



# **ATC880 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
- Display and control differential pressure is available
- Easily configure locally or remotely by optional Modbus without jumpers
- Two assignable alarms, third alarm optional
- Bright, dual 5-digit LCD with bar graph display
- Digital security to prevent unauthorized use
- IP65/NEMA 4X rated for harsh environments

## **Description**

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The ATC880 is a compact 1/4 DIN auto-tuning process controller that employs an acclaimed PID algorithm. The ATC880 is a cost-effective way to control a single process parameter, such as for a plastics extruder. Reliably auto-tune and alarm on strain gage, DC voltage or current inputs. The ATC880 can also control differential pressure when an optional secondary strain gage input is used. The bright 5-digit LED is accompanied by a helpful, quick view 35-segment analog bar graph. Other useful display information includes alarm set points, peak values, error conditions, and engineering unit beacons. The ATC880 is easily field-configured or programmed remotely via optional Modbus/ Jbus without annoying mechanical jumpers. An optional 24Vdc input supply is also available.







#### **Specifications**

#### PERFORMANCE CHARACTERISTICS

**Instrument Type:** Digital, panel-mount PID closed loop controller

**Display:** 5 red LED digits 0.52" (13.2mm) high

5 green LED digits 0.44" (11.3mm) high 35-segment bar graph scaled to value

Accuracy:  $\pm 0.1\%$  full scale Sampling Time:  $\pm 0.0\%$  full scale

**INPUT** 

**Input:** Strain gage or linear (Vdc, mA)

**Strain Gage:** 350 to 5000 $\Omega$ , 1 to 4mV/V, excitation 10V  $\pm$ 7%

**Linear Input:** 0 to 5Vdc and 0 to 10Vdc,

0 to 20mA and 4 to 20mA

**Input Signal:** -25 to 125% full scale **Input Impedance:** <10 $\Omega$  for linear current input

>165k $\Omega$  for linear voltage input

**Shunt Calibration:** With or without resistor (40 to 100%)

**Digital:** 1 programmable voltage-free contact closure

Optional: 4 opto-isolated for control

**ALARM OUTPUTS** 

**Alarm Type:** SPDT 2A max @ 240Vac resistive load

Alarm Number: 3 standard
Alarm Update Time: 50mS, typical

**OUTPUTS** 

Type (Retransmission): 0-5Vdc and 0-10Vdc; 0-20mA and 4-20mA

**Type (Control):** 0-5Vdc, -10/+10Vdc, and 0-10Vdc;

0-20mA and 4-20mA

**Resolution:**  $\pm 0.1\%$  of output span  $\pm 0.1\%$  of output span  $\pm 0.1\%$  of output span

**CONTROL FUNCTION** 

**Type:** PID with integral preload and anti-reset

windup with an adaptive auto-tuning algorithm

**SERIAL COMMUNICATION INTERFACE** 

**Type:** Isolated RS-485

**Protocol:** Modbus RTU/Jbus, selectable

**MECHANICAL & PACKAGING CHARACTERISTICS** 

**Termination:** Screw terminals on rear with safety covers

Front Panel: IP65/NEMA 4X with gasket
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, cUL

**POWER SUPPLY (MAINS)** 

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**Input Power:** 100 to 240Vac, 50/60Hz switching

24Vac/dc option available

**Power Consumption:** 15VA, max

**Transmitter Supply:** 24Vdc for 2-or 4-wire mA transmitters

#### **Ordering Guide**

ATC880-X-X-X (Process Controller + Strain Gage or mA/V input

+ 3 Alarms + Analog Control Output)

External Set Point:

0 = No External Set Point

1 =Analog Remote Set Point or Secondary Input

for Differential (selectable)

Options:

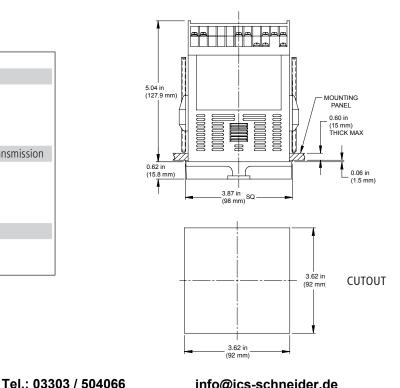
2 = 24Vdc Auxiliary Power Supply + Analog Retransmission

3 = 24Vdc Auxiliary Power Supply + Analog Retransmission + RS-485 + 4 Digital Inputs

Power Supply:

3 = 100 to 240Vac, Switching

5 = 24Vac/dc, Switching



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