



48 x 48mm

Features :

- 4+4 digits, 7 segment LED dual display
- TC / RTD input
- PID / ON - OFF control
- Auto tune / Self tune
- Two set points
- °C / °F selectable
- Field selectable control output (Relay or SSR)
- Auxiliary output : Relay

Display specifications

Display	4+4 digits, 7 Segment LED dual display Height of upper display : 15.3mm Height of lower display : 8mm
LED indication	1. Output 1 ON T : Auto tune 2. Output 2 ON S : Dwell timer

Input specifications

Inputs	Thermocouple (J, K, T, R, S) / RTD (PT100)
Resolution	0.1 / 1° for TC / RTD inputs (fixed 1° for R & S type TC input)
Indication accuracy	For J, K & T inputs : 0.25% of F.S. $\pm 1^\circ$ For R & S inputs : 0.5% of F.S. $\pm 2^\circ$ (20 min of warm up time for TC inputs) For RTD inputs : 0.1% of F.S. $\pm 1^\circ$ (F.S. = Full scale)
Temperature unit	°C / °F selectable
Input filter (FTC)	0.2 to 10.0sec
Sampling time	250 ms

Output specifications

Control output (Relay or SSR user selectable)	
Relay contact (SPST)	5A resistive @ 250V AC / 30V DC
SSR drive (Voltage pulse)	12V DC, 30 mA
Auxiliary output	
Relay contact (SPST)	5A resistive @ 250V AC / 30V DC

Functional specifications

Control action	1) PID Control with auto tuning 2) ON-OFF control
Proportional band (P)	1.0 to 400.0°
Integral time (I)	0 to 9999 sec
Derivative time (D)	0 to 9999 sec
Cycle time	0.1 to 99.9 sec
Hysteresis width	0.1 to 99.9°
Manual reset value	-19.9 to 19.9°
Heat-cool	
Control action	PID
Proportional band-cool	0.0 to 400.0°
Cycle time-cool	0.1 to 99.9 sec
Dead band	Programmable from set point low limit to set point high limit.
Settings for alarm output	
Modes	Deviation, Absolute
Hysteresis	0.1 to 99.9°

Auxiliary supply specifications

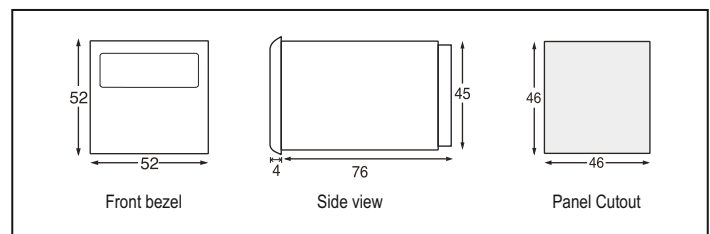
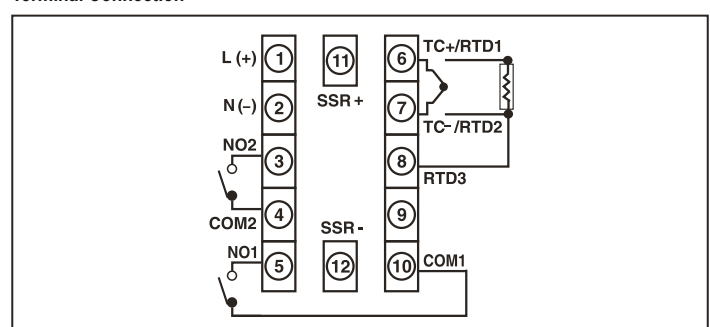
Supply voltage	85 to 270V AC / DC (50 / 60Hz)
Power consumption	6 VA max @ 230V AC

Environmental specifications

Temperature	Operating : 0°C to 50°C Storage : -20°C to 75°C
Humidity (non - condensing)	95% RH

