry
- 14 gage steel panels
- Baked enamel finishes

Environmental Requirements

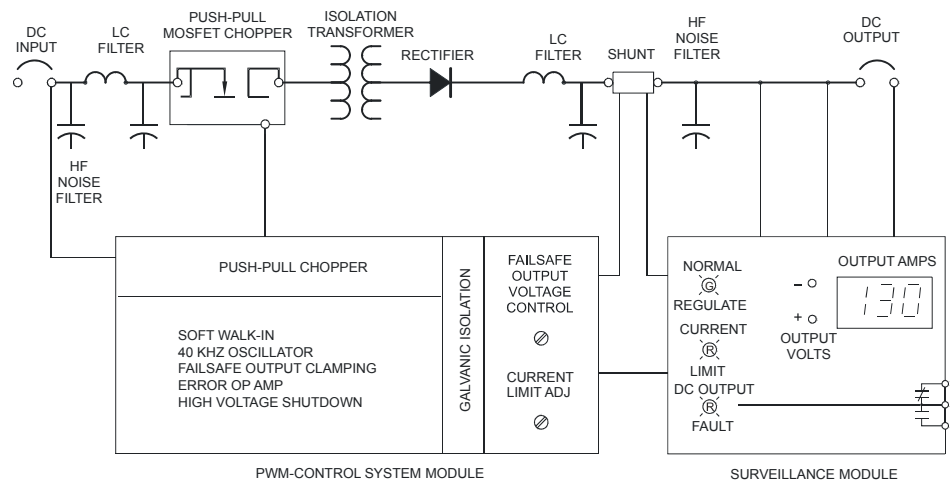
- Natural convection cooled, 2 rack space top & bottom clearances required.
- -20°C to $+40^\circ\text{C}$ continuous operation
- RH < 95% non-condensing

Reliability

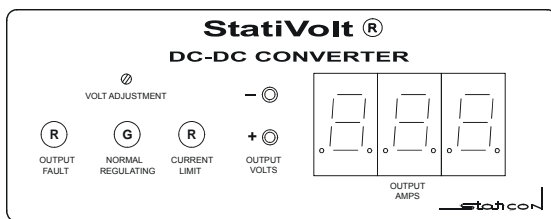
- MTBF is 100,000 hours

Design & Test Standards

- Generally per NEMA, ANSI, IEEE, IEC
- Magnetics designed for Class 220°C

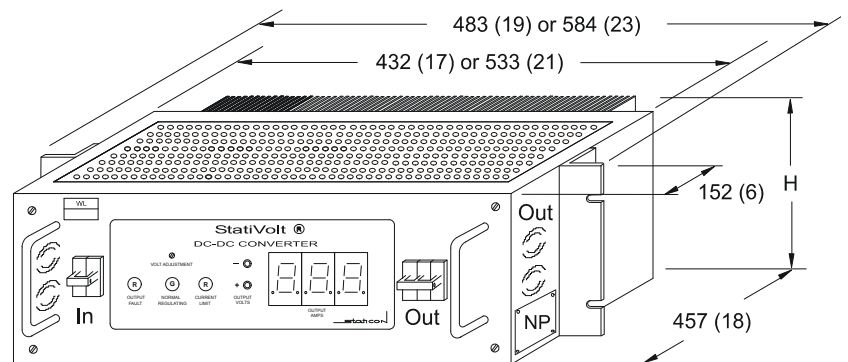


Single-Line Diagram with Control Functions



Control Label

Output W	Height H mm (in)	Weight kg (lbs)
240	133 (5.25)	12 (26)
480	133 (5.25)	14 (31)
650, 720, 960	178 (7)	16 (35)
1330, 1440	222 (8.75)	20 (44)



Rack Mount Converter Cabinets Dimensions in mm (in)