

Exhaust Air Temperature Control Set

Exhaust air control for performance-related air volume control

For providing infinitely variable UV lamp output, the exhaust air volume required for the UV lamp must be in a direct relationship with the lamp output. The exhaust control system regulates this exhaust air volume automatically. The complete set is designed in such a way that neither the installer or the operator needs to carry out any more measurements, parameterisation or programming work. This makes both the installation and the initial commissioning very easy and safe.



The complete set comprises:

- Temperature sensor PT 100, cable included (1)
- Electronic controller (programmed and ready for connection) for front-panel mounting, 45 x 45 mm (2)
- Throttle valve including mounting accessories (3)
- Motorised throttle valve, DC 24 V (4)
- Hose-clamps (5)
- 2 set point settings are possible (operation / stand-by)



The control is based on the measurement of the exhaust air temperature. The temperature is measured at or near the reflector unit and is transmitted to an electronic controller. This controller has been pre-programmed and only needs to be connected to the temperature sensor and to a 24 V DC power supply. The control variable resulting from this is transmitted to the motorised 24 V DC drive that adjusts a mechanical throttle valve. This results in a change in volume of the exhaust air. Therefore the exhaust air fan itself (not included in the exhaust air temperature control set) can always operate at full power and does not need to have a controller of its own. This eliminates the need for a frequency converter. Two set point settings are possible, e.g. the first for the temperature during operation and the second one for the stand-by phase. The second set point setting is activated by a dry contact.

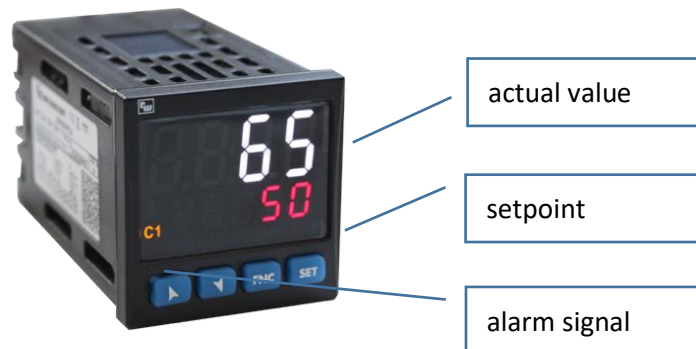
Exhaust air control					
Diameter of the throttle, mm	Ø 80	Ø 100	Ø 125	Ø 140	Ø 160
Art. No. (complete set)	025 10042 0000	025 10398 0000	025 10403 0000	025 10407 0000	025 10418 0000
Art. No. (set without PT 100 and PT 100 cable)	025 10408 0000	025 10041 0000	025 10409	025 10410 0000	025 10419 0000
valve (variant)	Please specify the diameter when ordering.				
Power supply	DC 24 V (customer)				
Power consumption of drive and electronic controller	approx. 6 W				
Installation height (throttle and one adapter sleeve)	approx. 240 mm				
Cable length for PT100	2 m (only exhaust air control sets that include a PT100)				
Protection class	IP 20 (box and terminal), IP65 front panel (with gasket)				
Weight controller	approx. 185 g				
Parameters controller	The controller is programmed with all parameters which cover typical cooling situations.				

Notes: Both the 24 V DC power supply and the exhaust air fan are not included in delivery of the exhaust air temperature set. If ordered in combination with a reflector unit, the temperature sensor (PT100), the throttle valve and the motorised drive can be preassembled on request without extra charge.

