

PRODUCT SELECTION GUIDE

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Creating Best Value



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Temperature Controllers



TC544C

48(H) x 48(W)mm



TC544B



TC513BX

48(H) x 48(W)mm



TC533BX

48(H) x 48(W)mm



TC538BX

48(H) x 48(W)mm

| | | | | |
|---|--|---|---|---|
| FEATURES | <ul style="list-style-type: none"> • TC / RTD input • ON-OFF / PID control (Auto tune / self tune) • Dual set point • Selectable control output: Relay / SSR • Auxiliary output : Relay | <ul style="list-style-type: none"> • Single display, Single set point • Short depth TC • TC / RTD input • Control output : Relay or SSR | <ul style="list-style-type: none"> • Dual display, Single set point • Short depth TC • TC / RTD input • Control output : Relay or SSR | <ul style="list-style-type: none"> • Dual display, Single set point • Short depth TC • TC / RTD input • Control output : Relay or SSR |
| DISPLAY | 4 + 4 digits, 7 segment LED dual display | 3 digits, 7 segment LED single display | 3 + 3 digits, 7 segment LED dual display | 4 + 4 digits, 7 segment LED dual display |
| INPUT TYPE | Thermocouple (J, K, T, R, S) / RTD (PT100) | | | |
| RESOLUTION | 0.1/1° for TC / RTD inputs (fixed 1° for R & S type TC input) | Fixed 1° resolution | | |
| ACCURACY | For TC input : 0.25% of F.S. ±1°; For R & S inputs : 0.5% of F.S. ±2° (20 min of warm up time for TC inputs); For RTD input : 0.1% of F.S. ±1° | | | |
| SETPOINT | Dual set point | | Single set point | |
| CONTROL MODE | Auto tune / Self tune PID or ON-OFF | | | |
| CONTROL OUTPUT | Relay : SPST : 5A resistive @ 230V AC / 30V DC or SSR : 12V DC, 30mA | Relay : SPDT : 10A resistive @ 230V AC / 30V DC or SSR : 12V DC, 50mA | | |
| AUXILIARY OUTPUT | Relay : 5A resistive @ 230V AC / 30V DC | --- | | |
| SPECIAL FUNCTIONS | Heat cool PID, Dwell timer | --- | | |
| SUPPLY VOLTAGE (AC : 50 / 60 Hz) | 90 to 270V AC / DC | | | |



TC544A

TC244AX

TC344AX

48(H) x 48(W)mm

72(H) x 72(W)mm

96(H) x 96(W)mm



TC513AX

TC203AX

TC303AX

48(H) x 48(W)mm

72(H) x 72(W)mm

96(H) x 96(W)mm



TC533AX

TC233AX

TC333AX

48(H) x 48(W)mm

72(H) x 72(W)mm

96(H) x 96(W)mm

| | | | |
|---|---|---|---|
| FEATURES | <ul style="list-style-type: none"> • Dual display, Dual set point • TC / RTD input • Control output : Relay or SSR • Auxiliary output : Relay • Dwell timer, Heat cool PID | <ul style="list-style-type: none"> • Single display, Single set point • TC / RTD input • Control output : Relay or SSR | <ul style="list-style-type: none"> • Dual display, Single set point • TC / RTD input • Control output : Relay or SSR |
| DISPLAY | 4 + 4 digits, 7 segment LED dual display | 3 digits, 7 segment LED single display | 3 + 3 digits, 7 segment LED dual display |
| INPUT TYPE | Thermocouple (J, K, T, R, S) / RTD (PT100) | | |
| RESOLUTION | 0.1/1° for TC / RTD (fixed 1° for R & S TC) | Fixed 1° resolution | |
| ACCURACY | For TC inputs : 0.25% of F.S. ±1°; For R & S inputs : 0.5% of F.S. ±2° (20 min of warm up time); For RTD input : 0.1% of F.S. ±1° | | |
| SETPOINT | Dual set point | | Single set point |
| CONTROL MODE | Autotune PID or ON - OFF | | |
| CONTROL OUTPUT | Relay : SPDT (SPST for TC544A) : 5A resistive @ 230V AC / 30V DC or SSR (Field Selectable) : 12V DC, 50mA | Relay : SPDT (SPST for TC303A) : 10A resistive @ 230V AC / 30V DC or SSR : 12V DC, 50mA (except TC303A) | |
| AUXILIARY OUTPUT | Relay : SPDT (SPST for TC544A) : 5A resistive @ 230V AC / 30V DC | --- | |
| SPECIAL FUNCTIONS | Heat cool PID, Dwell timer | --- | |
| SUPPLY VOLTAGE (AC : 50 / 60 Hz) | 90 to 270V AC / DC, 24V DC (Optional for TC544 Only) | 90 to 270V AC / DC | |

