

# Control module

UNIcon universal control module for pressure/temperature with control of “Adiabatic” moistening stages.



The UNIcon control module controls fans mounted on coolers, for example, dependent on pressure or temperature. For this, a 0-10 V signal is output.

To additionally increase the cooling performance (in peak load times), the control module can switch on up to three moistening stages by relays. Usually these relays activate servo motors which open valves and ensure moistening of the air sucked in by the cooler. The air can be cooled additionally by evaporation and ensures and increase in the cooler performance.

The UNIcon also controls the pump for the water supply line, closes or opens valves for the frost protection function (close main supply line, open valves for draining).

## Input for sensors or speed settings through



Setting of the desired speed through device or by external default, e.g. 0...10 V

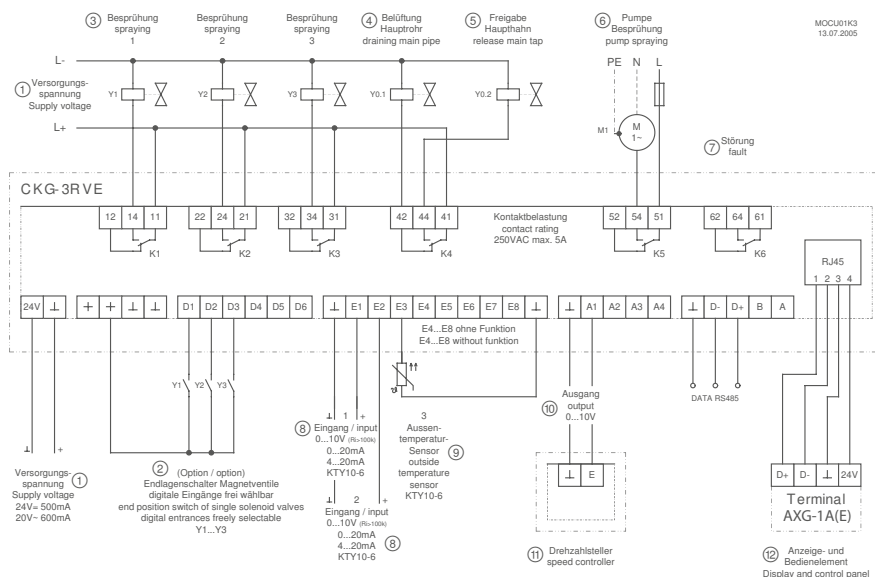


Connecting pressure sensors (refrigeration), e.g. type MBG.. sensors, measuring range 0...30 bar, 0...50 bar



Connection of thermistors, e.g. sensors type TF.. e.g. active sensor type MTG..

## Connection diagram



- ① Supply voltage
- ② Option: Limit switches solenoid valves, digital inputs freely selectable
- ③ Spraying
- ④ Venting
- ⑤ Enable supply cock
- ⑥ Pump spraying
- ⑦ Fault
- ⑧ Input
- ⑨ Outdoor temperature sensor
- ⑩ Output
- ⑪ Speed controller
- ⑫ Display and operating element

Interference emission according to EN 61000-6-3 (domestic)  
Interference immunity according to EN 61000-6-2 (industrial)

## Equipment/properties

### LC multi-function display with plain text display:

Different menu languages can be selected

### Simple start-up by operating modes:

You can choose between different operating modes, for example, external activation, temperature control, pressure control condensers.

### Simple programmability:

Typical settings for the activation of fans and activation of the spraying stages can be made easily.

### 3 analog inputs for sensors or setting signals:

Analog input E1 and E2: Setting by operating modes or manually programmable, e.g. 0-10 V, 0-20 mA, 4 – 20 mA.

For input E2, special functions (external manual mode, external setpoint, measurement value for limit messages) can be programmed.

Input E3: To measure the outdoor temperature (the CKE-3ARV includes a TFR thermistor for this). Relay switching points for frost protection can be set depending on the outdoor temperature

### 6 digital inputs D1 to D6:

Setting by operating modes or manually programmable. Limit switches for valves, enable, switch over setpoint 1 or 2, external fault, control function inversion, output limitation, manual mode.

### 2 analog outputs A1 and A2:

Output A1: 0-10 V for activation of fans, e.g. by external speed controller (e.g. Fcontrol frequency inverter).

Output A2 manually programmable, e.g. 0-10 V proportional modulation, constant voltage, proportional input signal.

### 2 digital outputs (relays) K1 and K2:

Setting by operating modes or manually programmable. Spraying stages 1 / 2 / 3, activation supply cock/pump (frost protection), operating indication, fault indication, limits, external fault at digital input.

Built-in module CKG-3RVE:

- Display and operating terminal AXG-1AE, Article No. 349008 for control panel installation.
- Alternative AXG-1A, Article No. 349008 in IP54 housing for wall mounting.
- STEP POWER power supply unit Article No. 380067 for DIN rail mounting
- Thermistor IP54 for measuring the outdoor temperature TFR, Article No. 00089846.

Information

Motor protection

Fcontrol, lcontrol

UNIcon

Acontrol, Ucontrol, Dcontrol

Transformer

System components

Appendix

UNIcon with control of „Adiabatic“ moistening stages 1~ 100...240V 50/60Hz						
Type	Article no.	Max. heat dissipation W	Maximum ambient temperature °C	Protection class	Weight kg	Dimensions (W x H x D) mm
CKE-3ARV	320087	30	40	IP54	3.26	270 x 323 x 154

UNIcon with control of „Adiabatic“ moistening stages DC 24 / AC 20 V						
Type	Article no.	Max. heat dissipation W	Maximum ambient temperature °C	Protection class	Weight kg	Dimensions (W x H x D) mm
CKG-3RVE	320017	10	40	IP20	0.40	157 x 111 x 59