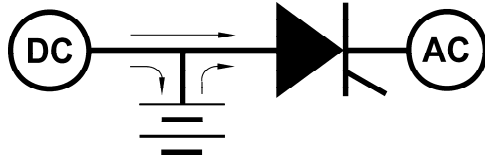




Converted AC power ensures a high station availability of mission-critical safety devices, instrumentation, alarms, controls and computers. StatiVolt Inverters supply true sine wave AC power. They are designed and built for decades of robust, industrial duty and field serviceability. Over 40 years of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

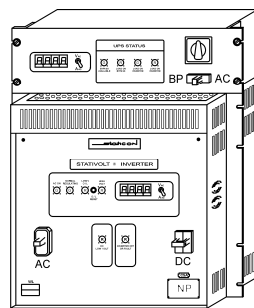
- Input, output circuit breakers
- Inherent surge rejection
- Inherent AC fault limiting
- Transformer isolation
- Output current limiting
- Failsafe output V control

Versatile Functions & Options

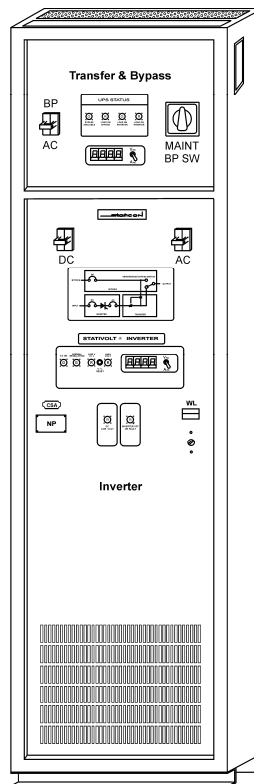
- DC Input Telecom Filter
- DC Input Low V Shutdown
- Dual AC Output Voltages
- Distribution Breakers
- Special Utility Options

Warranty & Service

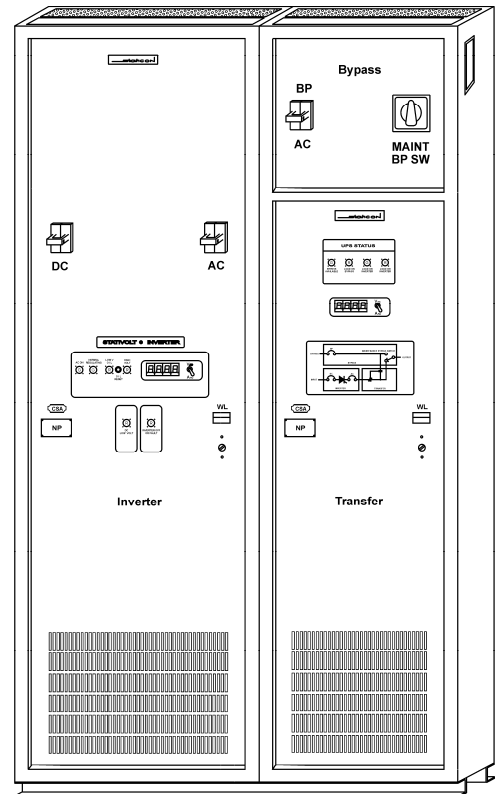
- 2 year comprehensive
- 5 year major component
- 25 year life, field-serviceable



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<sub>AC</sub> & 30 V<sub>DC</sub>), 0.3 A (120 V<sub>DC</sub>)

#### 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
- I<sup>2</sup>t 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

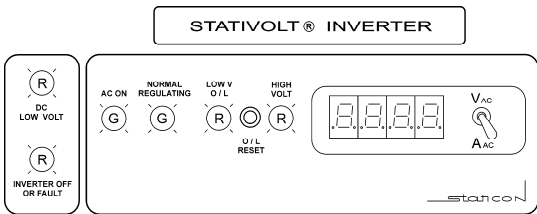
- Natural convection cooled, top, side, rear clearances required for air flow.
- -20°C to +40°C continuous operation
- RH < 95% non-condensing

#### 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

