## MODEL 600 Lead/Lag Controller

Facility Energy Management Solutions

Quest Controls

The Model 600 Lead/Lag controller provides the best lowcost HVAC automation solution for your critical facility. The controller outperforms comparable devices through its rugged design, intuitive display/keypad, ease of set-up, and Quest's patented economizer control algorithm.

The Model 600 is designed to work as a standalone HVAC control system for two HVAC Units in a lead/lag or lead/ standby configuration.

The Model 600 meets your needs by providing a comprehensive monitoring and control system for MULTIPLE HVAC units in your Telecom or Broadband facility. The Model 600 reduces costs and gives you the confidence that your critical facility is operating at peak performance. The Model 600 has the flexibility to handle wall packs, rooftops and split systems plus support for single, dual stage systems and heat pumps with unmatched dependability.

Quest's patented economizer control algorithm optimizes energy consumption as your HVAC units maximize the use of outside air to maintain your facility's optimal temperature. When networked to the ESB2 system, one outside air sensor can be shared with all Model 600 units.

The Model 600 is a convenient and reliable controller that provides the necessary redundancy for critical facilities while providing optimization that reduces energy consumption of the HVAC equipment.

In the world of critical facilities, redundancy is key, and the Model 600 delivers.

Example Settings	Value
Standalone mode - cool 1 on	76
Standalone mode - cool 2 on	78
Standalone mode - All cooling off 74	
Standalone mode - heat 1 on 55	
Standalone mode - heat 2 on	53
Standalone mode - All heating off	60
Standalone mode - fan operation Auto	
Network mode - cool 1 on	78
Network mode - cool 2 on	80
Network mode - All cooling off 74	
Network mode - heat 1 on	50
Network mode - heat 2 on	48
Network mode - All heating off	53
Network mode - fan operation	On

Replace Old Antiquated or Obsolete Control Systems with a Lowcost Intelligent Controller that Provides Remote Communication.



## **Model 600 HVAC Controller Features**

- Can be configured to control most HVAC systems such as single stage, two stage or heat pump systems
- Designed to work with existing HVAC economizer control modules using Quest's patented Economizer control algorithm
- Powered from both HVAC 24VAC transformers
- Additional 24 or 48VDC power source supported
- Networkable to the ESB2 or any Modbus RTU poller
- Works in standalone mode if communications are lost
- LCD display for current operating mode, alarms and temperature readings
- Five button keypad for navigation to other status screens plus Comfort Mode and Lead Switch buttons
- Default settings and configuration are settable through password protected screens
- All settings can be modified remotely via Modbus RTU
- Supports two zone temperature sensors, an outside air sensor, and an optional humidity sensor
- Calculates controlling temperature using either the average or high of the zone sensors
- Outside air sensor allows standalone, optimal economizer control



## MODEL 600 Lead/Lag Controller

I/O Summary		
13 Inputs	Qty	
Analog Inputs	4	
Zone 1 Temperature Sensor		
Zone 2 Temperature Sensor		
Humidity Sensor		
Outside Air Sensor		
Digital Inputs		
HVAC 1 Control Voltage Lost		
HVAC 1 Fail – Lockout Alarm		
HVAC 1 Economizer Status		
HVAC 2 Control Voltage Lost		
HVAC 2 Fail – Lockout Alarm		
HVAC 2 Economizer Status		
Smoke Detector		
Hydrogen Gas		
Generator Running		
18 Digital Outputs	Qty	
24VAC Outputs for Control	12	
HVAC 1 – Supply Fan	1	
HVAC 1 – Econ/Cool stage 1		
HVAC 1 – Force Mechanical Cooling		
HVAC 1 – Heat stage 1		
HVAC 1 – Cool Stage 2 or Heat Pump (O terminal)		
HVAC 2 – Emergency Vent Mode		
HVAC 2 – Supply Fan		
HVAC 2 – Econ/Cool stage 1		
HVAC 2 – Force Mechanical Cooling		
HVAC 2 - Heat stage 1		
HVAC 2 - Cool Stage 2 or Heat Pump (O terminal)	1	
HVAC 2 – Emergency Vent Mode		
Dry Contact Alarm Outputs	6	
HVAC lockout	1	
High Building Temp Level 2		
High Building Temp Level 1		
Low Building Temp		
Low Building Temp	1	
Low Building Temp Smoke	1	

**The Model 600 Controller** Your Reliable Partner Providing a Comprehensive Monitoring & Control System for your Telecom or Broadband Facility!

Specifications	
Part Number	151112
Mounting	Wall mount
Enclosure	Color: Grey Material: Polycarbonate with knockouts on all sides
Inputs	Digital Inputs: (9) dry contact closures Analog Inputs: Temperature sensors (3) Thermistors sensor ± 1°F (0.5°C) 4-20mA Input (1) – Relative Humidity Sensor
Outputs	Control Digital Outputs: (12) 30V AC max, 1A continuous, 3A in-rush Alarm Outputs: (6) Form C dry contracts. Supports 48VDC @ 0.5A
Power	24VAC from both HVAC units and 24/48VDC simultaneously
LCD Display	Type: Backlit LCD display Display Area: 2 rows of 16 characters each
Keypad	Four button directional arrows, enter button plus Comfort Mode and Lead Switch
Communication	RS485 Modbus RTU
Environmental	Operating Temperature: 0°C to 50°C; 32°F to 122°F Storage Temperature: -30°C to 50°C; -22°F to 122°F Relative Humidity: 0 to 95% non-condensing
Dimensions	7.09″W x 10″H x 2.8″D (180 x 254 x 71 mm)
Weight	2.2 lb (1 kg)
Warranty	1 year



**Controllers to the TELSEC ESB2** 

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