

2019 Product Code Booklet

TEMPERATURE CONTROLLERS

INPUTS:

00200 Differential
00250 Pyrometer

Sensor:

00350 Relative Humidity
00400 RTD
00450 Thermistor

Thermocouple:

00550 Type B
00600 Type C
00650 Type D
00700 Type E
00750 Type J
00800 Type K
00850 Type N (nicrosil/nisil)
00900 Type PL2
00950 Type R
01000 Type S
01050 Type T

01100 Universal Process
01150 Universal Thermocouple

OUTPUTS:

01250 Analog Current
01300 Analog Voltage
01350 Dual (Heat/Cool)
01400 Time Proportioning Logic
01450 Time Proportioning Relay
01500 Time Proportioning Triac

CONTROL MODES:

01600 Adaptive Tuning
01650 Autotuning
01700 Auto/Manual
01750 Cascade
01800 Fuzzy Logic
01850 Gain Scheduling
01900 Multiple Setpoint
01950 On/Off
02000 PID
02050 Proportional with Manual Reset
02100 Ramp/Soak Programming
02150 Ratio Control
02200 Valve Positioning

PHYSICAL FEATURES

DIN SIZE:

02350 Full
02400 1/4
02450 1/8
02500 1/16
02550 1/32
02600 Other
02650 Connection, Hard Wire

02700 Connection, Plug
02750 Display, Dual
02800 Display, Single

Mounting:

02900 Front Panel
02950 Back Panel
03000 DIN Rail
03050 NEMA 4 rating

ADDITIONAL FEATURES

Agency Approval:

03200 CE Certification
03250 CUL Recognized
03300 UL Recognized
03350 Configurable Alarms
03400 Configurable Display
03450 Field Configurable
03500 Load Current Display
03550 Load Failure Alarm
03600 Loop Break Alarm
03650 Max/Min/Average Statistics
03700 Operator Lockout
03750 Serial Communications
03800 Universal Power Input

INDUSTRIES SERVED:

03900 Chemicals/Petrochemicals
03950 Electronics
04000 Finishing
04050 Food Processing & Production
04100 Packaging/Printing
04150 Pulp/Paper/Converting
04200 Pharmaceuticals
04250 Plastics/Rubber/Vinyl

OVENS

OVEN CONFIGURATION:

04400 Batch, Bell
04450 Batch, Bench
04500 Batch, Cabinet
04550 Batch, Truck/Walk-In
04600 Continuous, Belt Conveyor
04650 Continuous, Conveyorless
04700 Continuous, Cross-Bar Conveyor
04750 Continuous, Drag Chain
04800 Continuous, Fixture Conveyor
04850 Continuous, Monorail
04900 Continuous, Power Roller
04950 Continuous, Pusher Conveyor
05000 Continuous, Screw Conveyor
05050 Continuous, Slat
05100 Continuous, Turn Table
05150 Continuous, Walking Beam
05200 Idler Rolls

05250 Tenter Frames
05300 Top Load
05350 Other

HEATING METHOD:

05450 Conduction
05500 Convection/Infrared Combination
05550 Convection, Counter-Flow
05600 Convection, Flotation
05650 Convection, Impingement
05700 Convection, Through-Air
05750 Infrared, Catalytic
05800 Infrared, Long Wave
05850 Infrared, Medium Wave
05900 Infrared, Short Wave
05950 Microwave/Radio Frequency
06000 Other

ENERGY SOURCE:

06100 Dual Fuel
06150 Electricity
06200 Hot Oil
06250 Hot Water
06300 Natural Gas
06350 Oil
06400 Propane
06450 Steam
06500 Other

PRODUCT HEATED:

06600 Particles/Powders
06650 Parts/Discrete Products
06700 Sheets/Webs (Continuous Material)
06750 Slurries
06800 Other

MANUFACTURING PROCESS:

06900 Annealing
06950 Baking/Cooking
07000 Bonding
07050 Burn-In
07100 Burn-Off
07150 Curing
07200 Dehydrating
07250 Drying
07300 Fusing
07350 Heat Setting
07400 Heat Shrinking
07450 Laminating
07500 Pre-Drying
07550 Pre-Heating
07600 Soldering
07650 Sterilizing/Depyrogenation
07700 Testing
07750 Thermoforming
07800 Other

