INNERGY TECH

A1000 VARIABLE FREQUENCY DRIVE

The A1000 VFD Controller package from Innergy tech is designed to provide full energy recovery wheel control. Unlike other controllers which rely on a separate variable frequency drive and controller, the A1000 VFD Controller package benefits from the extensive Yaskawa A1000 programming capacity to eliminate the need of a separate controller entirely.

By using a total of four analog temperature sensors, the A1000 VFD Controller package will regulate the speed of the energy recovery wheel for full frost control and free-cooling (with summer changeover) operations. The drive package is fully compatible with Building Management Systems (BMS) with default S-422/485 MEMOBUS/Modbus or optional BACnet communication protocols. An induction rotation sensor is also available as a separate option.

Features and benefits

Simplified system that eliminates the need of a separate controller

Complete wheel frost protection and free cooling support

Fully customizable setpoints

Large LCD display screen

Can be linked to a BMS (remote mode) or used as a standalone unit (local mode)

Comes with 4 integrated circuits temperature sensors with true, linear signal outputs

Supports all enthalpy or sensible Innergy tech wheels

Compatible with 208/230/460 & 575 volts, 3 phases current inputs.

UL listed component tested in accordance with UL standard UL508C

Provided with IP20/NEMA Type 1 enclosure

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AHRI CERTIFIED®
www.ahridirectory.org
Air-to-Air ERV
AHRI Standard 1060
Energy Recovery COMPONENT is certified, Actual performance in packaged equipment may vary.

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SPECIFICATIONS

A. The variable frequency drive (VFD) controller shall support full economiser and frost protection modes with the use of four temperature sensors located in all four air tunnels (Outdoor air, Supplied air, Return air & Exhaust air).

B. Frost control: VFD to modulate wheel speed in order to maintain the exhaust temperature above set point (default: 34°F, adjustable).

C. Economizer mode (free cooling): When outdoor air temperature is below the return air temperature, the VFD shall modulate wheel speed in order to prevent the supply temperature from exceeding set point (default: 60°F, adjustable).

D. Automatic summer changeover: When the outdoor air temperature gets higher than the return air temperature and a potential for cooling is detected, the wheel shall resume to its full rotation speed of 20RPM.

E. All sensors to be field installed. Outdoor air and return air sensors to be installed onto the wheel frame. Supply and exhaust sensors to be installed as far from the wheel as possible but before the next in-line item to ensure good average temperature reading.

F. Drive package to be supplied with IP20/NEMA Type 1 enclosure.

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605, Rocheleau Street, Drummondville, (Quebec) Canada, J2C 6L8
Tool free: 1 800 203-9015 • Tel.: (819) 475-2666 • Fax: (819) 475-9541
sales@innergytech.com • **innergytech.com**