Temperature Controllers



DTC503
48(H) x 48(W)mm



DTC231
72(H) x 72(W)mm



DTC331
96(H) x 96(W)mm



DTC204A-2
72(H) x 72(W)mm



DTC324A-2
96(H) x 96(W)mm

| FEATURES | <ul style="list-style-type: none"> • 3 Digit single display • J, K TC input • ON-OFF / PID control | <ul style="list-style-type: none"> • 3 Digit single display • J, K TC input • ON-OFF / Proportional control | <ul style="list-style-type: none"> • Single display, Dual set point • TC / RTD input • Control output : Relay or SSR • Auxiliary output : Relay |
|---------------------------------|---|--|---|
| DISPLAY | 3 digits, 7 segment LED single display | | 4 digits, 7 segment LED single display |
| INPUT TYPE | Thermocouple (J, K) | | Thermocouple (J, K, T, R, S) / RTD (PT100) |
| RESOLUTION | Fixed 1° resolution | | 0.1 / 1° for TC / RTD inputs (Fixed 1° for R & S type TC input) |
| ACCURACY | For J, K inputs : 0.25% of F.S. ±1°C | 0.25% of F.S. ±1° (20 min warm up time) | For TC Inputs : 0.25% of F.S. ±1°; For R & S Inputs : 0.5% of F.S. ±2° (20 min of warm up time); For RTD Input : 0.1% of F.S. ±1° |
| SETPOINT | Single set point | | Dual set point |
| CONTROL MODE | ON-OFF / PID | ON-OFF | Autotune PID or ON - OFF |
| CONTROL OUTPUT | Relay : SPDT : 10A resistive @ 230V AC / 30V DC | Relay : SPST : 10A resistive @ 230V AC / 30V DC | Relay : SPDT : 10A resistive @ 230V AC / 30V DC or SSR: 12V DC, 30mA |
| AUXILIARY OUTPUT | --- | | Relay : SPDT : 5A resistive @ 230V AC / 30V DC |
| SUPPLY VOLTAGE (AC: 50 / 60 Hz) | 90 to 270V AC / DC | | |



