





ATHENA CONTROLS, INC. 5145 Campus Drive Plymouth Meeting, PA 19462-1129 U.S.A.



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SERIES 16

1/16 DIN Universal **Process Controller**

- Thermocouple, RTD, Voltage or Current Input
- User-Selectable Ramp to Setpoint
- Bumpless Auto/Manual Transfer
- NEMA 4X (IP65) Dust and Splash-Proof Front Panel
- On/Off through Full PID Operation (P,PI,PD,PID)
- Auto-Tuning, Heat or Cool
- Adjustable Hysteresis & Heat/Cool Spread
- Field-Configurable Process, Deviation, or Latching Alarms
- · Remote Setpoint Select Option
- Dual Output/Dual Alarm Capabilities
- · Optional RS232/RS485 Communica-
- · Optional Process Variable Retransmission



Ordering Information

| IVI | 00 | lei | 16 |
|-----|----|-----|----|
| | | | |

| <u>Input</u> | <u>Range</u> | <u>Code</u> |
|-----------------------|--------------------|-------------|
| "E" TC | 0 to 1292° F | EF |
| "E" TC | -18 to 700° C | EC |
| "J" TC | 0 to 1400° F | JF |
| "J" TC | 0 to 750° C | JC |
| "K" TC | 0 to 2460° F | KF |
| "K" TC | 0 to 1349° C | KC |
| "L" TC (Platinel® II) | 0 to 2372° F | LF |
| "L" TC (Platinel® II) | -18 to 1300° C | LC |
| "N" TC | 0 to 2370° F | NF |
| "N" TC | 0 to 1300° C | NC |
| "R" TC | 0 to 3200° F | RF |
| "R" TC | 0 to 1750° C | RC |
| "S" TC | 0 to 3200° F | SF |
| "S" TC | 0 to 1750° C | SC |
| "T"TC | -200 to 600° F | TF |
| "T"TC | -100 to 300° C | TC |
| 100 ohm RTD | -328 to 1562° F | PF |
| 100 ohm RTD | -200 to 850° C | PC |
| 100 ohm RTD | -199.0 to 450.0° F | DF |
| 100 ohm RTD | -100.0 to 225.0° C | DC |
| 1000 ohm RTD | -328 to 1562° F | XF |
| 1000 ohm RTD | -200 to 850° C | XC |
| 1000 ohm RTD | -199.0 to 450.0° F | ZF |
| 1000 ohm RTD | -100.0 to 225.0° C | ZC |
| 1 to 5 V | Scaleable | L1 |
| 0 to 5 V | Scaleable | L4 |
| 10 to 50 mV | Scaleable | L2 |
| 0 to 50 mV | Scaleable | L5 |
| 4 to 20 mA* | Scaleable | L3 |
| 0 to 20 mA* | Scaleable | L6 |
| 0 to 10 Vdc | Scaleable | L7 |
| 2 to 10 Vdc | Scaleable | L8 |
| Oto 1 Vdc | Scaleable | 19 |

Output 1 (Heating) Configuration Code

0 = None B = Relay, 5 A/3 A, F = 4-20 mA

S = Pulsed 20 Vdc

T = S.S. Relay, 1 A E = 0-20 mA

Output 2 (Cooling) Configuration Code

0 = None

B = Relay, 5 A/3 A F = 4-20 mAS = Pulsed 20 Vdc

T = S.S. Relay, 1 A E = 0-20 mAY = "B" relay, NC

Standard Options

None

Collector

Dual 24 Vdc

Dual SSR, N.C

Code Options

Communications

RS-485 Remote Setpoint Select

40 = Switch Closed

30 = RS-232

with Alarm

Alarm Cards 10 = Dual SSR, N.O.







Switch Open

= 5 V Input

12 Vd

= 4 to 20 mA 1 to 5 V

= 0 to 20 mA

Heater Break Alarn

= 15 Vdc

= 5 Vdc

PV Retransmit



^{*}Milliamp ranges are available with 2.52 ohm resistor (supplied).



