Delta Electronics PFB1224UHE

01 Fan leads and electrical budget

Identify the two-wire configuration

Confirm the PFB1224UHE marking and the red/black lead arrangement. Do not transfer tachometer or PWM functions from a different suffix version.

Review the supply budget

Check the 24 V supply and wiring against the 2.40 A maximum operating current. Include the installation's startup and protection requirements in the power-system assessment.

Rated supply	24 V DC
Operating supply	14.0–26.5 V DC
Input current	2.00 A nominal; 2.40 A maximum
Input power	48.0 W nominal; 57.6 W maximum

02 Air direction and rotor clearance

Set the airflow direction

Inspect the fan's directional markings and the enclosure's intended intake/exhaust path. A rotating fan installed in the wrong direction can leave the protected equipment inadequately cooled.

Clear and guard the rotor

Remove cable intrusion and other obstructions from the rotating area. Fit the required guard and mechanical support without blocking the intended airflow path.

Reference speed	5,500 rpm
Motor type	Brushless DC, two phases/eight poles

03 Polarity and the enclosure flow path

Connect the power leads

Connect red to positive and black to negative, then verify voltage at the fan. Keep the operating supply within 14.0 to 26.5 V DC.

Assess enclosure resistance

Review filters, grilles, ducts and nearby obstructions. Do not use the free-air flow figure as the delivered airflow of a high-resistance installation.

Power leads	Red positive; black negative
Free-air flow	252.85 CFM at zero static pressure
Shutoff pressure	35.877 mm H□O at zero airflow

04 Startup and installed cooling performance

Observe startup and rotation

Energize in a controlled condition and observe startup, direction and stable running. If the rotor remains blocked, remove power and correct the mechanical cause before further testing.

Measure thermal performance

Check the equipment temperature under representative load and airflow conditions. Fan rotation alone does not establish that the cooling requirement has been met.

Reference speed	5,500 rpm
Acoustic noise	66.5 dB(A) average; 70.5 dB(A) maximum

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05 Noise observations and thermal baseline

Inspect abnormal noise

Investigate rubbing, looseness or changed vibration before accepting acoustic behavior. Compare sound measurements only under defined, repeatable operating conditions.

Retain the cooling baseline

Record supply voltage, current, airflow direction, filter condition and equipment temperature. Use that baseline to distinguish a fan problem from increasing enclosure resistance.

Technical basis: Delta Electronics PFB1224UHE Specification for Approval, sample revision 00.

Related product navigation

Yokogawa AAI141-S00

Yokogawa AAI543-S00 S1

These are related references, not confirmed substitutes or an automatically approved assembly.