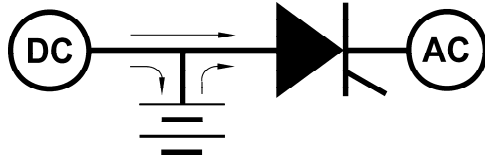




Converted AC power ensures a high station availability of mission-critical safety devices, instrumentation, alarms, controls and computers. StatiVolt Inverters supply true sine wave AC power. They are designed and built for decades of robust, industrial duty and field serviceability. Over 40 years of applications to critical, industrial AC loads is testimony to their reliability.



| Output kVA | | DC Input kW (1Ø) | | | |
|------------|-------|------------------|------|-------|-------|
| 1Ø | 3Ø | 24 V | 48 V | 120 V | 240 V |
| 0.6 | 1.8 | 1 | 1 | 0.9 | 0.9 |
| 1.2 | 3.6 | 1.7 | 1.7 | 1.6 | 1.5 |
| 2.0 | 6.0 | 2.7 | 2.6 | 2.5 | 2.4 |
| 3.0 | 9.0 | 4.1 | 3.8 | 3.7 | 3.5 |
| 4.0 | 12.0 | 5.3 | 5.1 | 4.8 | 4.5 |
| 5.0 | 15.0 | 6.7 | 6.3 | 6 | 5.6 |
| 6.0 | 18.0 | | 7.5 | 7.1 | 6.7 |
| 7.5 | 22.5 | | 9.4 | 8.8 | 8.3 |
| 10.0 | 30.0 | | 13 | 12 | 11 |
| 12.5 | 37.5 | | 16 | 15 | 14 |
| 15.0 | 45.0 | | 19 | 18 | 17 |
| 20.0 | 60.0 | | | 24 | 22 |
| 25.0 | 75.0 | | | 29 | 28 |
| 30.0 | 90.0 | | | 35 | 33 |
| 40.0 | 120.0 | | | 47 | 44 |
| 50.0 | 150.0 | | | 59 | 56 |
| 60.0 | 180.0 | | | 71 | 67 |

Reliability by Design

- CSA certified inverters
- Sine-wave AC power, kVA=kW
- Low frequency, low noise
- Electronic + magnetic control
- Failsafe, soft-switching
- Natural convection cooled

Low DC Input Voltage

- 24, 48, 120, 240 V DC nominal
- Battery-only start-up capability

Protection

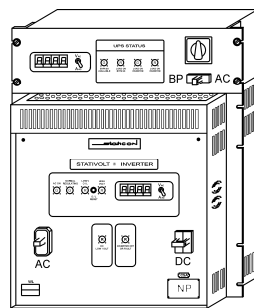
- Input, output circuit breakers
- Inherent surge rejection
- Inherent AC fault limiting
- Transformer isolation
- Output current limiting
- Failsafe output V control

Versatile Functions & Options

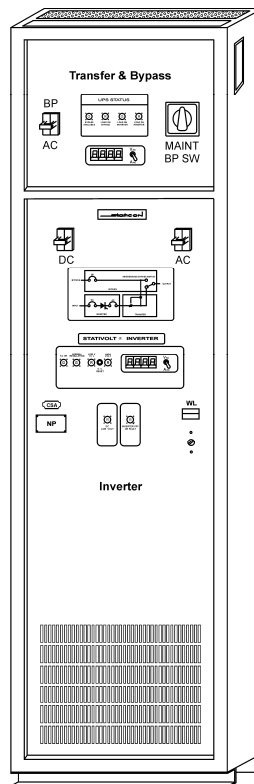
- DC Input Telecom Filter
- DC Input Low V Shutdown
- Dual AC Output Voltages
- Distribution Breakers
- Special Utility Options

Warranty & Service

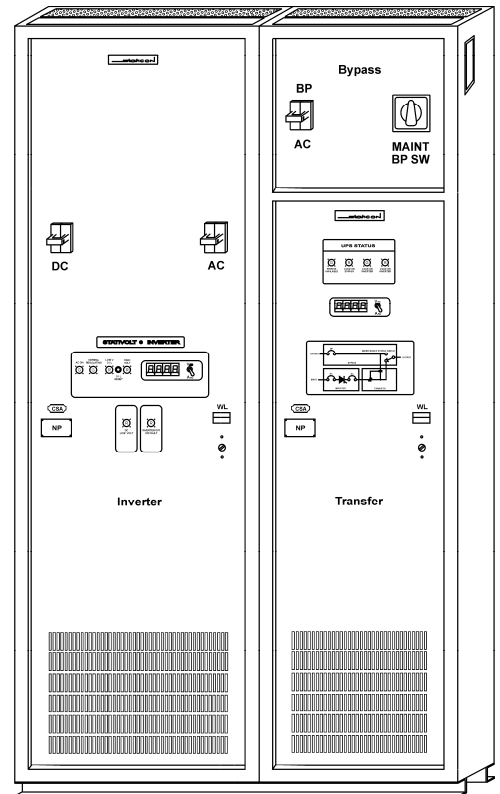
- 2 year comprehensive
- 5 year major component
- 25 year life, field-serviceable



