

400Hz 3 Phase AC to DC Converter (Inherent Harmonic Suppression)

- MIL-STD-461, MIL-STD-704 compliant
- Passive power factor correction
- Low parts count for high MTBF up to 500,000 hours (airborne environment)
- Rugged construction, MIL-STD-810 compliant
- MIL-STD-167, MIL-STD-202G compliant
- RTCA DO-160D



TYPICAL FORCED-AIR COOLED MODEL

Abbott Technologies offers two standard types of harmonically corrected transformer rectifier units:

- Unregulated with power factor correction and power levels from 100 Watts to 100,000 Watts;
- Regulated with power levels from 1000 Watts to 15,000 Watts.

Specifications

Input Primary

115V Delta, Suffix A
115/200V WYE or 200V Delta, Suffix B.

Voltage Output:

24, 28, 280, 300. Other voltages are available on request.

Operating Temperature Range:

Unregulated Units: -40°C to +72°C
Regulated Units: -40°C to +70°C (no derating)

Isolation:

Input to Output: 1500V
Input to Case: 1500V
Output to Case: 500V

Input Frequency

400Hz, 3 Phase. Power factor corrected.

Cooling Methods:

Fan-Cooled: Suffix A
Forced-Air Cooled: Suffix B
Conduction-Cooled: Suffix C
Water-Cooled: Suffix H

Environment:

Constructed to meet MIL-STD-810 for vibration, shock, acceleration, fungus, sunshine, and attitude. (Sand, dust, humidity, saltspray, rain, explosion – A, C, and H cooling only).

Regulation:

Unregulated models:
- Load regulation: 10% typical
- Line regulation: N/A

Regulated models:
- Load regulation: 2% typical
- Line regulation: 2% typical

Reliability:

MTBF 40,000 hours calculated per MIL-HDBK-217B in naval sheltered environment.

Mounting Provisions:

Regulated models only.
- Input phase loss.
- Input under/over voltage.
- Remote Enable/Disable.
- Output over/under voltage.
- Output overload alarm.
- Over temperature condition.
- Fan locked rotor alarm.

Mechanical Dimensions:

Consult factory for specific models.

Model Number System

TR400A-50-28-A/R

MODEL FAMILY (400Hz 3Ø INPUT)

TR400A - 115V DELTA
TR400B - 115/200V WYE or 200V DELTA

OUTPUT POWER (WATTS)*

1 - 100W	50 - 5000W
2 - 250W	75 - 7500W
5 - 500W	100 - 10,000W
10 - 1000W	150 - 15,000W
15 - 1500W	200 - 20,000W
25 - 2500W	250 - 25,000W
37 - 3750W	

R - REGULATED MODE

COOLING METHOD

A - FORCED-AIR (INTEGRAL AIR)
B - FAN-COOLED (EXTERNAL)
C - CONDUCTION-COOLED
H - WATER-COOLED

DC OUTPUT VOLTAGE

24 - 24 V DC
28 - 28 V DC
280 - 280 V DC
300 - 300 V DC



TYPICAL WATER-COOLED MODEL

* For units with output power greater than 25,000 watts, consult factory.

POWER RATING

Harmonic current limits in MIL-STD-461 are based upon a percentage of fundamental current at full load. Abbott models are designed for compliant operation at full rated resistive load. Caution should be exercised when selecting power ratings of model to avoid overspecifying, as a converter operating too far below its rating may draw harmonic currents in excess of MIL-STD-461 limits, compared with delivered power.



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