ATC990
Process Controller

1/4 DIN Auto-Tuning Control and Display of Process or Differential Pressure

Features

- Auto-tuning control in a discrete 1/4 DIN package
- Graphical/text LCD Display with color change LED backlight on alarm (red/green)
- Graphical trend view of process, alarms & events as standard
- Easy to use Setup Wizard
- Single loop control
- Display and control of differential pressure is available
- USB port option for access to configuration and log files
- Data logging option logs process values, set points and alarms to .csv file for use with spreadsheets
- Modbus RS-485 and Modbus TCP Ethernet supported
- BlueControl configuration and commissioning software option

Description

The ATC990 with a graphical/text LCD display is a universal input process controller with advanced functionality including Trend views as well as Digital Inputs, USB and data logging options. It provides a cost-effective way to control a single process parameter, such as for a plastics extruder. Designed to improve user efficiency many features are integrated to reduce commissioning time, simplify operation and minimize maintenance downtime. Reliably auto-tune and alarm on strain gauge, DC voltage, temperature or current inputs. The ATC990 can also control differential pressure when an optional secondary strain gauge input is used. Other useful display information includes alarm set points, peak values, error conditions, and engineering unit beacons. The controller provides a quick and easy set-up which includes a step by step configuration wizard which starts automatically on the first start up. An optional 24Vdc output supply is also available.

CE UL

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Specifications

PERFORMANCE CHARACTERISTICS

Instrument Type: Digital, panel-mount PID closed loop controller
Display: 160 x 80 Monochromatic Graphical LCD with backlight

Accuracy:
Thermocouple : ±0.1% of full range, ±1LSD (±1°C for internal CJC if enabled)
DC Linear : ±0.1% of full range, ±1LSD
Sampling Time: 50mS, typical

INPUT

Input: Strain gauge, Thermocouple or linear (Vdc, mA)
Strain Gauge: 350 to 5000Ω, 1.4 to 4mV/V, excitation 10V ±7%
Linear Input: 0 to 5Vdc and 0 to 10Vdc,
0 to 20mA and 4 to 20mA
Input Signal: -25 to 125% full scale (approximately -10mV to +50mV)
Input Impedance: <10Ω for linear current input
>165kΩ for linear voltage input
Shunt Calibration: With or without resistor (40 to 100%)
Digital: 4 programmable voltage-free contact closure

ALARM OUTPUTS

Alarm Type: SPST 2A max @ 240Vac resistive load Dual relays have a shared common
Alarm Number: 3 standard
Alarm Update Time: 100mS, typical

OUTPUTS

Type (Retransmission): 0-5Vdc and 0-10Vdc, 0-20mA and 4-20mA
Type (Control): 0-5Vdc and 0-10Vdc (2% under/over drive)
0-20mA and 4-20mA
Resolution: 15 3/4 bit
Accuracy: ±0.1% of output span (mA @ <500Ω, V @ >500Ω)

CONTROL FUNCTION

Type: Adaptive auto-tuning algorithm
Serial Communication Interface
Type: Isolated RS-485
Protocol: Modbus RTU

MECHANICAL & PACKAGING CHARACTERISTICS

Termination: Screw terminals on rear
Front Panel: IP65 with gasket (IP65 front USB connector)
Operating Temp: 32 to 122°F (0 to 50°C)
Storage Temp: -4 to 158°F (-20 to 70°C)
Humidity: 85% relative humidity, non-condensing
Weight: 1.43 lbs. (650g)

APPROVALS & CERTIFICATIONS

CE Mark: Self-certified to applicable standards
Agency Approvals: UL

POWER SUPPLY (MAINS)

Input Power
Mains Version: 100 to 240Vac, 50/60Hz switching
Low Voltage Version: 20 to 48Vac 50/60Hz 15VA or 22 to 65Vdc 12W
Power Consumption: 15VA, max
Transmitter Power Supply: 24Vdc into 400Ω min, 60mA drive for 2-or 4-wire mA transmitters

Ordering Guide

ATC990-X-X-X-X-X-X-X-X-X-X (Includes Retransmission)

Relay/Alarms
0 = No Relays
2 = Dual Relays Independent Common
3 = 3 Single Relays
4 = 3 Relays (1 Single, 1 Dual – shared common)

2nd Input/Setpoint
0 = Not Installed
1 = Installed

Communications
0 = No Comms
1 = RS-485 ModBus
2 = Ethernet Modbus TCP

24 V Transmit Power Supply
0 = Not Installed
1 = Installed – Use with relay options 0, 2 or 4 only

Retransmission
1 = Installed

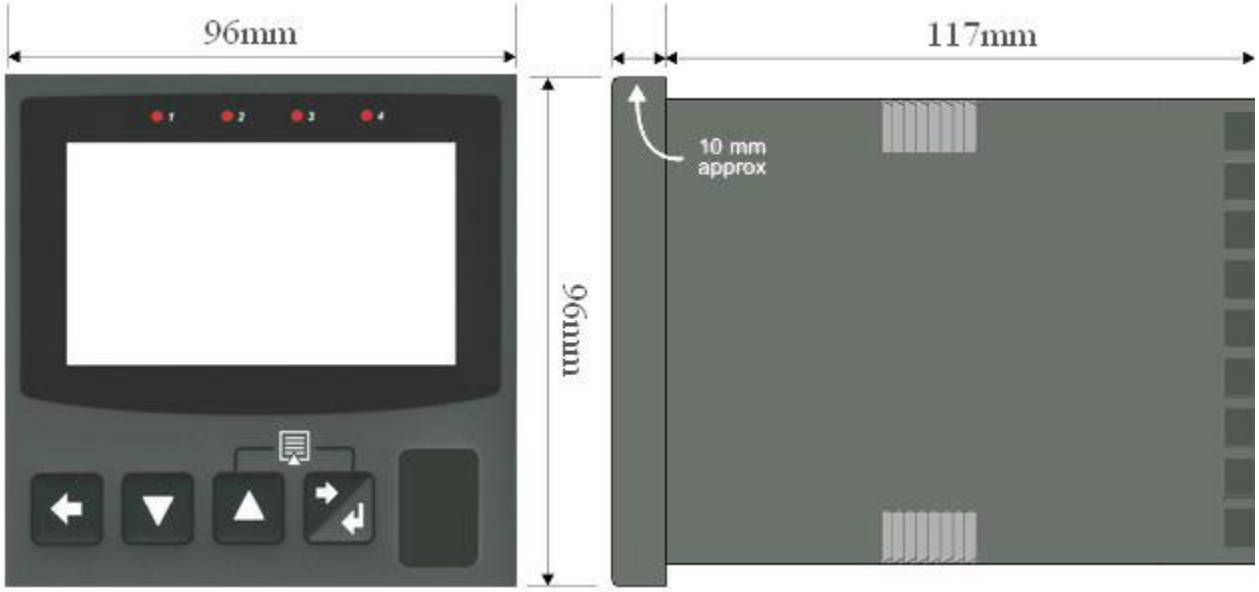
Input Voltage
0 = 100 to 240Vac
1 = 24Vac/DC

Data Logger, Real Time Clock and USB*
0 = Not Installed
1 = Installed
*Includes USB

USB w/USB Memory Stick*
0 = Not Installed
1 = Installed
*Not required with Data logger

Digital Inputs
0 = Not Installed
1 = Installed

Dimensions



All dimensions are inches (mm) unless otherwise specified.

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Refer to www.dynisco.com for access to Operator Manual and other support documentation.