PID500-T
48(H) x 48(W)mm



PID500
48(H) x 48(W)mm



PID110
96(H) x 48(W)mm



PID330
96(H) x 96(W)mm



PID528
48(H) x 48(W)mm

| FEATURES | <ul style="list-style-type: none"> • TC / RTD input • Single step ramp soak • Max 3 outputs • Retransmission (Optional) | <ul style="list-style-type: none"> • Advanced PID control • Universal input • Single step ramp soak • Max 3 outputs • Retransmission (Optional) • RS485 MODBUS RTU protocol (Optional) | <ul style="list-style-type: none"> • Dual display, Dual set point • TC / RTD input • Control output : Relay • Auxiliary output : Relay |
|----------------------------------|---|--|--|
| DISPLAY | 4 + 4 digits, 7 segment LED dual display | | |
| INPUT TYPE | Thermocouple : J, K, T, R, S, C, E, B, N, L, U, W, Platinel II RTD : PT100 | Thermocouple : J, K, T, R, S, C, E, B, N, L, U, W, Platinel II RTD : PT100 Signal inputs (DC) : -5 to 56 mV, 0 to 10 V DC, 0 to 20 mA DC | Thermocouple (J, K, T, R, S) / RTD (PT100) |
| RESOLUTION | TC / RTD : 1 / 0.1° | TC / RTD : 1 / 0.1°; Analog input : 1 / 0.1 / 0.01 / 0.001 | 0.1 / 1° for TC / RTD inputs (Fixed 1° for R & S type TC input) |
| ACCURACY | For TC input : 0.25% of F.S. ±1°; For R & S inputs : 0.5% of F.S. ±2° (20 min of warm up time); For RTD input : 0.1% of F.S. ±1°; Signal input : ±0.5%, ± 1 digit (Except PID500-T) | | For TC Inputs : 0.25% of F.S. ±1°; For R & S Inputs : 0.5% of F.S. ±2° (20 min of warm up time); For RTD Input : 0.1% of F.S. ±1° |
| SET POINT | Maximum 3 | | Dual set point |
| CONTROL MODE | Autotune PID or ON - OFF | | |
| CONTROL OUTPUT | Relay : SPST : 5A @ 230V AC / 30V DC or SSR : 12V DC, 20mA or Current : 4 to 20 mA DC (Max load 500E) or Voltage : 0 to 10V DC (Min load 10K) (Depends on product code selection) | | Relay : SPST : 5A resistive @ 230V AC / 30V DC |
| AUXILIARY OUTPUT | (Maximum 2) Relay or SSR (Mode : Set point or alarm mode) Relay : SPST : 5A @ 230V AC / 30V DC; SSR : 12V DC, 20mA | | Relay : SPST : 5A resistive @ 230V AC / 30V DC |
| OPTIONAL FEATURES | Extra alarm output, Retransmission analog output, RS485 MODBUS RTU protocol (Except PID500-T) | | --- |
| SUPPLY VOLTAGE (AC : 50 / 60 Hz) | 90 to 270V AC / DC | | |



PR502
48(W) x 48(H)mm

| FEATURES | <ul style="list-style-type: none"> • Ramp soak control • 10 programs, 16 steps each • Alarm at each stage • Memory retention |
|------------|---|
| DISPLAY | 4 + 4 digits, 7 segment LED dual display |
| INPUT TYPE | Thermocouple : J, K, T, R, S, C, E, B, N, L, U, W, Platinel II RTD : PT100, Signal inputs (DC) : -5 to 56 mV, 0 to 10 V DC, 0 to 20 mA DC |
| RESOLUTION | TC / RTD : 1 / 0.1°; Analog input : 1 / 0.1 / 0.01 / 0.001 |
| ACCURACY | For TC input : 0.25% of F.S. ±1°; For R & S inputs : 0.5% of F.S. ±2° (20 min of warm up time); For RTD input : 0.1% of F.S. ±1°; Signal input : ±0.5%, ± 1 digit (Except PID500-T) |

| SETPOINT | Maximum 3 |
|----------------------------------|--|
| CONTROL MODE | Autotune PID or ON - OFF |
| CONTROL OUTPUT | Relay : SPST : 5A @ 230V AC / 30V DC or Current : 4 to 20 mA DC (Max load 500E) |
| AUXILIARY OUTPUT | (Mode : Set point or alarm mode) Relay : SPST : 5A @ 230V AC / 30V DC |
| OPTIONAL FEATURES | No. of profiles : 10 (16 steps each), Ramp / soak Time range : 0.01 to 99.99 Hrs. Other profile parameters : Link profiles, Programmable repeat cycle, Power down resume, Reset option, Deviation hold, Alarm at each step with settable alarm duration, Retransmission analog output, RS485 MODBUS RTU protocol |
| SUPPLY VOLTAGE (AC : 50 / 60 Hz) | 90 to 270V AC / DC |