SERIES 16 TEMPERATURE/ PROCESS CONTROLLER

OPERATING LIMITS

Temperature 32° to 131° F (0° to 55°C)

Humidity 90% R.H. maximum, non-condensing

Line Voltage 100 to 250 V 50/60 Hz

125 to 300 Vdc

24 Vac/Vdc (optional)

Power

consumption Less than 6 VA (instrument)

PERFORMANCE

Accuracy $\pm 0.2\%$ of FS, \pm one digit

Setpoint

Resolution 1 count/0.1 count

Repeatability ± 1.0 count

Temperature

Stability 5 mV/°C maximum

TC Cold

End Tracking 0.05°C/°C ambient

Noise Rejection Common mode > 100 dB

Series mode > 70 dB

Process Sampling 10 Hz (100 ms)

Linear Input: L1 to L7 (Refer to Ordering Codes)

Engineering Units Scalable, -1999 to 9999 Digital Filtering 0.1, 1.0, or 10 sec

Decimal Position Selectable, none, 1/10, or 1/100

CONTROL CHARACTERISTICS

Setpoint Limits Limited to configured range of TC and

RTD

Alarms Adjustable for high/low; selectable

process or deviation

 Rate
 0 to 900 sec

 Reset
 0 to 3600 sec

 Cycle Time
 0.2 to 120 sec

 Gain
 0 to 400

Gain Ratio 0 to 2.0 (in 0.1 increments)
Control Hysteresis 1 to 100 (on/off configuration)
Spread (Output 2) 0 to 100 (above setpoint)

Ramp to Setpoint 1 to 100 minutes

Autotune Operator-initiated from front panel Manual Control Operator-initiated from front panel

INPUTS

Thermocouple K,J,N,R,T,S, Platinel®II

Maximum lead resistance, 100 ohms for

rated accuracy

RTD Platinum, 3-wire, 100 ohms at 0°C, DIN

curve standard (0.00385); 1000 ohms

Linear Current and voltage (refer to ordering

OUTPUTS

#1 reverse-acting (Heating)
#2 direct-acting (Cooling)

B Relay 5 A @ 120 Vac, 3 A @ 240 Vac

F 4-20 mA, 500 ohms max.

S 20 Vdc pulsed

T Solid-state relay, 1 A

Alarms Optically isolated triac, rated 1 A, 120/240

Vac @ 25°C DC - 20 mA sink or 24 V

supply

MECHANICAL CHARACTERISTICS

Display Dual, 4-digit, 9.2 mm, Process: orange

Menu/parameter: green

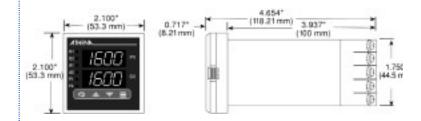
Front Panel Rating NEMA 4X (IP65)

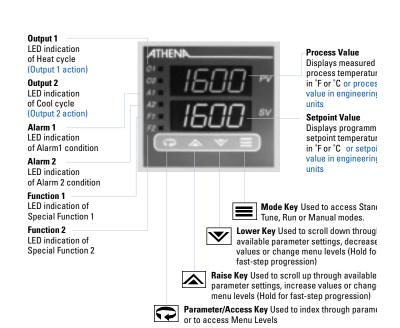
Connections Input and output via barrier strip, with

locking terminals

Contacts Twin bifurcated, double-wipe

Specifications subject to change without notice.





