## 🚈 🤇 🧲 CP-TC-5 🗖

## Application

CP-TC-5 was designed for control panel installation and due to its very small size it allows an optimal use of the available space. The crucial difference to model CP-TC-1 is the option of two separate temperature sensor inputs. Thus, it is possible to process two different temperature points in one device. 8A switching power, extended power range, multi sensor input, display showing nominal and actual value, 2 point/PID-control, signal relay and analog outputs are only some of the advantages of this controller. Moreover, a time-saving transmission of parameters to other devices is possible via an interface and an optionally available memory module.

Circuit diagram

12V 30mA +VDC SSR RS485-RS485+

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General information		
Display:	Actual value display 4 digit, height of digits 12,7mm Set point display 4 digit, height of digits 7,5mm	
Operating environment:	Operating temperature Humidity	045°C 3595%
Protection class:	IP65, front side with seal (IP54 without seal) IP30, connection area	
Material:	Polycarbonate, UL94V0 self-extinguishing	
Weight:	240g	
Dimensions:	Front dimension: [72x72x Panel cut-out: [66.5x66	:99]mm [width x height x depth] 5.51mm [width x height]

Electrical properties

Analog inputs: two independent inputs	Thermocouples: K, J, S, R (temperature compensation between 050°C at clamping units) Resistor sensor: PT100, PT500, PT1000, Ni100, PTC1K, NTC10K Standard input: 010V, 020mA, 420mA, 040mA
Measuring tolerance:	All inputs ±0,2%, ±1 digit
Outputs:	Relay changeover 1x8A/250V, normally open contact 1x5A/250V (configurable in connection with the three possible set points)
Continuous output:	SSR output 30mA/12V (also configurable as additional alarm output)
Interface:	Modbus RS485, parameter interface for easy transmission of the parameters to any number of controller
Power supply:	24230V AC or DC $\pm$ 15% 50/60Hz (extended power range input with one device)
Power consumption:	5VA
Clamps:	maximum 1,5mm <sup>2</sup>

Software properties		
Control algorithm:	P, PI, PD and PID, as well as on-off with hysteresisProportional band:09999°C or °FIntegral time:0,0999,9sDerivative time:0,0999,9s	
Limiter function:	The controller can work as limiter, manual reset possible via front keys, storage of actual state despite voltage interruption	
Software functions:	Autotuning of the parameters, adjustable alarm values, keylock and lock of parameter levels via password, four set points possible, heating and cooling mode etc.	

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