Cooling Controllers



CH403A
36(H) x 72(W)mm



CH403
36(H) x 72(W)mm

| | | |
|--|---|--|
| FEATURES | <ul style="list-style-type: none"> • 2½ Digits single display • NTC input type • Restart time delay • Auto / Manual defrost selection • Door open mode • Cyclic timer applicable for auxiliary output | <ul style="list-style-type: none"> • 3 Digits single display • Auto / Manual defrost management • High / Low temperature alarms • Control output: Relay • Auxiliary output: Relay & SSR |
| DISPLAY | 2½ digits, 7 segment display | 3 digits, 7 segment display |
| INPUT TYPE | NTC type sensor | |
| RESOLUTION | 1 / 0.1° | |
| ACCURACY | 0.25% of F. S., ±1° | ±1% of F.S. |
| SETPOINT | Single set point | |
| CONTROL MODE | ON - OFF | |
| CONTROL OUTPUT | SPDT: 10A @ 230V AC / 30V DC or SPST: 20A @ 230V AC / 30V DC (Depends on product code selection) | |
| AUXILIARY OUTPUT | SSR: 12V DC, 10mA or Relay: SPST: 5A @ 230V AC / 30V DC (Depends on product code selection) | |
| HYSTERESIS | 0.1 to 9.9° | |
| DISPLAY OFFSET | -19.9° to 19.9° | -19.9° to 20.0° |
| RESTART TIME DELAY | Adjustable from 0 to 19.9 min | |
| RELAY ACTION | Heat & Cool mode | |
| DEFROST TIME | Programmable from 0 to 99 min | |
| DEFROST FREQUENCY | Programmable from 0 to 99 (hr / min / sec) | |
| SUPPLY VOLTAGE (AC : 50 / 60 Hz) | 230V AC or 90 to 270 V AC / DC | 90 to 270V AC / DC |

Process Indicators



PIC152A-VI
48(H) x 96(W)mm



PIC101N
48(H) x 96(W)mm



PIC101A-T-230
48(H) x 96(W)mm



PIC101A-VI-230
48(H) x 96(W)mm

| | | | | |
|--|---|---|--|--|
| FEATURES | <ul style="list-style-type: none"> • User programmable universal input • Retransmission output • LED status indicator : Alarm ON • 2 Alarm indication • Inbuilt 24V DC sensor supply | <ul style="list-style-type: none"> • 4 digits, Single display • User programmable universal input • Scalable voltage / current input | <ul style="list-style-type: none"> • Simple temperature indicator • TC / RTD input type | <ul style="list-style-type: none"> • 4 Digits single display • User programmable voltage & current input |
| DISPLAY | 4 digits, 7 segment LED single display | | | |
| INPUT TYPE | Thermocouple : J, K, T, R, S, RTD : PT100 Signal inputs (DC) : -5 to 56mV, 0 to 10V, 0/4 to 20mA | Thermocouple : J, K, T, R, S, RTD : PT100 Signal inputs (DC) : 0 to 56mV, 0 to 10V, 0/4 to 20mA | Thermocouple : J, K, T, R, S RTD : PT100 | Signal inputs (DC) : 0 to 10V, 0/4 to 20mA |
| RESOLUTION | TC / RTD : 1 / 0.1, Analog input : 1 / 0.1 / 0.01 / 0.001 | | 1 / 0.1° (Fix 1° resolution for R & S type TC) | Decimal point position selectable : 1 / 0.1 / 0.01 / 0.001 |
| ACCURACY | For TC inputs : 0.25% of F.S. ±1°; For R & S inputs : 0.5% of F.S. ±2° (20 min of warm up time); For RTD input : 0.1% of F.S. ±1°; Cold junction accuracy ± 5°C ; Signal input : ±0.5% of F.S., ± 1 digit | | For TC inputs : 0.25% of F.S. ±1°; For R & S input : 0.5% of F.S. ±2° (20 min of warm up time); RTD input : 0.1% of F.S. ±1° | Signal input : ±0.5% of F.S. ± 1 digit |
| OUTPUT | 2 Alarms : SPDT : 5A @ 230V AC / 24V DC Alarm modes : High, Low, Band, Fail output & fault diagnosis. Hysteresis, Annunciator : Programmable, Reset action : Automatic or latched | | --- | |
| SPECIAL FEATURES | Retransmission output : 0 / 4 to 20mA DC, 0 to 5V DC, 0 to 5 / 10V DC, (Software selectable) RS485 MODBUS RTU protocol (Optional) | | --- | |
| SENSOR SUPPLY | 24V DC, 30mA (Output to power the sensor) | | | |
| SUPPLY VOLTAGE (AC : 50 / 60 Hz) | 90 to 270V AC / DC, 24V DC (Optional) | | 230V AC, ±20% | |

Analog Temperature Controller



TC52
48(W) x 48(H)mm

| | |
|-------------------|--|
| FEATURES | <ul style="list-style-type: none"> • Dial setting • TC input • Single relay output • Easy to use |
| DISPLAY | Dial setting |
| INPUT TYPE | Thermocouple (J) |
| RESOLUTION | Fixed 1° resolution |

| | |
|--|---------------------------------------|
| ACCURACY | Setting : ± 3% of F.S., ±0.5% of F.S. |
| SETPOINT | Single set point |
| CONTROL MODE | Time proportional & ON-OFF |
| CONTROL OUTPUT | SPST : 7A resistive @ 230V AC |
| SUPPLY VOLTAGE (AC : 50 / 60 Hz) | 230V AC |

