X1/X3

- HEAT-COOL TEMPERATURE CONTROLLERS
- DOUBLE ACTION CONTROLLER WITH ANALOGUE OUTPUT

FEATURES

DISPLAY	X1	X3
Dual	Main display: 4 green digit, h 10 mm Secondary display: 4 green digit, h 9 mm + 11 LEDs	Main display: 4 green digit, h 10 mm Secondary display: 4 green digit, h 9 mm + 16 LEDs,
INPUTS		
Universal	Thermocouples: L/J (0... +600°C / 32... +1112°F), T (-200...+400°C / -328...+752°F), K (0...+1200°C / 32...+2192°F), S/R (0... +1600°C / 32...2912°F) Thermoresistances: PT100 connection with 2 or 3 wires (-200... +600°C / -328... +1112°F) Linear signals: 0/10... 50 mV; 0/4...20 mA Infrared sensors or special ranges (custom)	
Accuracy	0.25% ±1 digit (for thermoelements); 0.1% ±1 digit (for mA and mV)	
Auxiliary input	Non isolated remote Set Point: current 0/4... 20mA or voltage 1... 5/ 0... 5/ 0... 10V Current Transformer for Heater Break function	
Digital inputs	--	3
OUTPUTS		
Up to 5	OUT 1: Relay, NO, 2A/250Vac (4A/120Vac) or TRIAC 1A/250Vac OUT 2: Relay, NO, 2A/250Vac (4A/120Vac) or TRIAC 1A/250Vac OUT 3: Relay,SPDT, 2A/250Vac (4A/120Vac) OUT 4: Relay, SPDT, 2A/250Vac (4A/120Vac) or Logic not isolated: 0/5Vdc, ±10% 30mA max. OUT 5: Analogue for Measuring or Set Point retransmission, current: 0/4... 20mA max. 750Ω/10V max.	
Analogue control output	Measuring or Set Point retransmission, current: 0/4... 20mA 750Ω/15V max. or voltage: 0... 1/5/10V 500Ω/20mA max.	
Auxiliary power supply	+18Vdc ±20%, 30mA max. for external transmitter (2, 3 or 4 wires)	
FUNCTIONAL		
Control	PID with overshoot control or ON/OFF single/double action with 1, 2 or 3 alarms	PID with overshoot control or ON/OFF single/double action with 1, 2 or 3 alarms PID for Servomotor control
Alarms	Up to 3	
PID functions	Error dead band, overshoot control, manual reset, cycle time, Control output high limit, Soft-start output valve, output safety value	
Double action (Heat-Cool) with overlap	Dead band, Relative cool gain, cycle time (time proportional output), Cool output high limit For X3 only: Cool output hysteresis	
Servomotor control (without position potentiometer)	--	Motor travel time, motor minimum step
Pre-programmed Set Point	--	1 program, 8 segments 1 initial and 1 end, from 1 to 9999 cycles/continuous cycling
Special functions	Timer (1... 9999s/min), Stand-by Set Point, Start-up, Start-up Set Point	
Tuning	One Shot Tuning	Fuzzy Tuning One Shot
Auto/Man Station	--	Standard with Bumpless function, by keypad digital input or serial communication
Signal retransmission	Measuring or Set Point retransmission	
Serial communication	Isolated RS485 with ModBus-RTU (JBUS) protocol, with 2 wires	
Baud rate	1200, 2400, 4800, 9600 bit/sec, 2 wires	
GENERAL		
Power supply	100... 240Vac (-15... +10%) or 24Vac (-25... +12%) and 24Vdc (-15... +25%) / 50/60Hz	
Power consumption	6VA max.	
Dimensions / Weight	48 x 96 mm - depth 110 mm / 250 g approx.	
Mounting	Flush in panel in 45 x 92 mm hole	
Connections	Screw terminal block M3 for cables with section 1 mm² (18AWG)	
Front protection degree	IP65	
Operating / storage temperature	0... 50°C (32... 122°F) / -20...+70°C (-4... 158°F)	
Operating humidity	5... 95% RH without condensation	
Conformity	EN 61010-1	

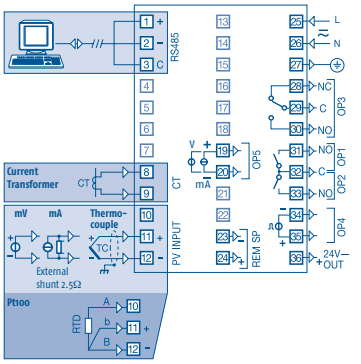
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

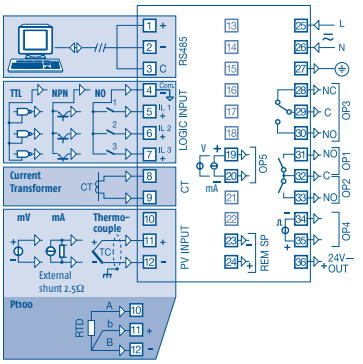
X1 / X3	CODE
POWER SUPPLY	
100... 240 Vac/Vdc	3
24 Vac/Vdc	5
OUT 1, OUT 2, OUT 3 AND OUT 4	
Relay-Relay-Relay-Voltage for SSR driving	1
Triac-triac-Relay-Voltage for SSR driving	5
Relay-Relay-Relay-Relay	9
SERIAL COMMUNICATION	
Not available	0
RS485	5
OPTIONS	
Not available	0
Servomotor (X3 only)	2
Retransmission + Remote Set Point (X1 only)	5
Analogue Output + Remote Set Point (X3 only)	5
Servomotor + Analogue Output + Remote Set Point (X3 only)	7
SPECIAL FUNCTIONS	
Not available	0
Start-up + Timer	2
1 Program 8 segments (X3 only)	3
INSTRUCTION MANUAL	
Italian/English	0
Not available	9
FRONT FRAME COLOUR	
Dark grey	0
Dark grey + shunt 0.1%	2
SPECIAL EXECUTION	
Not available	0
Tropicalized	3

CONNECTIONS

X1

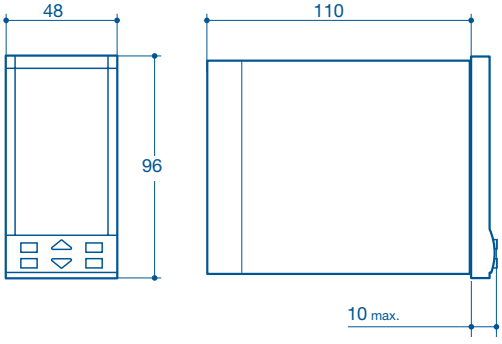


X3



DIMENSIONS

X1 / X3



The dimensions are expressed in mm

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