1/8 DIN Universal **Process Controller**

- Thermocouple, RTD, Voltage or Current Input
- Switch-Selectable Inputs
- User-Selectable Ramp to Setpoint
- Auto-Tuning, Heat or Cool
- Dual Output/Dual Alarm Capabilities
- On/Off through Full PID Operation (P,PI,PD,PID)
- NEMA 4X (IP65) Dust and Splashproof Front Panel
- Bumpless Auto/Manual Transfer
- Adjustable Hysteresis & Heat/Cool Spread
- Field-Configurable Process, Deviation, or Latching Alarms
- Optional RS232/RS485 Communica-
- Optional Process Variable Retransmission
- Remote Setpoint Select, Non-Linear Inputs, or Other Special Options



Model 18 or 19

| <u>Input</u> | <u>Range</u> | |
|--------------|--------------------|----|
| <u>Code</u> | | |
| "E" TC | 0 to 1292° F | EF |
| "E" TC | -18 to 700° C | EC |
| "J" TC | 0 to 1400° F | JF |
| "J" TC | 0 to 750° C | JC |
| "K" TC | 0 to 2460° F | KF |
| "K" TC | 0 to 1349° C | KC |
| Platinel® II | 0 to 2372° F | LF |
| Platinel® II | -18 to 1300° C | LC |
| "N" TC | 0 to 2370° F | NF |
| "N" TC | 0 to 1300° C | NC |
| "R" TC | 0 to 3200° F | RF |
| "R" TC | 0 to 1750° C | RC |
| "S" TC | 0 to 3200° F | SF |
| "S" TC | 0 to 1750° C | SC |
| "T"TC | -200 to 600° F | TF |
| "T"TC | -100 to 300° C | TC |
| 100 ohm RTD | -328 to 1562° F | PF |
| 100 ohm RTD | -200 to 850° C | PC |
| 100 ohm RTD | -199.0 to 450.0° F | DF |
| 100 ohm RTD | -100.0 to 225.0° C | DC |
| 1000 ohm RTD | -328 to 1562° F | XF |
| 1000 ohm RTD | -200 to 850° C | XC |
| 1000 ohm RTD | -199.0 to 450.0° F | ZF |
| 1000 ohm RTD | -100.0 to 225.0° C | ZC |
| 1 to 5 V | Scaleable | L1 |
| 0 to 5 V | Scaleable | L4 |
| 10 to 50 mV | Scaleable | L2 |
| 0 to 50 mV | Scaleable | L5 |
| 4 to 20 mA* | Scaleable | L3 |
| 0 to 20 mA* | Scaleable | L6 |
| 0 to 10 Vdc | Scaleable | L7 |
| 2 to 10 Vdc | Scaleable | L8 |
| 0 to 1 Vdc | Scaleable | L9 |

Output 1 Code

None Relay, 5A/3A

4 to 20 mA High Impedance

Pulsed 20 Vdc Solid-State Relay,

N.C. Relay

Output 2 Code

None Relay, 5A/3A В

N.C. Relay

Alarm 1 Code

В

4 to 20 mA High Impedance

Pulsed 20 Vdc Solid-State Relay,

Alarm 2

None 0 = None = Relay B = Relay

24 V S = 24 V= SSR SSR

Communications Code

RS-232

RS-485 **SPI RS-485** Option 2

Transducer Excita-

10 Vdc

12 Vdc 15 Vdc

Special Options

ED = Limit Controller (Other options, consult

= 5 Vdc

factory)

Option 1

Code **Auxiliary Output**

= 4 to 20 mA 0 to 20 mA 0 to 5 V

Remote Analog Setpoint SA = 0 to 5 V w/ switch SB = 1 to 5 V w/ switch

= 0 to 20 mA w/ switch SD = 4 to 20 mA w/ Switch only

1 to 10 Vdc w/ switch







SERIES 18 & 19 TEMPERATURE/PROCESS CONTROLLERS

OPERATING LIMITS

100 to 250 V. 50/60 Hz Line Voltage

125 to 300 Vdc

Power Consumption Less than 6 VA (instrument) **Temperature** 32° to 131°F (0° to 55°C)

Humidity 90% R.H. maximum, non-condensing

PERFORMANCE

 $\pm 0.2\%$ of FS, \pm one digit Accuracy Setpoint Resolution 1 count/0.1 count

Repeatability +1.0 count

Temperature Stability 5 mV/°C maximum TC Cold End Tracking 0.05°C/°C ambient Noise Rejection Common mode > 100 dB Series mode > 70 dB

Process Sampling 10 Hz (100 ms)

L1 to L7 (Refer to Ordering Codes) Linear Input:

Engineering Units Scalable, -1999 to 9999 **Digital Filtering** 0.1, 1.0, or 10 sec

Decimal Position Selectable, none or (0.00), (0,0)

CONTROL CHARACTERISTICS

Setpoint Limits Limited to configured range of TC

and RTD

Alarms Adjustable for high/low; selectable

process or deviation

0 to 900 sec Rate 0 to 3600 sec Reset Cycle Time 0.2 to 120 sec Gain 0 to 400

Gain Ratio 0 to 2.0 (in 0.1 increments) Control Hysteresis 1 to 100 (on/off configuration) 0 to 100 (above setpoint) Spread (Output 2)

Ramp to Setpoint 1 to 100 minutes

Autotune Operator-initiated from front panel Manual Control Operator-initiated from front panel

INPUTS

Thermocouple E, K,J,N,R,T,S, Platinel®II

Maximum lead resistance, 100 ohms for

rated accuracy

Platinum, 3-wire, 100 ohms at 0°C, DIN RTD curve standard (0.00385); 1000 ohms

Current and voltage (refer to ordering

Linear

code)

OUTPUTS

#1 reverse-acting (heating) #2 direct-acting (cooling)

Relay 5 Δ @ 120 Vac 3 Δ @ 240 Vac R

F 4-20 mA, 500 ohms max.

S 20 Vdc pulsed

Т Solid-state relay, 1 A

Optically isolated triac, rated 1 A, **Alarms**

> 120/240 Vac @ 25°C DC - 20 mA sink or 24 V supply (switch AC only) or 3 A/5 A,

120/240 Vac (switch AC or DC)

MECHANICAL CHARACTERISTICS

Display Dual, 4-digit, 9.2 mm

Process: orange

Menu/parameter: green

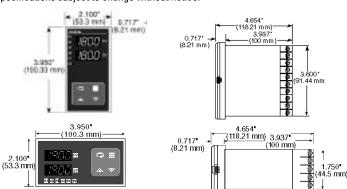
Front Panel Rating NEMA 4X (IP65)

Connections Input and output via barrier strip, with

locking terminals

Contacts Twin bifurcated, double-wipe

Specifications subject to change without notice.



Output 1 LED indication of Heat cycle (Output 1 action)

Output 2 LED indication of Cool cycle (Output 2 action)

Alarm 1 LED indication

of Alarm1 condition

Alarm 2

LED indication of Alarm 2 condition

Function 1 LED indication of

Special Function 1

Function 2 LED indication of

Special Function 2



Process Value

Displays measure process temperati in °F or °C or proce value in engineerii units

Setpoint Value

Displays programs setpoint temperati in °F or °C or setp value in engineerii units



Mode Key Used to ac Standby, Tune, Run or Manual modes



Lower Key Used to scroll down through available parameter settings, decrease values or change menu levels (Hold for fast-step progression)



Raise Key Used to scroll up through available parameter settings, increase values or change menu levels (Hold for fast-step progression)



