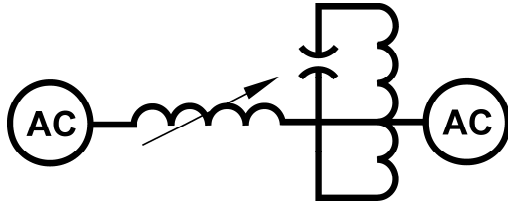




Clean sine-wave AC power ensures a high availability of mission-critical safety devices, instrumentation, alarms, controls and computers. **Static Line Conditioners** filter, regulate and condition AC power. They are designed and built for decades of robust, industrial duty and field serviceability. Over 43 years of applications to critical, industrial AC loads is testimony to their reliability.



Output kVA		Efficiency
1Ø	3Ø	
0.6	1.8	75
1.2	3.6	82
2.0	6.0	85
3.0	9.0	88
4.0	12.0	90
5.0	15.0	90
6.0	18.0	90
7.5	22.5	90
10.0	30.0	91
12.5	37.5	92
15.0	45.0	92
20.0	60.0	92
25.0	75.0	92
30.0	90.0	92
40.0	120.0	92
50.0	150.0	92
60.0	180.0	92
80.0	240.0	92

### Features

#### Reliability by Design

- Fully CSA certified systems
- Pure sine-wave AC power
- Rated for load Crest Factors ≤ 3
- Natural convection cooled

#### Protection

- Output current limiting
- Inherent surge rejection
- Inherent AC fault limiting
- Fail-safe output V control

#### Versatile Functions & Options

- Input circuit breaker
- Isolation transformer
- Dual AC Output Voltages
- Auto transfer to bypass
- Bypass Transformer
- Maintenance bypass switch
- Distribution Breakers
- Special Utility Options

#### Warranty & Service

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



### Contents

Line Conditioner Specs 2





### Line Conditioner Specs

#### Power Conditioning Design

- Regulation, filtering & conditioning
- Tuned ferro-resonant tank circuit
- Pure sine-wave AC power
- Rated for load Crest Factors  $\leq 3.0$

#### Output Control

- Fail-safe, closed-loop control
- High speed electronic V sensing
- Magnetic shunt regulation

#### Steady-State V & F Regulation

- $\pm 1\%$  (100% load, -20% to +10% AC V)
- $\pm 2\%$  (100% load, -25% to +15% AC V)
- $\pm 3\%$  (100% load, -30% to +20% AC V)

#### 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
- Contacts are form 'C' contacts rated: 3 A (120 V<sub>AC</sub> & 30 V<sub>DC</sub>), 0.3 A (125 V<sub>DC</sub>)

#### Brownout Coverage

- 1/2 to 1 cycle (8-16 ms) depending on load characteristics and sine-wave point of outage

#### Protection

- I limiting set to start at 150% of full load
- Input breaker (option)
- Isolation transformer (option)

#### Output AC V Range

- $\pm 10\%$  of nominal ( $\pm 5\%$  regulator adjust,  $\pm 5\%$  transformer tap adjust)

#### Dynamic AC V Response

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

#### 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

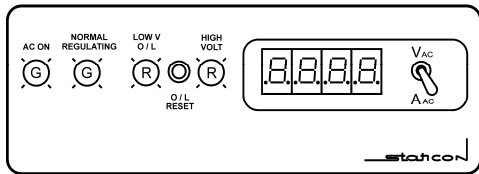
#### Reliability

- MTBF is 300 k hrs (1Ø), 100 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

STATIAC® AC LINE CONDITIONER



Single-Line Diagram With Controls

