

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

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.



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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:	±0.1% full scale
Sampling Time:	50mS, typical

INPUT

Input:	Strain gage or linear (Vdc, mA)
Strain Gage:	350 to 5000Ω, 1 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
Input Impedance:	<10Ω for linear current input >165kΩ 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:	±0.1% of output span
Accuracy:	±0.1% of output span

CONTROL FUNCTION

Type:	PID with integral preload and anti-reset windup with an adaptive auto-tuning algorithm
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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)

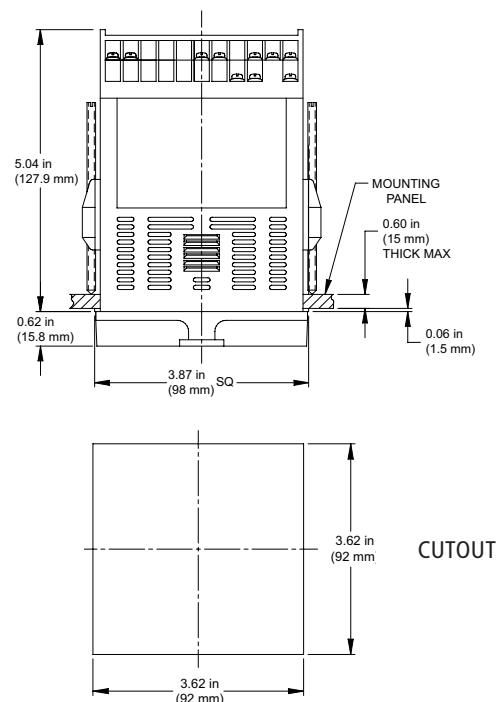
Input Power:	100 to 240Vac, 50/60Hz switching 24Vac/dc option available
Power Consumption:	15VA, max
Transmitter Supply:	24Vdc for 2-or 4-wire mA transmitters

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

Shaded sections refer to standard configurations that are offered.



All dimensions are inches (mm) unless otherwise specified.
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Refer to www.dynisco.com for access to Instruction Manual and other support documentation.