Parameter/Access Key Used to index through parame or to access Menu Levels

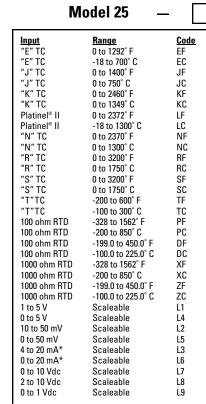
SERIES 25

1/4 DIN Universal **Process Controller**

- Thermocouple, RTD, Voltage or Current Input
- · User-Selectable Ramp to Setpoint
- Bumpless Auto/Manual Transfer
- NEMA 4X (IP65) Dust and Splash-Proof Front Panel
- On/Off through Full PID Operation (P,PI,PD,PID)
- Auto-Tuning, Heat or Cool
- Adjustable Hysteresis & Heat/Cool Spread
- Field-Configurable Process, Deviation, or Latching Alarms
- · Remote Setpoint Select Option
- Dual Output/Dual Alarm Capabilities
- Optional RS232/RS485 Communica-
- Optional Process Variable Retransmission



Ordering Information



Output 1 None

Relay, 5A/3A В 4 to 20 mA

Code

High Impedance Pulsed 20 Vdc

Solid-State Relay,

Y = N.C. Relay

Output 2 Code

0 None В Relay, 5A/3A

4 to 20 mA High Impedance

Pulsed 20 Vdc Solid-State Relay

N.C. Relay

Alarm 1 Alarm 2 Code Code

None B = Relay 24 V S =

SSR

None B = Relay 24 V S = SSR

Communications

None = RS-232 = RS-485

SPI RS-485

Option 1

Option 2

Transducer Excita-

10 Vdc

12 Vdc

15 Vdc

5 Vdc

Special Options

factory)

ED = Limit Controller

(Other options, consult

Code

Code None Auxiliary Output 4 to 20 mA = 0 to 20 mA = 0 to 5 V Remote Analog Setpoin

= 0 to 5 V w/ switch 1 to 5 V w/ switch

= 0 to 20 mA w/ switch = 4 to 20 mA w/ switch = 1 to 10 Vdc w/ switch





SERIES 25 TEMPERATURE/PROCESS CONTROLLER

OPERATING LIMITS

Line Voltage 100 to 250 V 50/60 Hz

125 to 300 Vdc

Power

Less than 6 VA (instrument) Consumption 32° to 131°F (0°to 55°C) **Temperature**

Humidity 90% R.H. maximum, non-condensing

PERFORMANCE

 $\pm 0.2\%$ of FS, \pm one digit Accuracy

Setpoint

Resolution 1 count/0.1 count

Repeatability +1.0 count

Temperature

Stability 5 mV/°C maximum

TC Cold End

Tracking 0.05°C/°C ambient Noise Rejection Common mode > 100 dB

Series mode > 70 dB

Process Sampling 10 Hz (100 ms)

Linear Input: L1 to L7 (Refer to Ordering Codes)

Engineering Units Scalable, -1999 to 9999 **Digital Filtering** 0.1, 1.0, or 10 sec

Decimal Position Selectable, none, 1/10, or 1/100

CONTROL CHARACTERISTICS

Setpoint Limits Limited to configured range of TC

and RTD

Alarms Adjustable for high/low; selectable

process

or deviation Rate 0 to 900 sec Reset 0 to 3600 sec Cycle Time 0.2 to 120 sec Gain 0 to 400

Gain Ratio 0 to 2.0 (in 0.1 increments) Control Hysteresis 1 to 100 (on/off configuration) Spread (Output 2) 0 to 100 (above setpoint)

1 to 100 minutes Ramp to Setpoint

Autotune Operator-initiated from front panel **Manual Control** Operator-initiated from front panel

INPUTS

Thermocouple E, K,J,N,R,T,S, Platinel®II

Maximum lead resistance, 100 ohms for

rated accuracy

RTD Platinum, 3-wire, 100 ohms at 0°C, DIN

curve standard (0.00385); 1000 ohms

Linear Current and voltage (refer to ordering code)

OUTPUT OPTIONS

#1 reverse-acting (heating) #2 direct-acting (cooling)

В Relay 5 A @ 120 Vac, 3 A @ 240 Vac

F 4-20 mA, 500 ohms max.