Ordering information

Temperature Controllers

| PRODUCT CODE | OUTPUT 1 | | OUTPUT 2 | SUPPLY VOLTAGE | CERTIFICATION |
|--------------|----------|-----|----------|--------------------|---------------|
| | RELAY | SSR | | | |
| TC544C | RELAY | SSR | RELAY | 90 to 270V AC / DC | CE |
| TC513BX | RELAY | SSR | --- | 90 to 270V AC / DC | --- |
| TC513BX-CE | RELAY | SSR | --- | 90 to 270V AC / DC | CE |
| TC533BX | RELAY | SSR | --- | 90 to 270V AC / DC | --- |
| TC533BX-CE | RELAY | SSR | --- | 90 to 270V AC / DC | CE |
| TC544B | RELAY | SSR | RELAY | 90 to 270V AC / DC | --- |
| TC544B-CE | RELAY | SSR | RELAY | 90 to 270V AC / DC | CE |
| TC538BX | RELAY | SSR | --- | 90 to 270V AC / DC | --- |
| TC544A | RELAY | SSR | RELAY | 90 to 270V AC / DC | CE |
| TC544A-24V | RELAY | SSR | RELAY | 24V DC | CE |
| TC544A-CU | RELAY | SSR | RELAY | 90 to 270V AC / DC | CE, PA |
| TC244AX | RELAY | SSR | RELAY | 90 to 270V AC / DC | --- |
| TC344AX | RELAY | SSR | RELAY | 90 to 270V AC / DC | --- |
| TC513AX | RELAY | SSR | --- | 90 to 270V AC / DC | CE |
| TC513AX-CU | RELAY | SSR | --- | 90 to 270V AC / DC | CE, PA |
| TC513AX-24V | RELAY | SSR | --- | 24V DC | CE |
| TC533AX | RELAY | SSR | --- | 90 to 270V AC / DC | CE |
| TC233AX | RELAY | SSR | --- | 90 to 270V AC / DC | --- |
| TC333AX | RELAY | SSR | --- | 90 to 270V AC / DC | --- |
| TC203AX | RELAY | SSR | --- | 90 to 270V AC / DC | --- |
| TC303AX | RELAY | SSR | --- | 90 to 270V AC / DC | --- |
| TC303A | RELAY | --- | --- | 90 to 270V AC / DC | --- |

| PRODUCT CODE | OUTPUT 1 | OUTPUT 2 | OUTPUT 3 | COMM. (RS485) | SUPPLY VOLTAGE | CERTIFICATION |
|---------------------|----------|----------|----------|---------------|--------------------|---------------|
| PID500-T-0-0-01 | RELAY | RELAY | RELAY | --- | 90 to 270V AC / DC | --- |
| PID500-T-1-0-01 | SSR | RELAY | RELAY | --- | 90 to 270V AC / DC | --- |
| PID500-T-2-0-00 | 4-20mA | RELAY | --- | --- | 90 to 270V AC / DC | --- |
| PID500-2-0-04 | 4-20mA | RELAY | RELAY | YES | 90 to 270V AC / DC | --- |
| PID500-2-0-04 V2-CE | 4-20mA | RELAY | RELAY | YES | 90 to 270V AC / DC | CE |
| PID500-3-0-00 | 0 - 10V | RELAY | --- | --- | 90 to 270V AC / DC | --- |
| PID500-3-0-00 V2-CE | 0 - 10V | RELAY | --- | --- | 90 to 270V AC / DC | CE |
| PID500-0-0-01 V2-CE | RELAY | RELAY | RELAY | --- | 90 to 270V AC / DC | CE |
| PID500-0-0-01 V2 | RELAY | RELAY | RELAY | --- | 90 to 270V AC / DC | --- |
| PID500-0-0-04 | RELAY | RELAY | RELAY | YES | 90 to 270V AC / DC | --- |
| PID500-0-0-04 V2-CE | RELAY | RELAY | RELAY | YES | 90 to 270V AC / DC | CE |
| PID500-2-0-01 | 4-20mA | RELAY | RELAY | --- | 90 to 270V AC / DC | --- |
| PID500-2-0-01 V2-CE | 4-20mA | RELAY | RELAY | --- | 90 to 270V AC / DC | CE |
| PID500-1-0-01 | SSR | RELAY | RELAY | --- | 90 to 270V AC / DC | --- |
| PID500-1-0-01 V2-CE | SSR | RELAY | RELAY | --- | 90 to 270V AC / DC | CE |
| PID330-2-0-04 | 4-20mA | RELAY | RELAY | YES | 90 to 270V AC / DC | --- |
| PID330-0-0-01 | RELAY | RELAY | RELAY | --- | 90 to 270V AC / DC | --- |
| PID110-2-0-04 | 4-20mA | RELAY | RELAY | YES | 90 to 270V AC / DC | --- |
| PID110-0-0-01 | RELAY | RELAY | RELAY | --- | 90 to 270V AC / DC | --- |
| PR502-0-0-1 | RELAY | RELAY | --- | YES | 90 to 270V AC / DC | CE |
| PR502-2-0-0 | 4-20mA | RELAY | --- | --- | 90 to 270V AC / DC | CE |