INDUSTRIES SERVED:

07900 Chemicals/Petrochemicals

07950 Electronics
08000 Oil & Gas/Ethanol/Biodiesel Fuels
08050 Finishing
08100 Food
08150 Packaging/Printing
08200 Paper/Pulp/Converting
08250 Pharmaceuticals
08300 Plastics/Rubber

BOILERS

TYPE:

08450 Fire Tube, Horizontal Return Tubular
08500 Fire Tube, Scotch/Scotch Marine/Shell
08550 Firebox
08600 Water Tube
08650 Other

DESIGN/CONSTRUCTION:

08750 Cast Iron
08800 Coil-Type
08850 Fire Box
08900 Steam Generator
08950 Radiant
09000 Tubeless
09050 Other

FABRICATION METHOD:

09150 Packaged/Skid-Mounted
09200 Factory Assembled
09250 Field Erected
09300 Other

FUEL / ENERGY SOURCE:

09400 Biomass/Biodiesel
09450 Dual Fuel (combination oil and gas)
09500 Electricity
09550 Heavy Oil
09600 Light Oil
09650 Natural Gas
09700 Propane
09750 Other

RATING (PROVIDED IN BHP | BTU/HR | LB/HR OF STEAM):

09850 <100 | 3,347,500 | 3,450
09900 101 | 3,380,975 | 3,485
09950 200 | 6,695,000 | 6,900
10000 201 | 6,728,475 | 6,935
10050 300 | 10,042,500 | 10,350
10100 301 | 10,075,975 | 10,385
10150 500 | 16,737,500 | 17,250
10200 501 | 16,770,975 | 17,285
10250 600 | 20,085,000 | 20,700
10300 601+

KILOWATT RATING:

10400 Up to 10 KW
10450 11 to 25 KW
10500 26 to 50 KW
10550 51 to 100 KW
10600 101 to 200 KW
10650 200 to 300 KW
10700 301 to 500 KW
10750 501 to 1,000 KW

10800 Greater Than 1,000 KW

DESIGN PRESSURE:

10900 Less Than 15 psig
10950 16 to 150 psig
11000 151 to 200 psig
11050 201 to 300 psig
11100 301 to 500 psig
11150 501 to 1,000 psig
11200 Greater Than 1,000 psig

AUXILIARY SYSTEMS

OFFERED:

11300 Atmospheric Feedwater Receiver
11350 Condensate Return System
11400 Deaerator
11450 Economizer/Heat Recovery System
11500 External Heater Unit (to pre-heat water)
11550 Low NOX Burners
11600 Water Conditioner/Treater
11650 Other

INDUSTRIES SERVED:

11750 Chemical/Petrochemical
11800 Electronics
11850 Oil & Gas/Ethanol/Biodiesel Fuels
11900 Finishing
11950 Food Processing
12000 Packaging/Printing
12050 Pharmaceutical
12100 Plastics/Rubber
12150 Pulp/Paper/Forest Products/Converting

DRYERS

DRYER CONFIGURATION:

12300 Batch/Cabinet
12350 Can/Drum
12400 Continuous/Conveyer
12450 Deck
12500 Festoon/Loop
12550 Loft
12600 Paddle
12650 Ring
12700 Roll/Cylinder
12750 Rotary
12800 Shelf/Tray/Truck
12850 Skein
12900 Tensionless
12950 Tenter Frame
13000 Tower
13050 Tunnel
13100 Warp
13150 Web
13200 Wicket
13250 Other

DRYER TYPE:

13350 Centrifugal
13400 Combination Infrared/Convection
13450 Conduction
13500 Convection, Counter-Flow
13550 Convection, Impingement

13600 Convection, Flotation
13650 Convection, Through-Air
13700 Dehumidifying
13750 Flash
13800 Fluid-Bed
13850 Infrared, Catalytic
13900 Infrared, Long Wave
13950 Infrared, Medium Wave
14000 Infrared, Short Wave
14050 Microwave
14100 Radio Frequency
14150 Spray
14200 Steam
14250 Vacuum
14300 Other

ENERGY SOURCE:

14400 Dual Fuel
14450 Electricity
14500 Hot Oil (Thermal Fluid)
14550 Hot Water
14600 Natural Gas
14650 Oil
14700 Propane
14750 Steam
14800 Other

MATERIAL DRIED:

14900 Pastes/Mixes
14950 Powders
15000 Slurries
15050 Solids
15100 Solvent-Based Materials
15150 Water-Based Materials
15200 Other

MANUFACTURING PROCESS:

15300 Calcining
15350 Curing
15400 Dehydrating
15450 Drying
15500 Finishing
15550 Fusing
15600 Granulating
15650 Heat Setting
15700 Heat Shrinking
15750 Laminating
15800 Moisture Profiling
15850 Pasteurizing
15900 Pre- and Post-Drying

INDUSTRIES SERVED:

16000 Chemicals/Petrochemicals
16050 Electronics
16100 Oil & Gas/Ethanol/Biodiesel Fuels
16150 Finishing
16200 Food
16250 Packaging/Printing
16300 Paper/Pulp/Converting/Forest Products
16350 Pharmaceutical
16400 Plastics/Rubber/Vinyl

CONDUCTION AND CONVECTION HEATERS

HEATER CONFIGURATION:

16550 Band (Round): Cast-In

16600 Band (Round): Ceramic
 16650 Band (Round): Coil
 16700 Band (Round): Drum
 16750 Band (Round): Mica
 16800 Band (Round): Tubular
 16850 Band (Round): Silicone Rubber
 16900 Circulation: Cartridge
 16950 Circulation: Direct-Steam Injection
 17000 Circulation: Tubular
 17050 Circulation: Thermal Fluid
 17100 Flexible: Blanket
 17150 Flexible: Drum
 17200 Flexible: Etched Foil
 17250 Flexible: Heating Cable
 17300 Flexible: Silicone Rubber
 17350 Flexible: Tape
 17400 Flexible: Other
 17450 Heat Tracing
 17500 Heating System: Direct Steam Injection
 17550 Heating System: Packaged
 17600 Heating System: Starch Cookers
 17650 Heating System: Tank
 17700 Heating System: Thermal Fluid
 17750 Immersion: Finned
 17800 Immersion: Screw Plug
 17850 Immersion: Tubular, Bottom-Mounted
 17900 Immersion: Tubular, Flanged
 17950 Immersion: Tubular, Over-the-side
 18000 Immersion: Tubular, Pipe Thread
 18050 Immersion: Tubular, Teflon-Coated
 18100 Process Air: Duct
 18150 Process Air: Heat Gun/Hot Air Blower
 18200 Process Air: Open Coil
 18250 Process Air: Space
 18300 Process Air: Tubular
 18350 Process Air: Tubular, Finned
 18400 Ring: Cast-In
 18450 Ring: Ceramic
 18500 Ring: Mica
 18550 Strip (Flat/Plate): Cast-In
 18600 Strip (Flat/Plate): Ceramic
 18650 Strip (Flat/Plate): Etched Foil
 18700 Strip (Flat/Plate): Finned
 18750 Strip (Flat/Plate): Mica
 18800 Strip (Flat/Plate): Silicone Rubber
 18850 Strip (Flat/Plate): Tubular

ENERGY SOURCE:

18950 Electricity
 19000 Hot Oil (Thermal Fluid)
 19050 Hot Water
 19100 Natural Gas
 19150 Oil
 19200 Propane
 19250 Steam
 19300 Other

MANUFACTURING PROCESS:

19400 Bonding
 19450 Curing
 19500 Dehydrating
 19550 Drying
 19600 Embossing
 19650 Evaporating
 19700 Extruding
 19750 Fusing
 19800 Heat Setting
 19850 Heat Shrinking
 19900 Laminating
 19950 Laminating/Preheating
 20000 Soldering
 20050 Sterilizing
 20100 Tempering
 20150 Thermoforming

INDUSTRIES SERVED:

20250 Chemicals/Petrochemicals
 20300 Electronics
 20350 Oil & Gas/Ethanol/Biodiesel Fuels
 20400 Finishing
 20450 Food
 20500 Packaging/Printing
 20550 Paper/Pulp/Converting
 20600 Pharmaceuticals
 20650 Plastics/Rubber

BURNERS

BURNER TYPE:

20800 Atomizing
 20850 Catalytic
 20900 Ceramic
 20950 Endothermic
 21000 Exothermic
 21050 Fuel Oil
 21100 Immersion Tube
 21150 Impingement
 21200 Infrared
 21250 Line
 21300 Low NOx
 21350 Luminous Flame
 21400 Oxy-Fuel
 21450 Packaged
 21500 Premix
 21550 Radiant Cup
 21600 Radiant Tube
 21650 Regenerative
 21700 Ribbon
 21750 Self-Recuperative
 21800 Velocity, High
 21850 Velocity, Low
 21900 Velocity, Medium

ENERGY SOURCE:

22000 Coal
 22050 Cogeneration/Biogases
 22100 Dual Fuel
 22150 Liquid Waste
 22200 Natural Gas
 22250 Natural Gas/Oil
 22300 Oil
 22350 Propane

22400 Solid Waste
 22450 Waste Oil
 22500 Wood
 22550 Other

APPLICATIONS:

22650 Air Heating, Direct
 22700 Air Heating, Indirect
 22750 Boilers/Steam Generators
 22800 Cleaners/Washers
 22850 Dryers
 22900 Incinerators/Oxidizers
 22950 Liquid Heaters
 23000 Ovens
 23050 Thermal Fluid Heaters
 23100 Hot Water Heaters

INDUSTRIES SERVED:

23200 Chemicals/Petrochemicals
 23250 Electronics
 23300 Oil & Gas/Ethanol/Biodiesel Fuels
 23350 Finishing
 23400 Food
 23450 Packaging
 23500 Pulp/Paper/Forest Products
 23550 Pharmaceutical
 23600 Plastics/Rubber/Vinyl

POWER CONTROLS

CONFIGURATION:

23750 Single-Phase, SCR Control
 23800 Three-Phase, SCR Control

LINE VOLTAGE:

23900 460/480 V
 23950 208/204 V
 24000 380/410/415 V
 24050 120 V
 24100 600 V
 24150 Other

FIRING MODE:

24250 On/Off
 24300 Phase-Angle
 24350 Burst Firing
 24400 Single-Cycle Firing
 24450 Soft Start

INPUTS:

24550 AC Logic
 24600 DC Logic
 24650 Analog DC
 24700 Digital Communication

CURRENT:

24800 0 to 50 A
 24850 51 to 125 A
 24900 126 to 225 A
 24950 226 to 500 A
 25000 501 to 1,000 A
 25050 More than 1,000 A

COOLING (122°F (50°C) ambient; 212°F (100°C) hot spot max.):

25150 Convection
 25200 Fan
 25250 Liquid

FUSES INCLUDED:

25350 Yes

25400 No

PROTECTION:

- 25500 Current Limiting
- 25550 Power Limiting
- 25600 Voltage Clamping Device

RETRANSMISSION:

- 25700 Analog
- 25750 Digital
- 25800 Load Current
- 25850 Load Voltage
- 25900 Load Power

INTERNAL ALARMS:

- 26000 Load Current
- 26050 Load Voltage
- 26100 Partial Load Failure
- 26150 Heat-Sink Temperature
- 26200 Heater Break Alarm

LOAD CONDITION FEEDBACK:

- 26300 Yes
- 26350 No

MOUNTING:

- 26450 Panel
- 26500 DIN Rail

INDUSTRIES SERVED:

- 26600 Chemicals/Petrochemicals
- 26650 Electronics
- 26700 Oil & Gas/Ethanol/Biodiesel Fuels
- 26750 Finishing
- 26800 Food Processing
- 26850 Packaging/Printing
- 26900 Pulp/Paper/Converting/Forest Products
- 26950 Pharmaceutical
- 27000 Plastics/Rubber/Vinyl

INFRARED HEATERS

HEATER TYPE

Gas-Fired:

- 27200 Catalytic
- 27250 Ceramic Fiberboard
- 27300 Ceramic Element
- 27350 Ceramic Tile
- 27400 Porous Metal Fiber Matrix
- 27450 Porous Ceramic Fiber Matrix

Electrically Powered:

- 27550 Ceramic Element
- 27600 Ceramic Generator
- 27650 Coiled Metal Sheath
- 27700 Halogen Lamp
- 27750 Metal Ribbon
- 27800 Panel Type
- 27850 Quartz Tube
- 27900 Radiant Tube
- 27950 Radiant Wall
- 28000 Sinuated Wire

WAVELENGTH:

- 28100 Long Wave
- 28150 Medium Wave
- 28200 Short Wave

MANUFACTURING PROCESS:

- 28300 Annealing
- 28350 Baking

- 28400 Bonding
- 28450 Cooking
- 28500 Curing
- 28550 Dehydrating
- 28600 Drying
- 28650 Embossing
- 28700 Evaporating
- 28750 Extruding
- 28800 Fusing
- 28850 Heat Setting
- 28900 Heat Shrinking
- 28950 Laminating
- 29000 Pre-Drying
- 29050 Pre-Heating
- 29100 Soldering
- 29150 Sterilizing
- 29200 Tempering
- 29250 Thermoforming
- 29300 Other

INDUSTRIES SERVED:

- 29400 Chemicals/Petrochemicals
- 29450 Electronics
- 29500 Oil & Gas/Ethanol/Biodiesel Fuels
- 29550 Finishing
- 29600 Food
- 29650 Packaging/Printing
- 29700 Paper/Pulp/Converting
- 29750 Pharmaceuticals
- 29800 Plastics/Rubber

HEAT EXCHANGERS

CONSTRUCTION:

- 29950 Extended Surface, Plate-Fin
- 30000 Extended Surface, Tube-Fin
- 30050 Plate, Brazed
- 30100 Plate, Gasketed
- 30150 Plate, Lamella
- 30200 Plate, Spiral
- 30250 Plate, Welded
- 30300 Tubular, Double-Pipe
- 30350 Tubular, Shell and Tube, Plate Baffle
- 30400 Tubular, Shell and Tube, Rod Baffle
- 30450 Tubular, Spiral Tube
- 30500 Other:

MATERIALS OF

CONSTRUCTION:

- 30600 Aluminum
- 30650 Brass
- 30700 Carbon Steel
- 30750 Ceramic
- 30800 Copper
- 30850 Exotic Metals
- 30900 Fluoropolymers
- 30950 Glass
- 31000 Graphite
- 31050 Nickel
- 31100 Stainless Steel
- 31150 Titanium
- 31200 Other:

FLOW ARRANGEMENT:

- 31300 Multi-Pass, Cross Counterflow
- 31350 Multi-Pass, Cross Parallel Flow
- 31400 Multi-Pass, Divided Flow
- 31450 Multi-Pass, Paralled Counterflow
- 31500 Multi-Pass, Parallel Plate Multi-Pass
- 31550 Multi-Pass, Split Flow
- 31600 Single Pass, Counterflow
- 31650 Single Pass, Crossflow
- 31700 Single Pass, Parallel Flow

MEDIUM PROCESSED:

- 31800 Air
- 31850 Gas
- 31900 Glycol
- 31950 Heat Transfer Fluid
- 32000 Oil
- 32050 Refrigerant
- 32100 Steam
- 32150 Water
- 32200 Other

METHOD OF HEAT TRANSFER:

- 32300 Air to Air
- 32350 Air to Liquid
- 32400 Gas to Air
- 32450 Gas to Liquid
- 32500 Liquid to Liquid
- 32550 Steam to Air
- 32600 Steam to Liquid
- 32650 Other:

MANUFACTURING PROCESS:

- 32750 Cooling
- 32800 Distillation
- 32850 Evaporation/Condensation
- 32900 Feed Preheater
- 32950 Fibrous Effluent
- 33000 Heat Recovery
- 33050 Heat Transfer
- 33100 Interchanger
- 33150 Pasteurization
- 33200 Reactor Slurry
- 33250 Reboiler
- 33300 Vapor Recovery
- 33350 Other:

INDUSTRIES SERVED:

- 33450 Chemicals/Petrochemicals
- 33500 Electronics
- 33550 Oil & Gas/Ethanol/Biodiesel Fuels
- 33600 Finishing
- 33650 Food
- 33700 Packaging/Printing
- 33750 Pulp/Paper/Converting
- 33800 Pharmaceutical
- 33850 Plastics/Rubber/Vinyl