

RT15 400V 75A 30kW HRE Rectifier Specification

The RT15 400V 75A 30kW HRE Rectifier is a high reliability and high efficiency switched mode rectifier (SMR) module that converts 3-phase 380VAC to 378VDC at 30kW output. It is suitable for high reliability applications such as Internet Data Centres (IDC) and DC UPS. The RT15 is compliant with China QB-H-007-2012 and it delivers a power saving peak efficiency of > 96%.

The compact size of the RT15 allows high power density in 600mm x 600mm footprint racks.

The addition of a MCSU-4 controller allows sophisticated power system management with network connectivity and advanced rectifier sleep mode functionality for additional power savings.



RT15 400V 75A 30kW HRE Rectifier

Detailed specifications at 380VAC in, 378VDC out, 25°C, unless otherwise stated

Input 380VAC

Voltage requirement:

Three phase, 4 wire (no neutral) nominal range: 323 - 480VAC; Voltage tolerance: 285 - 530VAC; Full output power available above 323VAC; Frequency: $50/60Hz \pm 10\%$; Voltage distortion: $\leq 5\%$; Phase imbalance: <10%

Current drawn at full load:

48A RMS max at 380 VAC; 57A RMS max below 323VAC;

Power factor: Type 1

Greater than 0.99 at full load; 0.98 at half load; 0.95 at 30% load

Harmonic distortion of input current: Type 1

Less than 5% at full load; 10% at half load;

Voltage withstand test:

2800VDC input to chassis for 1 minute;

Protection:

Overvoltage: operates to 530VAC typically and will sustain 720VAC without damage; Undervoltage: operates at reduced power to 155VAC typically; Surge protection to 6kV/3kA;

Startup and hot plug:

Inrush less than 100% input current; Soft start approx 10 seconds to match diesel generator start-up characteristics;

Output 336VDC (378V normally)

Voltage:

Current limit:

Range	14 - 83A;
Precision:	<±1%;

Power limit:

Current limit is automatically reduced to limit output power to 30kW;

Available current: 83A at 280V 83A at 336V 79A at 378V 75A at 400V

Voltage withstand test:

2800VDC output to chassis for 1 minute;

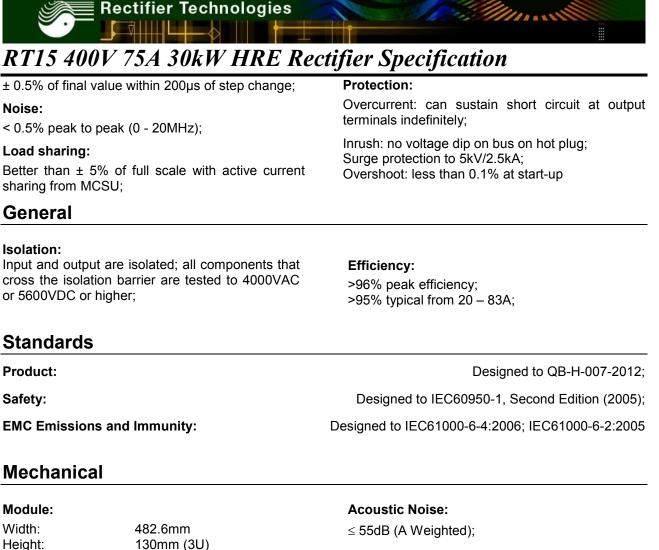
Static regulation:

Load: terminal voltage drops by $3.5V \pm 0.2V$ from zero to 75A load (for passive current sharing) for stand-alone units, or regulates to better than $\pm 0.05\%$ for MCSU-4 controlled units;

Dynamic regulation:

 \pm 5% for 25/50/25% and 50/75/50% step load change;





130mm (3U) 440mm < 31kg

Magazine:

Width Height 19 inch standard; 132mm (3U);

Environment

Depth:

Mass:

Operating range: Storage and transport: Vibration: Altitude:

-5°C to +40°C, ≤90% RH; -40°C to +70°C, ≤95% RH; 10-55Hz, 0.35mm sine; 1000m without de-rating;

Connections

Input, Output, and Communications:

Two hot-plug connectors are mounted on the back of the rectifier module that carry the AC, DC and communications lines. Matching connectors are located at the back of the rack-mounted magazine.

