19” Rack Mount 400Hz Static Frequency & Phase Converters: 1 phase to 3 phase

- Models from 1.5 to 4KVA
- Single-Phase Input, 3-Phase Output
- Power factor corrected input (PFC)
- Sinusoidal, Isolated Output
- Comprehensive Digital Output Display
- Low Acoustic Noise
- 2-Year Warranty
- Military Variants Available
- Def-Stan 61-5(4), Stanag 1008

Cost-Effective, Compact and Dependable:
Failsafe ABLE-30 series static frequency converters offer the most cost-effective and flexible way of providing an aircraft quality, 400Hz utility supply for 19” rack-mount installations. ABLE-30 series converters only require a single-phase input, but generate a 3-phase, fully aircraft compatible, 400Hz output. This means that they may be used in workshops and development laboratories where only a domestic type single-phase supply is available.

Compact, 19” Rack Mounting:
Extremely compact electronics allows the ABLE-30 range to be packaged in 19” rack-mountable chassis. Chassis are 510mm deep, and pre-fitted with fixings for telescopic slides.

Simplicity in Operation ..... 
‘Two button’ operation means minimal Operator training. No special set-up is required.

.....Yet Sophistication in Display:
An easy to read digital display makes all major parameters available for review - these include (for individual phases) output Voltage, Amps, Kw, Kva, Hz and power factor. ABLE-30 models also have facilities for remote On/Off control and remote status indication (via MODBUS RS485 or volt-free contacts).

Variable Output Voltage and Frequency:
All models may be ordered with continuously variable output voltage and frequency. The output voltage is variable by +/-15% about the nominal, and the frequency +/-5% about the nominal (380-420Hz). Control is via front panel knobs

Applications:
ABLE-30 series machines are suitable for static installations within plant rooms, hangars, workshops and laboratories. They should be installed within a standard 19” cabinet, which should have adequate cooling arrangements (normally forced). ABLE-30 units may be used in continuous duty applications.

High MTBF, Low MTTR:
An oversized rectifier and robust IGBT based inverter offer high reliability, while modular construction and a simple lay-out means that access for maintenance and repair is very straightforward.

Warranty:
All Failsafe equipment is supplied with a 2-year warranty.
ABLE-30 - Technical Specifications

INPUT:
- Input Voltage: 230V 1ph or 208V 2ph, +/- 10% (115V by request)
- Input Frequency: 50 or 60Hz, +/- 6%
- Input Harmonics: IEC 1000-3-4
- Input Power Factor: >0.98
- Rectifier Inrush: 10 second walk-in, max current < In x 1.2
- Input Connections: 2m lead with Schuko, UK 13A, EN60309 or Hubbell etc
- Input Protection: Fuse, rear panel

OUTPUT:
- Output Voltage: 115/200V or 120/208V, 3-Phase + N
- Output Voltage Regulation: Steady-state: +/-2%, dynamic 0-100% step load: +/-5% recovering to steady-state within 10mS.
- Total Harmonic Distortion: <3% linear load
- Output Frequency: 400Hz +/- 0.1%, quartz generated
- Output Phase Angle Accuracy: 120 deg. +/- 1%
- Permissible Load Power Factor: -0.6 to 1
- Output is galvanically isolated from input. (the output neutral may be bonded to earth).

SECURITY:
- Permissible Overload: 110% @ 10 min, 150% @ 5s, 200% @ 1 s
- Output Overvoltage Cutout: 130V L-N on any one phase
- Output Undervoltage Cutout: 100V L-N on any one phase
- Thermal Overload: Thermal sensors located in rectifier, inverter and output transformer.

INTERFACE:
- Optional RS485 or RS422 MODBUS high speed communications port allows the output parameters of
  the converter to be remotely monitored.

ENVIRONMENT & EQUIPMENT:
- Ambient Temperature Range: -10 to 40 deg C
- Humidity: <90%, non-condensing
- Altitude: All specifications quoted at < 2000m above sea level
- Acoustic Noise: < 50dBA @ 1m
- Overall Efficiency: 85 to 91% model dependant
- EMC: Better than EN55-022B
- Cabinet: Zinc plated steel, powder coated
- Front Panel: 5U x 19”, anodised aluminium
- Cabinet Protection: IP21
- Meters: Digital readout for output Amps, Volts (both ph-to-ph and ph-to-neutral), Hz, Kw and power factor for each phase.
- CE marked

DIMENSIONS:
Up to 4KVA: 19” x Height 5U x D510mm (20”), ventilation at rear.

OPTIONS:
- Other input and output voltages and frequencies
- Variable output voltage and frequency
- Remote On/Off and remote status.

<table>
<thead>
<tr>
<th>Model</th>
<th>Power</th>
<th>301</th>
<th>302</th>
<th>304</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.5KVA</td>
<td>2.5KVA</td>
<td>4KVA</td>
<td></td>
</tr>
<tr>
<td>Wt: Kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lbs</td>
<td>22</td>
<td>26</td>
<td>34</td>
<td>75</td>
</tr>
</tbody>
</table>

Failsafe (Rulix in some territories) is a specialist UK manufacturer of frequency converters and aircraft GPUs. Established more than 30 years ago, the company manufactures a wide range of solid-state converters for aerospace, naval, industrial and military applications.

Failsafe Power Supplies Ltd - Tel: +44 (0) 20 8568 8090  email: info@failsafepower.com