S 20 Vdc pulsed

Т Solid-state relay, 1 A

Alarms Optically isolated triac, rated 1 A,

120/240 Vac

@ 25°C DC - 20 mA sink or 24 V supply (switch AC only) or "B" 5 A @ 120 Vac, 3 A @ 240 Vac (switch AC or DC)

MECHANICAL CHARACTERISTICS

Dual, 4-digit, Process: orange, 0.55" Display

(14 mm) Menu/parameter: green,

0.36" (9.2 mm)

Front Panel

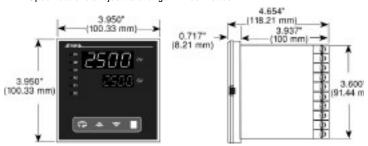
NEMA 4X (IP65) Rating

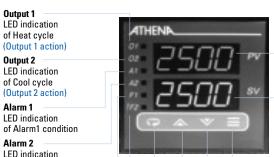
Input and output via barrier strip, with Connections

locking terminals

Contacts Twin bifurcated, double-wipe

Specifications subject to change without notice.





Process Value

Displays measured process temperature in °F or °C or process value in engineering

Setpoint Value

Displays programme setpoint temperature in °F or °C or setpoir value in engineering

Function 1

of Alarm 2 condition LED indication of Special Function 1

Function 2

LED indication of Special Function 2

Mode Key Used to access Standb[,] Tune, Run or Manual modes. Lower Key Used to scroll down through available parameter settings, decrease values or change menu levels (Hold for

fast-step progression) Raise Key Used to scroll up through available

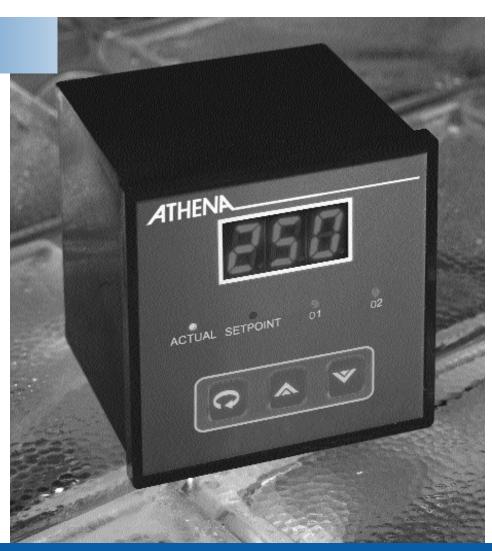
parameter settings, increase values or change menu levels (Hold for fast-step progression)

Parameter/Access Key Used to index through paramete or to access Menu Levels

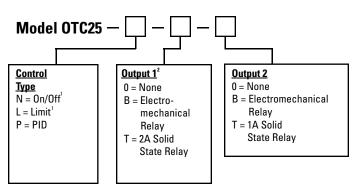
SERIES OTC25

1/4 DIN Digital Temperature Controller

- Large, Easy-to-Read LED Display, Selectable for Either Setpoint or Process Temperature
- Accepts Type J (OTC25-N &L) or Type J and K (OTC25-P) Thermocouple Input
- Adjustable Output Hysteresis to Prevent Rapid Cycling Around Setpoint Temperature
- · Adjustable Deviation Alarm Flashes When Measured Temperature Exceeds or Falls Below Setpoint Temperature
- NEMA 4X (IP65) Front Bezel, Splash-Proof and Resistant to Dust
- Discrete Status Indicators Illuminate When Temperature Display, Setpoint Display, Limit Display, or Heat/Cool Output Is Active



Ordering Information



- 1 On/Off and limit control versions (OTC25-N and OTC25-L) are only available with Type J thermocouple input.
- ² Limit control versions (OTC25-L) may only be ordered with electromechanical relay (Type "B") outputs in Output 1.