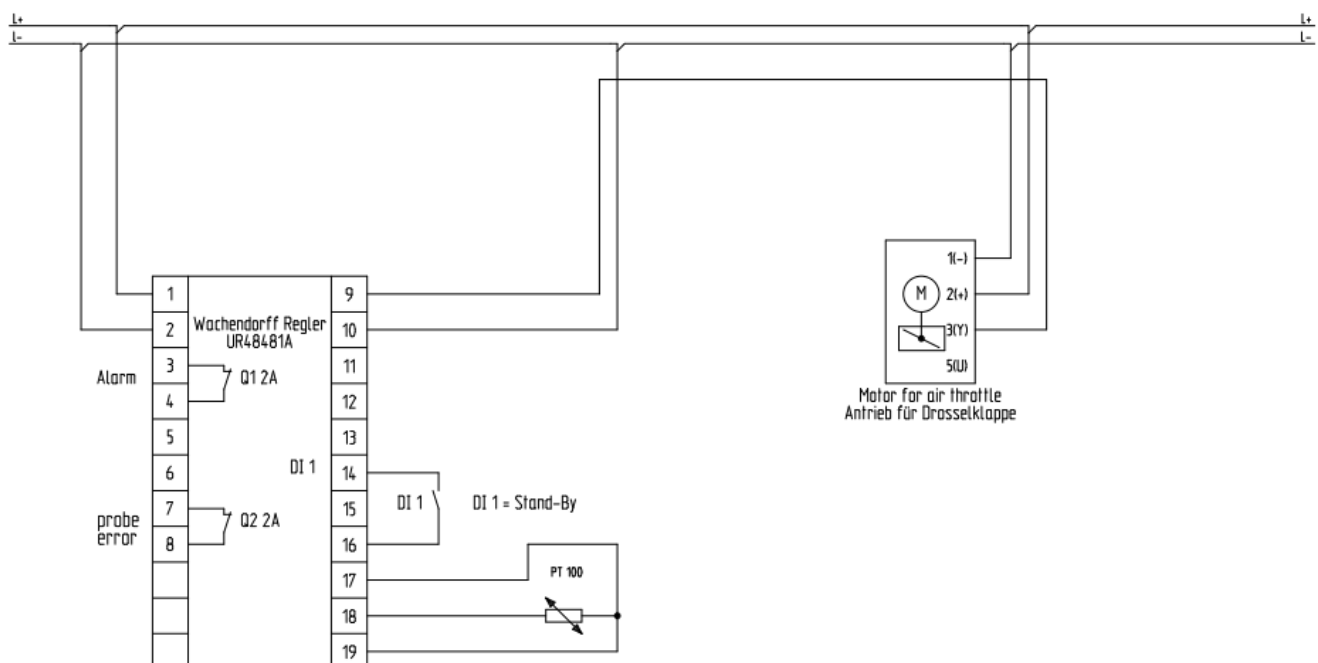
The pre-programming of the controller carried out at the factory is appropriate for the controlling of the air cooling for reflector units type Aachen, Köln, Ellwangen and Koblenz which have a built-in PT100 temperature sensor. If the PT 100 is to be installed in another position, the customer must arrange for the adaptation of the parameters (e.g. temperature switching points). This can be done via the buttons or via an Android app and NFC connection (for detailed information see separate instruction manual, please).



Display:



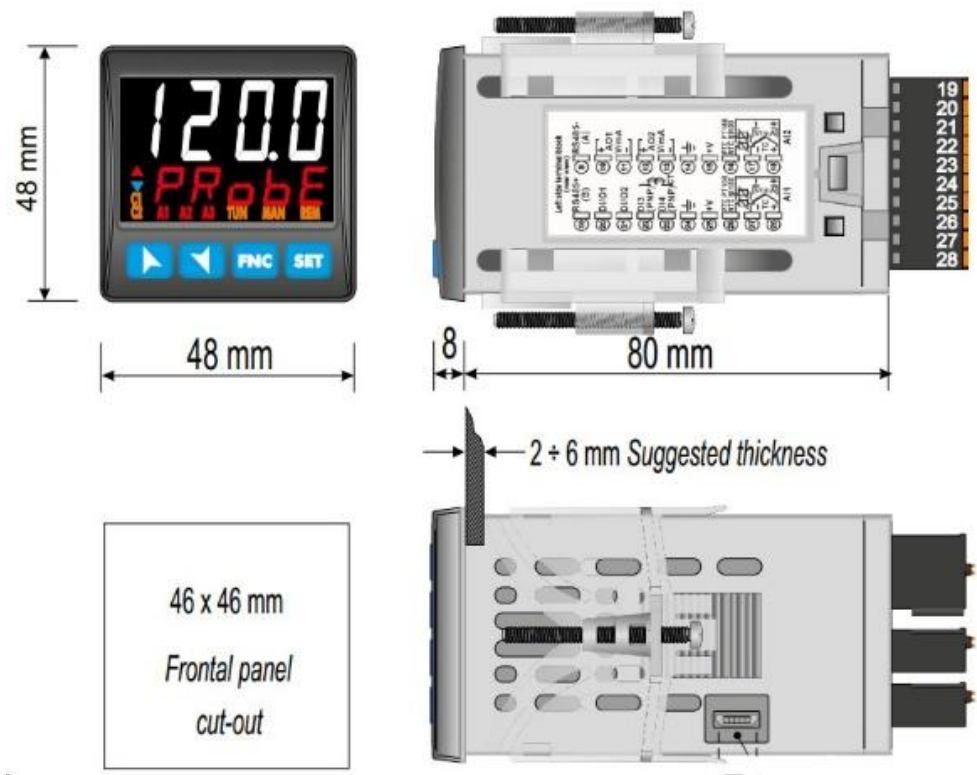
Circuit diagram:



Connections:

- 1, 2: Supply DC 24 V (1: +, 2: -)
- 3, 4: Relay output Q1 (break contact):
Fault alarm when exceeding the max. exhaust air temp., max. 230 V, 2A (resistive)
- 7,8: Relay output Q2 (break contact):
Fault alarm in case of interruption (e.g. cable break) or short circuit of the connection to PT 100.
In case of fault the throttle valve opens completely, max. 230 V, 2A (resistive)
- 9: Analog output (9: +, 10: -) for air throttle motor, DC 0...10 V
- 14, 16: Digital input (DI 1): close the contact to indicate to the controller stand-by (Shutter closed)
- 17, 18, 19: PT100; if 2-wire-PT100: bridge pin 17 and 19

Dimensions and installation:



How to mount the motor on the throttle valve:

