



InfraRay™ Modulating Controller For ROBERTS GORDON® Infrared Heaters



Technical Specification

ROBERTS GORDON®

Features

Compact, easy-to-use controls that maximize comfort and efficiency

- **Energy savings** - Continuously adjusts heat output based on outdoor air and design temperatures so you only use the energy you need, when you need it
- **Simplified zone control** - Manage two heating zones with one vacuum pump using four flexible operating modes
- **Seamless BMS integration** - Operates independently or compatible with BACnet® Building Management Systems for streamlined facility-wide control
- **Convenient operation** - Touchscreen interface and indicator lights make monitoring and adjustments simple, even in demanding environments

Configurations

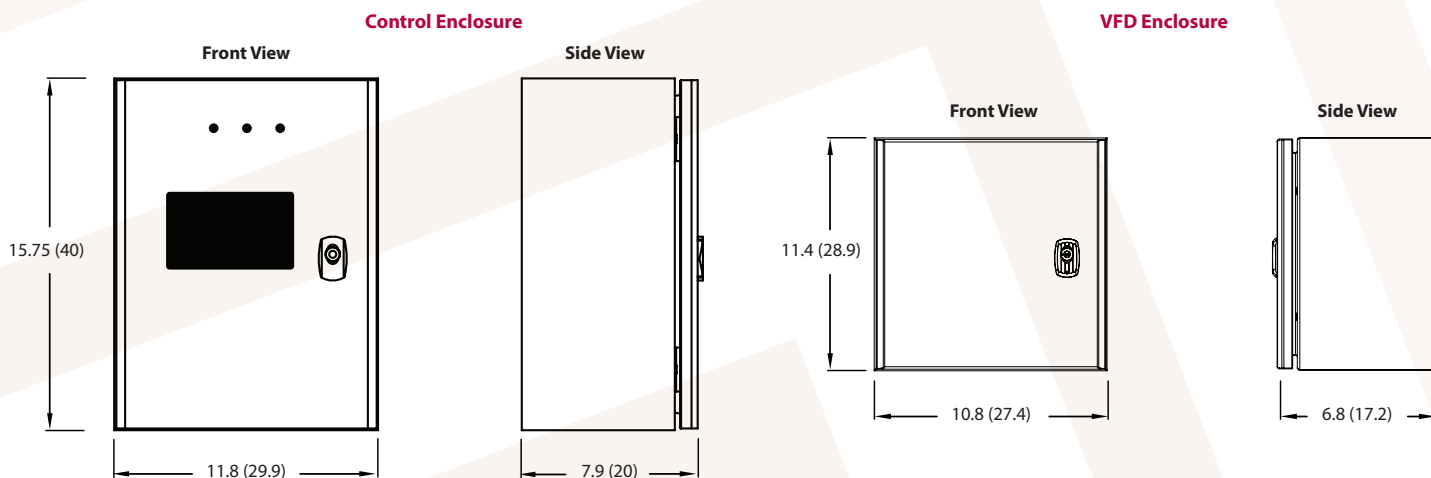
ROBERTS-GORDON® Heater	InfraRay™ Controller Compatible	Variable Frequency Drive (VFD) Required	Number of VFD's Required	Maximum Number of Heating Zones Per Controller	Maximum Number of Systems/ Unitary Heaters Per Controller
CORAYVAC® with Modulation	Yes	Yes	1 per vacuum pump	2	1
CORAYVAC® On/Off	Yes	No	N/A	2	1
VANTAGE® CTHN Multiburner	Yes	No	N/A	2	1
VANTAGE® Modulating Heaters (Models CTH3 and HEM)	Yes	No	N/A	2	1
VANTAGE® Single-Stage Heaters (Models CTH2V and HEV)	Yes	No	N/A	2	4
GORDONRAY® Single-Stage (Model BH)	Yes	No	N/A	2	4
GORDONRAY® Two-Stage (Model DF)	No	N/A	N/A	N/A	N/A
Combination of CORAYVAC® and VANTAGE® Modulating Heaters on Single Controller	Yes	Yes (only for modulating CORAYVAC®)	1 per vacuum pump	2	1+1
Combination of CORAYVAC® and VANTAGE® or GORDONRAY® Single-Stage Heaters	Yes	Yes (only for modulating CORAYVAC®)	1 per vacuum pump	2	1+4
Combination of VANTAGE® Modulating and VANTAGE® or GORDONRAY® Single-Stage Heaters	Yes	No	N/A	2	1+4

THE EXCLUSIVE PRODUCER OF CORAYVAC®

INFRARAY™ Modulating Controller		
Electrical Rating		120 V 1ø, 60 Hz, 20 Amps
Enclosure Finish		Gray RAL 7035, epoxy polyester powder, removable knockouts
Controller Ambient Operating Temperature Range		-4 to140 °F (-20 to 60 °C) 0 to 75% relative humidity
Zoning Capabilities		Up to two (2) ROBERTS GORDON® infrared heating systems (any combination of CORAYVAC® systems, VANTAGE® Multiburner systems, or unitary heaters) per controller
Status Indication		Three (3) indicator lights on the controller enclosure: two (2) for zones and one (1) for pump, one (1) indicator light on the VFD enclosure
Listings		
Enclosure		NEMA 4X/13, UL508 A, IEC 62208, UL
Control Board		Programmable Controller, IEC 61000-4-5, EN 60068-2-6Fc, UL 60730-1, UL 60730-2-9, CSA E60730-2-9, EN 60730-2-9 UL94
Touchscreen		PLC Product Certifications, CSA, EAC, RCM, CE, cURus, ICE6131-2
Touchscreen		
Display Size in. (cm)		4 (10.16)
System Configuration		System set up and updates are quickly and easily done via the touchscreen
Real-Time Clock		Data retention time in the event of a power outage
Real-Time Monitoring and Trending		Yes
Diagnostics Log		ON/OFF time and date
System Operating Schedules		Daily (Repeated throughout the year upon call for heat)
External Communication Ports		
Only BACnet® MS/TP or BACnet®/IP can integrate with Building Management Systems (BMS)		
CN16		USB Mini-B Port
CN17		USB A Port
CN18		CAN Expansion Bus Port
CN19		Serial Line Port (RS-485)
CN20		Ethernet
Universal Inputs	Analog/Digital	8/2
Universal Outputs	Analog/Digital	2/6
Installation		
Maximum Number of Satellite Controllers Connected to Central		31
Distance Between First and Last Controller ft. (m)		3,280 (1,000)
Equipment/Hardware/Software to Upload Program (if needed in the field)		Flash drive only; laptops, software, load reactors, jumpers, DIP or rotary switches not needed
Repeater		Only needed if over 4,000 feet or 32 devices
VFD Connection		Category 6 cable from VFD to controller
Sensors		One indoor sensor per zone and one outdoor sensor required
Warranty		
Duration		Three (3) year limited
Battery		
Location		Accessible via a sliding cover on the control board within the enclosure

INFRARAY™ Variable Frequency Drive (VFD)

Installation	Maximum distance from Central Control to vacuum pump: 3280 ft (1000 m)
Options	120V/240V single-phase 240V/460V three-phase
Electrical Rating	1HP VFD, 115V, 50/60Hz, 1ø, 15.7A 1HP VFD, 230V, 50/60Hz, 1ø, 8.5A 2HP VFD, 230V, 50/60Hz, 1ø, 14.9A 1HP VFD, 230V, 50/60Hz, 3ø, 5.3A 2HP VFD, 230V, 50/60Hz, 3ø, 9.3A 1HP VFD, 460V, 50/60Hz, 3ø, 3.45A 2HP VFD, 460V, 50/60Hz, 3ø, 6.15A
Enclosure Weight lbs. (kg)	17.7 (7.2)

Dimensions in. (cm)

Note: Each application requires a single Central Controller featuring a touchscreen (HMI). For applications requiring multiple controllers, all other controllers shall be Satellite Controllers that do not have a touchscreen.

Installation and service must be performed by a licensed contractor. Installation must conform to manufacturer's Installation, Operation and Service manual and local codes. In the absence of local codes, installation must conform with the National Fuel Gas Code. ANSI Z223.1. Safety: operate heater with proper care and observe all safety precautions per the manufacturer's Installation, Operation and Service manual.

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