| PRODUCT CODE | OUTPUT 1 | | OUTPUT 2 | SUPPLY VOLTAGE | CERTIFICATION |
|----------------|----------|-----|----------|--------------------|---------------|
| | RELAY | SSR | | | |
| DTC503 | RELAY | --- | --- | 90 to 270V AC / DC | --- |
| DTC231 | RELAY | --- | --- | 90 to 270V AC / DC | --- |
| DTC331 | RELAY | --- | --- | 90 to 270V AC / DC | --- |
| PID528-1 | RELAY | --- | RELAY | 90 to 270V AC / DC | --- |
| PID528-1 V2-CE | RELAY | --- | RELAY | 90 to 270V AC / DC | CE |
| DTC204A-2 | RELAY | SSR | RELAY | 90 to 270V AC / DC | --- |
| DTC324A-2 | RELAY | SSR | RELAY | 90 to 270V AC / DC | --- |
| TC52-400-J-230 | RELAY | --- | --- | 230V AC | --- |

Cooling Controllers

| PRODUCT CODE | OUTPUT | | SUPPLY VOLTAGE | CERTIFICATION |
|-----------------|----------------|--------------|--------------------|---------------|
| | CONTROL OUTPUT | ALARM OUTPUT | | |
| CH403A-1-NTC-CE | RELAY (10A) | SSR (12V DC) | 230V AC | CE |
| CH403A-2-NTC-CE | RELAY (20A) | --- | 90 to 270V AC / DC | CE |
| CH403A-3-NTC-CE | RELAY (10A) | RELAY (5A) | 230V AC | CE |
| CH403-1-NTC | RELAY (10A) | SSR (12V DC) | 90 to 270V AC / DC | CE |
| CH403-1-NTC-CU | RELAY (10A) | SSR (12V DC) | 90 to 270V AC / DC | CE, PA |
| CH403-2-NTC | RELAY (20A) | --- | 90 to 270V AC / DC | CE |
| CH403-3-NTC | RELAY (10A) | RELAY (5A) | 90 to 270V AC / DC | CE |

Process Indicators

| PRODUCT CODE | RETRANSMISSION | COMM. (RS485) | SUPPLY VOLTAGE | CERTIFICATION |
|------------------|----------------|---------------|--------------------|---------------|
| PIC152A-VI | Universal | --- | 90 to 270V AC / DC | --- |
| PIC152A-VI-CE | Universal | --- | 90 to 270V AC / DC | CE |
| PIC152A-VI-C-24V | Universal | YES | 24V DC | --- |
| PIC101-N | --- | --- | 90 to 270V AC / DC | CE |
| PIC101N-24V | --- | --- | 24V DC | CE |
| PIC101N-CU | --- | --- | 90 to 270V AC / DC | CE, PA |
| PIC101A-T-230 | --- | --- | 230V AC | --- |
| PIC101A-VI-230 | --- | --- | 230V AC | --- |