

# 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.



## Specifications

### PERFORMANCE CHARACTERISTICS

<b>Instrument Type:</b>	Digital, panel-mount PID closed loop controller
<b>Display:</b>	160 x 80 Monochromatic Graphical LCD with backlight
<b>Accuracy:</b>	
<b>Thermocouple :</b>	±0.1% of full range, ±1LSD (±1°C for internal CJC if enabled)
<b>DC Linear :</b>	±0.1% of full range, ±1LSD
<b>Sampling Time:</b>	50mS, typical

### INPUT

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

### ALARM OUTPUTS

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

### OUTPUTS

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

### CONTROL FUNCTION

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

### MECHANICAL & PACKAGING CHARACTERISTICS

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

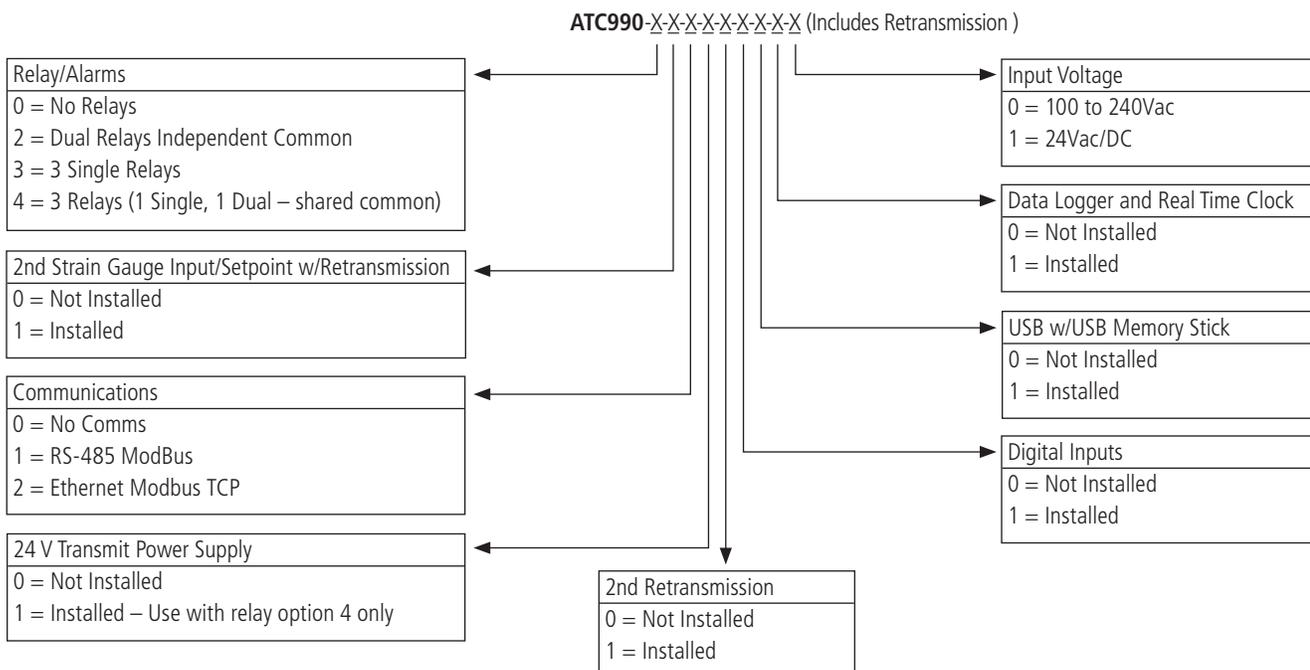
### APPROVALS & CERTIFICATIONS

<b>CE Mark:</b>	Self-certified to applicable standards
<b>Agency Approvals:</b>	UL

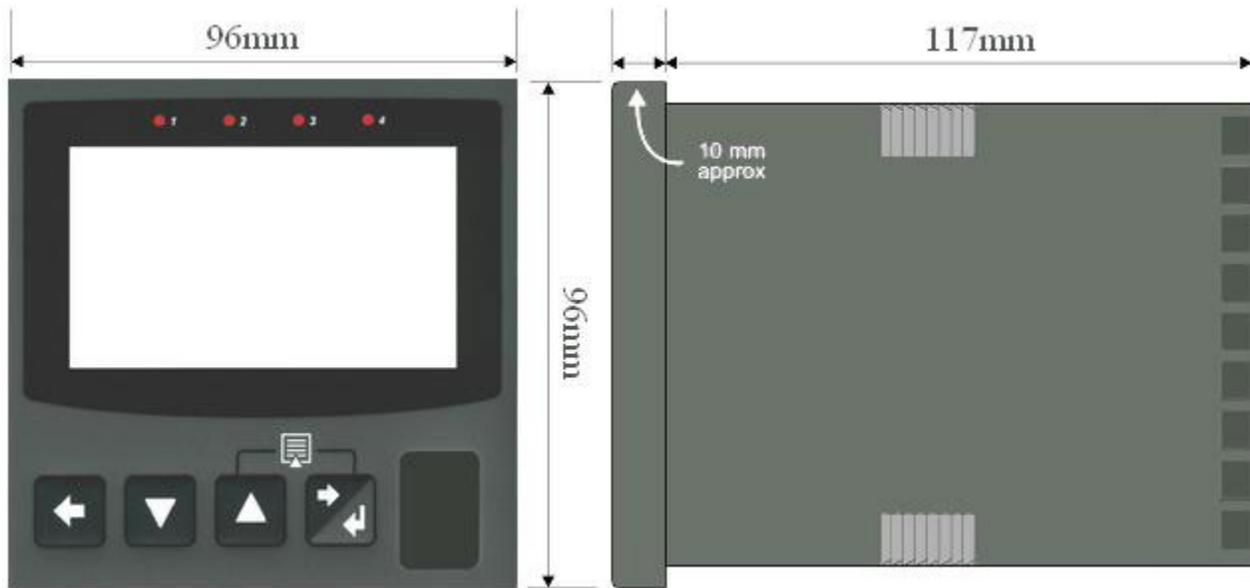
### POWER SUPPLY (MAINS)

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

## Ordering Guide



## Dimensions



(Drawing To Come)