

i/Box™

ST-35ER-F SMART STAT™



FEATURE SUMMARY

- **Free Topology LONWORKS™ Communication
FTT-10A (78KB)**
- **Neuron® 3150® processor**
- **Attractive architectural
grade packaging**
- **User Interface:
Backlit 2-digit LCD
and 4-pushbuttons**
- **Fully programmable
through graphical based
VisualControl™**
- **Easily accommodates
standard and custom
control strategies**
 - **5 Digital Relay Outputs**
 - **1 On-Board Thermistor**
 - **4 Jumper Selectable
Universal Inputs or
0-10VDC Output**
- **Engineered for
substantial job cost
savings**
- **2 Year Limited Warranty**

The ST-35ER sets a new precedent in the LON industry with the first wall mount fully programmable controller with integral 2-digit display. The functionality of the ST-35ER is virtually limitless with its flexible I/O configuration. Typical applications for the ST-35ER include control of: AHU's, Package Units, Heat Pumps, Fan Coil Units, Terminal Units, Unit Ventilators, VAV, etc.

The ST-35ER is fully programmable via VisualControl Graphical Programming. Standard and custom applications can be easily modified and/or created graphically, without the necessity of learning Neuron C or line code programming with unique syntax. The flexible I/O configuration of the ST-35ER consists of the following:

5 Dedicated Digital Outputs – Relays

These Relays are 24VAC voltage sourcing thereby saving field wiring time when energizing coils. There is no need to introduce 24VAC into the circuit, eliminating the need for power or common jumpers in the field.

One On-Board Internal Thermistor

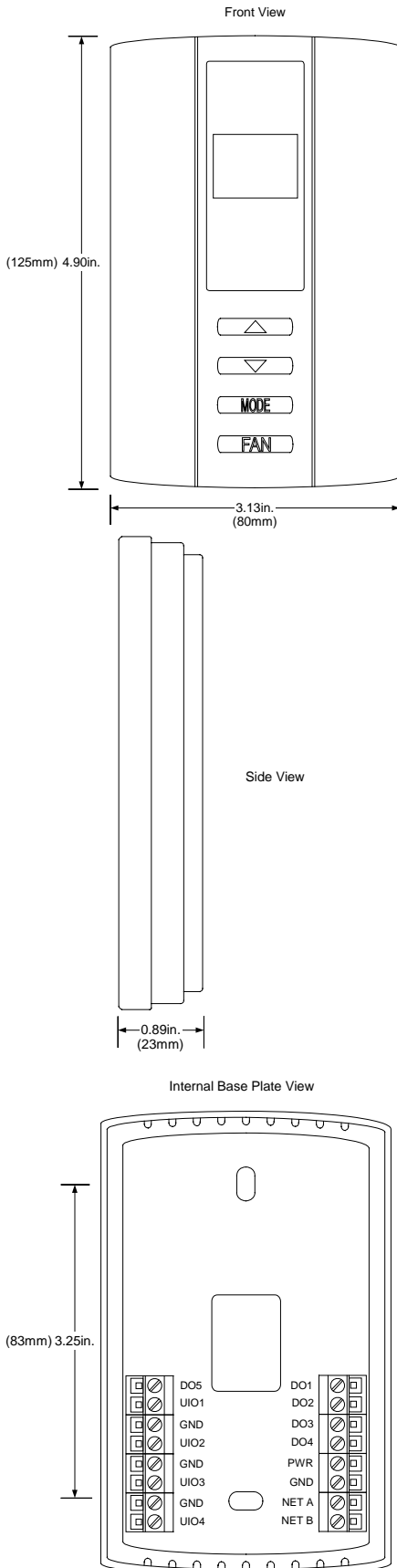
The on-board sensor provides accurate space temperature sensing.

4 Jumper Selectable Inputs/Outputs

The ST-35ER includes a total of 4 jumper selectable inputs or outputs. Each of the 4 I/O can be individually selected to be either a Universal Input or an Analog Output (0-10VDC) by simply moving a jumper. Typical applications for these I/O include: Supply Air, Mixed Air, Return Air, OSA, CO2/VOC Sensors, Fan Status, Compressor Status, Refrigerant Line Temperature, Occupancy, Modulating HW & CHW valves, VFD & Damper Control, etc.

The ST-35ER incorporates a fully programmable end user interface which consists of the following: Backlit 2-digit LCD display and four pushbuttons. The functionality of the pushbuttons are completely flexible with the only limitations being the engraved labeling on the 4-buttons: up arrow, down arrow, mode, and fan. When the 4-pushbuttons are programmed to accommodate set point, override or fan control strategies, tremendous savings can be experienced as these are all software functions and do not require any additional devices to be purchased, installed and/or wired in the field.

Network connectivity is made easy with a discretely placed service pin pushbutton and service pin LED accessible at the top of the ST-35ER enclosure. The unit does not need to be removed from its base or wall, if wired, to establish a network connection.



Specifications:

General

Communication: LONTALK™ Protocol
 Transceiver: FTT, Free Topology
 Processor: Neuron 3150 @ 10 MHz
 Memory: 64K bytes FLASH
 2K bytes SRAM (Neuron)
 0.5K bytes EEPROM (Neuron)

Power

Nominal Input Voltage: 24 VAC
 Input Voltage Range: 21-28 VAC
 Maximum Consumption: 8 VA, does not include Relay loading

Environmental

Operating Temperature: 0 °C to +50 °C, 32 °F to 122 °F
 Storage Temperature: -20 °C to +70 °C, -4 °F to 158 °F
 Relative Humidity: 5% to 95% (non-condensing)

Inputs (Internal)

Number: 1
 Temperature Sensor: Onboard Thermistor
 Accuracy: ±0.5 °C, ±1.0F (0 to 50 °C)

Jumper Selectable Inputs/Outputs

Total Number: 4
 Input Options: Digital – Dry Contact
 Voltage – 0-5 Volts
 Thermistor – Type 2, 3: 10Kohms
 Output Options: Voltage – 0-10 Volts
 Analog Resolution: Input 12 bits, Output 10 bits
 Accuracy: ±1% FS (25°C, 77°F)
 Protection Circuitry: Transient Over voltage, ESD

Dedicated Outputs

Number: 5
 Digital: Relay 1.0 A @ 24 VAC,
 Voltage Sourcing
 Protection Circuitry: Transient Over voltage, ESD

Enclosure

Display: 2 Digit Backlit LCD Display
 Dimensions: L 4.90" x W 3.13" x H 0.89"
 (125 x 80 x 23 mm)

Warranty

Period: 2 Years (Limited)

Document Number: 37-0236, ver. 1.0.0

1. Echelon, LONWORKS, LON, 3150, NEURON AND LONTALK are trademarks or registered trademarks of Echelon Corporation.
2. VisualControl is a trademark of VisualControl, LLC.
3. Smart Stat is a trademark of Smart Controls, LLC. SMART CONTROLS, LLC reserves the right to make changes without further notice to this product for improvements in design and reliability. SMART CONTROLS, LLC does not assume any liability arising out of the application or use of this product; neither does it convey any license under its patent rights of others.



Office:
 10000 St. Clair Avenue
 Fairview Heights, IL 62208
 U.S.A.
 Phone: 618-394-0300
 Fax: 618-394-1575

E-mail:
sales@smartcontrols.com

Web site:
www.smartcontrols.com