Mechanical specifications

Mounting	Panel
Weight	116 gms

Dimension (All are in mm)**Terminal Connection**

Compliance

Applicable EMI / EMC standards		
Product standard : IEC 61326-1		
Category		Standards compliance
ESD immunity	IEC 61000-4-2	Level III
Surge immunity	IEC 61000-4-5	+/- 2 kV common mode, +/- 1 kV differential mode
Radiated susceptibility	IEC 61000-4-3	Level III, 80 to 1000MHz Level II, 1.4GHz to 2GHz Level I, 2GHz to 2.7GHz
Conducted susceptibility	IEC 61000-4-6	Level II
Voltage dips and interruptions	IEC 61000-4-11	Dips : 0% residual voltage / 1 cycle (Criteria B), 40% residual voltage / 10 cycles 50Hz / 12 cycles 60Hz (Criteria C) 70% residual voltage / 25 cycles 50Hz / 30 cycles 60Hz (Criteria C) Interruptions : 0% residual voltage / 250 cycles 50Hz / 300 cycles 60Hz (Criteria C)
Conducted emission	CISPR-11	
Radiated emission	CISPR-11	
Electrical fast transient	IEC 61000-4-4	Level III

Ordering information

Product code	Output 1		Output 2	Supply voltage	Certification
TC544C	RELAY	SSR	RELAY	85 to 270V AC / DC	CE

Accessories (Optional)

Standard SELEC accessories that can be used with this product.

Adapter plate

- 1) AP7248 : Plastic adapter plate, used to mount 1/16 DIN (cutout size 48 x 48) Instrument into existing (72 x 72) cutout size.
- 2) AP9648 : Plastic adapter plate, used to mount 1/16 DIN (cutout size 48 x 48) Instrument into existing (96 x 96) cutout size.
- 3) AP4896-4848-G-C : Plastic adapter plate, used to mount 1/16 DIN (cutout size 48 x 48) Instrument into existing (48 x 96) cutout size.

Mounting accessories (Supplied with units)

For 48 X 48 Collar clamp ACL4802

Input sensor ranges

Sensor type		Resolution	Ranges	
			1	0.1
PT100	°C		-150 to 850	-150 to 850
	°F		-238 to 1562	-199 to 999
J	°C		-199 to 750	-199 to 750
	°F		-328 to 1382	-199 to 999
K	°C		-199 to 1350	-199 to 999
	°F		-328 to 2462	-199 to 999
T	°C		-199 to 400	-199 to 400
	°F		-328 to 750	-199 to 750
R & S	°C		0 to 1750	N/A
	°F		32 to 3182	N/A

Independent Downloader module (IDM)

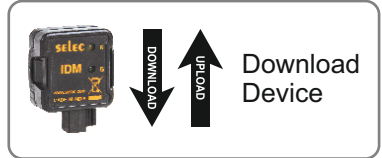



Diagram illustrating the IDM Level operations:

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graph TD
    subgraph IDM_Level [IDM Level]
        direction TB
        ID[ID]
        UP[UP]
        DL[DL]
        DS[DL]
        EF[EF]
        ID -- "(Blinking)" --> UP
        UP -- "Key" --> DS
        DS -- "Key" --> ID
        ID -- "Key" --> DL
        DL -- "Key" --> DS
        DS -- "Key" --> EF
        EF -- "Key" --> DS
    end

```

The diagram shows the sequence of operations for the IDM Level. It starts with the 'ID' (Independent Downloader Module) state, which is indicated by a blinking display. Pressing the 'UP' key initiates an upload from the product to the IDM. Pressing the 'DL' key initiates a download from the IDM to the product. Pressing the 'EF' key indicates the operation was successful, while pressing the 'DL/EF' key indicates the operation was unsuccessful.

Display	Parameter Description
ID	Independent Downloader Module
UP	Upload from product to IDM
DL	Download from IDM to product
DL	Operation Successful
EF	Operation unsuccessful