SERIES OTC25 DIGITAL TEMPERATURE CONTROLLER

OPERATING LIMITS

Line Voltage 100 to 250 V 50/60 Hz

Power

Consumption Less than 6 VA (instrument)

Operating

Temperature 32° to 140°F (0° to 60°C)

Humidity

Tolerance 90% R.H. maximum, non-condensing

PERFORMANCE

Accuracy $\pm 0.3\%$ of FS, \pm one digit

Temperature

Stability $5 \mu V/^{\circ}C$ maximum

TC Cold End

Tracking 0.05°C / °C ambient

Noise Rejection Common mode > 100 dB

Series mode > 70 dB

Process Sampling 3.7 Hz (270 ms)

CONTROL CHARACTERISTICS

 Setpoint Limits
 0° to 900°F (0° to 482°C)

 Control Hysteresis
 2° to 252°F (1° to 140°C)

 Display Offset
 -126° to +126°F (-70° to 70°C)

 Deviation Alarm
 Off, 1° to 252°F (0ff,1° to 140°C)

INPUTS

Thermocouple OTC25-N Type J

OTC25-L Type J OTC25-P Type J or K

Maximum lead resistance, 100 ohms for

rated accuracy

OUTPUTS

B Electromechanical relay,

5A @ 120 Vac, 3A @ 240 Vac

T Solid-state relay, 2 A (Output 1),

1 A (Output 2)

MECHANICAL CHARACTERISTICS

Display 3-digit, 0.56"

Orange

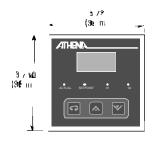
Discrete

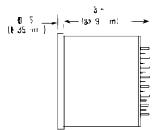
Indicators Setpoint: Amber

Actual: Amber 01: Orange 02: Orange Limit: Orange

Front Panel Rating NEMA 4X (IP65)
Connections Fast-on style

Panel Cutout: 3.622" sq. (92 mm)







Three-Digit LED Display

Displays measured temperature, setpoint, or parameter labels and settings.

Front Panel Controls and Indicators



Parameter Key

Used to access available parameters to set or change values.



Raise Key

Used to scroll up through available parameter settings or to increase values. (Hold for fast-step progression)



Lower Key

Used to scroll down through available parameter settings or to decrease values. (Hold for fast-step progression)

Discrete LED Indicators

| OTC25 N | OTC25 L | OTC25 P |
|-----------------|-----------------|------------------|
| Actual: amber | Actual: amber | Actual: amber |
| Setpoint: amber | Setpoint: amber | Setpoint: amber |
| Heat: orange | Limit: orange | Output 1: orange |
| - | _ | Output 2: orange |

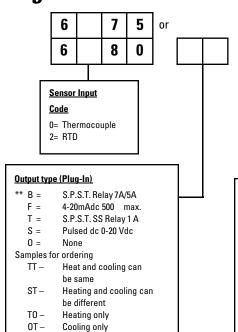
SERIES 6075 and 6080

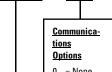
1/4 DIN Temperature and Process **Controllers**

- PID Control
- Auto-Tune Heat or Heat/Cool (6075/6080)
- Optional Field-Installable Computer Interface
- Thermocouple or RTD Inputs (6075/6080)
- Eight Ramp/Soak Segments, Repeatable to 254 Cycles or Infinite (6080)
- Guaranteed Soak Band (6080)
- · Plug-In Outputs
- Two Optional Alarms



Ordering Information





0 = None A = RS232 B = RS485

Alarms (1A SSR)

Code

00= None

E1= One auxiliary relay on-off (1° differential, customer selectable, process or deviation)

E2= Two auxiliary relays on-off (1° differential, customer selectable, process or deviation)

