

ATC880 Process Controller

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



Features

- n Auto-tuning control in a discrete 1/4 DIN package
- n Display and control differential pressure is available
- n Easily configure locally or remotely by optional Modbus without jumpers
- n Two assignable alarms, third alarm optional
- n Bright, dual 5-digit LCD with bar graph display
- n Digital security to prevent unauthorized use
- n 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 5000 Ω , 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:	<10 Ω for linear current input >165k Ω 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
number:	3 standard
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.