0.6 - 3 kVA 1Ø



4 - 25 kVA 1Ø



30 - 60 kVA 1Ø

3Ø inverter systems have similar, wider, floor mount 3x inverter cabinet configurations

Contents

Inverter Specifications 2
 Model Numbers, Options 3





Inverter Specifications

Power Conversion Design

- SCR chopper, commutation transformer
- Tuned ferro-resonant, sine wave AC
- kVA = kW load ratings

Output Control

- Fail-safe, closed-loop control
- High speed electronic V sensing
- Failsafe, magnetic shunt regulation
- True oscillator output frequency

Steady-State V & F Regulation

- ±1% (full load, -13% to +17% DC V)
- ±0.10 Hz frequency, 1 Hz / s slew rate

Overload Capacity

- 125% 1 h, 150% 1 min, 200% 10 s

Annunciation & Meters

- Standard annunciation & meters:
 - AC On green LED
 - Normal Reg. green LED
 - Low V O/L red LED, contacts
 - High V red LED
 - DC Low V red LED, contacts
 - Inv. Off / Fault red LED, contacts
- Contacts are form 'C' contacts rated:
 - 3 A (125 V_{AC} & 30 V_{DC}), 0.3 A (120 V_{DC})

Full Load Efficiency (%)

| kVA | | DC Voltage | | | |
|-------|--------|------------|----|-----|-----|
| 1Ø | 3Ø | 24 | 48 | 120 | 240 |
| 0.6 | 1.8 | 62 | 63 | 65 | 68 |
| 1.2 | 3.6 | 69 | 70 | 73 | 78 |
| 2 | 6 | 73 | 76 | 80 | 84 |
| 3 | 9 | 74 | 78 | 82 | 86 |
| 4 | 12 | 75 | 79 | 83 | 88 |
| 5 | 15 | 75 | 80 | 84 | 89 |
| 6-15 | 18-45 | | 80 | 85 | 90 |
| 20-60 | 60-180 | | | 85 | 90 |

Protection

- DC breaker rated $I \approx 1.5 \times$ full load I_{DC}
- AC breaker rated $I \approx 1.25 \times$ full load I_{AC}
- Transformer electrical isolation
- I²t breaker coordinated SCRs & diodes
- I limiting set to start at 150% of full load

Input DC V Range

- 24, 48, 120 or 240 V -13% to +17%

DC Input Ripple Voltage

- ≤ 1% rms (without battery)
- ≤ 0.5% rms (on typical battery)
- Noise filter option (< 32 dBnC noise)

Output AC V Range

- ± 10% of nominal (± 5% regulator adjust, ± 5% transformer tap adjust)

Dynamic AC V Response

- ±5% for 50% resistive step-loads
- ±10% for 100% resistive step-loads
- Recovery < 17 ms (50% step-load)

Parallel Inverter Operation

- Load sharing within 10% of unit I_{AC}

Output Distortion & Noise

- THD is < 5% (p-n) and < 3% (p-p)
- 0.1 to 30 MHz wide-band filter
- 120 dB common mode noise rejection
- 60 dB transverse mode attenuation

Surge Tolerance

- Withstands ANSI / IEEE C62.41 (IEC 6080-4) standard surge V waveforms
- 1000:1 (10 ms), 500:1 (20 ms) and 300:1 (30 ms) V spike attenuation

Electromagnetic Interference

- Conducted / radiated EMI within CSA C108.8 & FCC Part 15 Class B limits

Audible Noise

- 55-65 dBA (at 1 m, rating dependent)

Cabinets

- EEMAC / NEMA type 1, per CSA
- Front accessible, side / top cable entry
- 14 / 10 gage steel panels / mounts
- Powder-coated, baked enamel finishes

Environmental Requirements

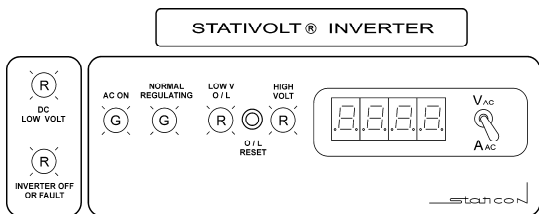
- Natural convection cooled, top, side, rear clearances required for air flow.
- -20°C to +40°C continuous operation
- RH < 95% non-condensing

Reliability

- MTBF is 120 k hrs (1Ø), 40 k hrs (3Ø)
- MTTR is 1 hour (spares on / near site)

Design & Test Standards

- CSA certified (C22.2 No. 107.1)
- Generally per NEMA, ANSI, IEEE, IEC
- Magnetics operate at max. 125°C
- Magnetics designed for Class 220°C



Single-Line Diagram With Controls