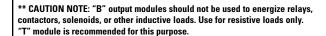
STANDARD RANGE CODE

| Thermocoupl | <u>le</u> | |
|--------------|--|-------------|
| <u>Code</u> | Set Range | <u>Type</u> |
| 01F | 0 to 1400°F (-18 to 760°C) | "J" |
| 02F | 0 to 2000°F (-18 to + 1093°C) | "K" |
| 26F | -200 to 600°F (-129 to 315°C) | "T" |
| 32F | 0 to 3200°F (-18 to 1745°C) | "R" |
| 33F | 0 to 3200°F (-18 to 1745°C) | "S" |
| Platinum RTD |) Ranges† | |
| (3-wire, 100 | at 0°C DIN CURVE STD) | |
| 26C | -200 to 1200°F (-128 to 649°C) | |
| 22F* | -199.9 to +199.9°F (-128.8 to +93.3°C) | |

CONSULT FACTORY FOR OTHER RANGES

†RTD units include a 1 mV/°C recorder output.

0 = low end of range. *Unit does not Auto-tune on this range.







SERIES 6075 & 6080 TEMPERATURE CONTROLLERS

Line Voltage:

120/240 Vac <u>+</u> 10% to <u>+</u> 15%, 50-60 Hz

Power

Consumption:

Less than 6VA (instrument)

Sensor Break

Protection: Upscale standard (6075, 6080)

Ramp/Soak Segments

(Series 6080): Eight ramp or soak segments, plus a

starting setpoint temperature

Key Functions (Series 6080):

Standby/Reset Puts controller in idle at beginning of pro-

file

R/S/Control Selects Ramp/Soak or controller mode

Tune/Setup Starts auto tuning or accesses

Ramp/Soak setup

Setpoint Returns controller to setpoint from index

mode Press twice to exit Ramp/Soak

setup

Run/Hold Start/Pause key for Ramp/Soak routine

Temperature

Stability: 5 V/°C maximum, 3 V/°C typical (6075,

6080)

T/C Cold End

Tracking: 0.05°C/°C ambient

Noise Rejection: Common mode 80 dB. Serial mode 120

dB.

Dual Display: Process temperature or parameter code

is shown on upper display; setpoint or parameter value can be selected on

lower display

Update Rate: Process display updated 2.5 times per

second; digitally filtered to eliminate

noise fluctuation

Filtered LED

Display: 4 digits for process, 4 digits for parame-

ters (9.2 mm)

Communications:

Digital Format: Isolated 7-bit ASCII, asynchronous with 1

start and 1 stop bit, odd parity, selectable

baud (300, 600, 1200, 2400)

Electrical: RS232, RS485, on plug-in cards.

Mechanical: 9 pin "D" connector, DB-9 Type on rear of

unit

Accuracy: $\pm 0.2\%$ of full scale, \pm one digit

Operating Ambient for

Rated Accuracy: 32° to 131°F (0° to 55°C)

F/C: Front Panel selectable, setpoint and

alarms affected (6075, 6080)

Alarms: 1 and 2 auxiliary on/off, adjustable for

high or low triggering; LED on front

panel displays alarm status;

process/deviation mode selectable; optically isolated solid-state relays, rated 1 A at 120/240 Vac (on/off)

Outputs, Primary

Setpoint: Available heating only, cooling only or

heat/cool, (Series 6075 & 6080)

"B" Relay (time

proportional) SPST relay, 7 A resistive at 120 Vac, 5 A

resistive at 240 Vac, 50 VA inductive

"F" 4-20 mAdc into 500 ohm maximum

Current proportional

"S" 20 Vdc pulsed time proportional signal for

driving

Pulsed voltage solid-state relays

"T" Triac (time

proportional) Solid state, plug-in relay output, zero

voltage switched; 1 A holding and 10 A

inrush, SPST

Connections: Inputs and outputs via barrier strips with

UL-listed locking terminals; communication via 9 pin sub-miniature "D" connec-

tor

Dimensions: Front panel: 3.780 sq. in. (96 mm²)

Case: 5.656" (143.3 mm), Depth behind panel:

4.78" (121.4 mm). Panel cut-out: 3.622 sq.

in. (92 mm²)

Mounting: Channel slides and screws

NOTES

NOTES

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