

# ABLE-60R Series

## **REVERSE** Static Frequency Converters

### 400Hz **Input**, 50/60Hz Output



- Continuous duty, 3-phase, 50/60Hz from a 400Hz input.
- Provide utility power in areas where only 400Hz is available.
- Ultra compact.
- Very low acoustic noise output.
- Galvanically isolated, sinusoidal, 3-phase output.
- Can be environmentally protected.
- Comprehensive digital display.
- Extremely dependable with long design life.

Rulix Failsafe ABLE-60R reverse series frequency converters may be run directly from any aircraft GPU or other aircraft equivalent (400Hz) supply, regardless of whether it is generated from a rotary, solid-state or centralised source. They have a large easy-to-read digital display panel which displays all output parameters including voltage, current, frequency and power. They are able to provide standard utility 50 or 60Hz power in areas where only 400Hz is available (such as the hangar apron or remote parking stand).

Rulix's latest converter topology provides a robust, high quality 50/60Hz output, able to handle even the most non-linear and complex types of load. It is capable of working in *continuous duty* with a long service life and at very high efficiency levels. The new design benefits from extremely low levels of both acoustic and electrical noise.

The ABLE-60R series includes 9 models ranging from 4KVA to 50KVA. All share the same comprehensive digital display panel, but with Rulix's trade-mark simplicity of operation.

ABLE-60R models may be ordered in the standard IP31 cabinet with castors, or they may be supplied in environmentally protected cabinets up to IP54 all-weather. Other possibilities include anti-vibration fixings, hand pull carts or permanent external plinth mounting.



Available on all-weather hand-pull cart.

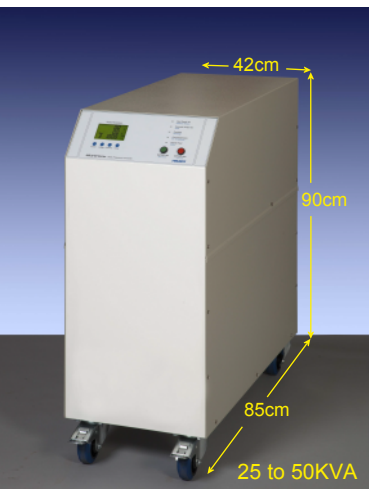
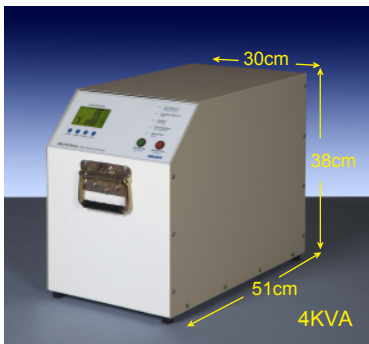


A 50KVA IP54 Plinth Mounted  
Reverse Converter

### Applications:

- To provide 50/60Hz utility power in areas where only 400Hz exists.
- Eliminate the need to run 50/60Hz power out to remote aircraft parking zones.
- Can be transported by air for use on arrival.
- Load test 400Hz GPUs.
- Special Applications.

Note: ABLE 60R series are NOT certified for in-flight use.



## Technical Specification:

### Input:

Voltage:..... 200V + N, 3ph +/-10%  
 Frequency:..... 400Hz +/- 6%  
 Power factor:..... >0.98 @ full load  
 Susceptibility:..... EN 61000-4-4, 5

### Output:

Voltage:..... 230/400V or 254/440V, 3ph  
 Voltage regulation steady-state:..... +/- 2%  
 Voltage regulation dynamic:..... +/- 5% @ 0-100% step-load.  
 Frequency:..... 50Hz or 60Hz +/- 1% under all conditions.  
 THDv:..... Better than 3% @ linear load  
 Overall quality:..... Better than MIL-STD704E, DFS400  
 Waveform:..... Pure sinusoid  
 Phase angle accuracy:..... Better than 1%  
 Overload capability:..... 110% @ 30 mins, 200% @ 5 secs, 300% @ 1 sec  
 Permissible load power factor:..... 0.6 leading to 0.6 lagging.  
 Permissible phase un-balance:..... 70%.

### Protection:

Input supply:..... MCB, phase loss detection, over & under voltage.  
 Output:..... Over-current, over-temperature, phase loss detection, over & under voltage, short-circuit (any phase).

### Display panel:

Parameters displayed:..... Output voltage (ph-ph + ph-N), output current, power, frequency, power factor.  
 Accuracy:..... Better than class 0.25 IEC 60688  
 LEDs:..... Input present, Converter healthy, Over-temperature, Overload, General fault.

### Environment:

Ambient temperature range:..... -10 to 50 deg C  
 Electrical noise:..... EN 55022, IEC1000-4  
 Cabinet protection:..... IP31  
 Acoustic noise:..... <50dB(A) @ 1m  
 Construction:..... Mild steel, zinc plated, painted RAL7032 grey & white  
 Castors or feet:..... 4KVA has rubber feet and lifting handles, others have 80mm castors with front brakes. A/Vs or feet optional.  
 Cooling:..... Variable speed turbine, air intake in base, exhaust at rear.  
 CE:..... CE marked

### Connectors:

Connector options:..... Hard-wire terminals, EN60309, MIL-STD, or Client choice.

### Remote Facilities:

Remote control option:..... Remote control panel, electrically isolated from the converter, self-powered, On/Off + 5 status indications. Operational up to 200m from the converter.  
 Remote monitoring:..... RS485 2-wire/0V, 1/2 duplex 1/4 unit load, MODBUS RTU 16-bit . CRC 4800 or 9600 baud.  
 Volt-free contacts (C/O):..... Input supply present, output on/off, over-temperature, overload, fault. Contacts isolated from converter.  
 Connector type remote:..... 25-way 'D' socket.

### Options:

Environmentally Protected:..... Cabinets up to IP54.  
 Anti-condensation heaters..... Automatically controlled.  
 Hand-pull cart ..... All-weather with brake.  
 Special output voltages:..... 208V/60Hz 3ph.  
 Military EMC standard:..... MIL-STD 461

**Standards:**..... EN61000-6-4, EN62040-1-1, MIL-STD704, CE

Rulix Failsafe Aerospace is a specialist 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.

Authorised Distributor

ABLE604 4KVA	ABLE606 6KVA	ABLE610 10KVA	ABLE615 15KVA	ABLE620 20KVA	ABLE625 25KVA	ABLE630 30KVA	ABLE640 40KVA	ABLE650 50KVA
48Kg	70Kg	85Kg	130Kg	150Kg	185Kg	225Kg	255Kg	275Kg