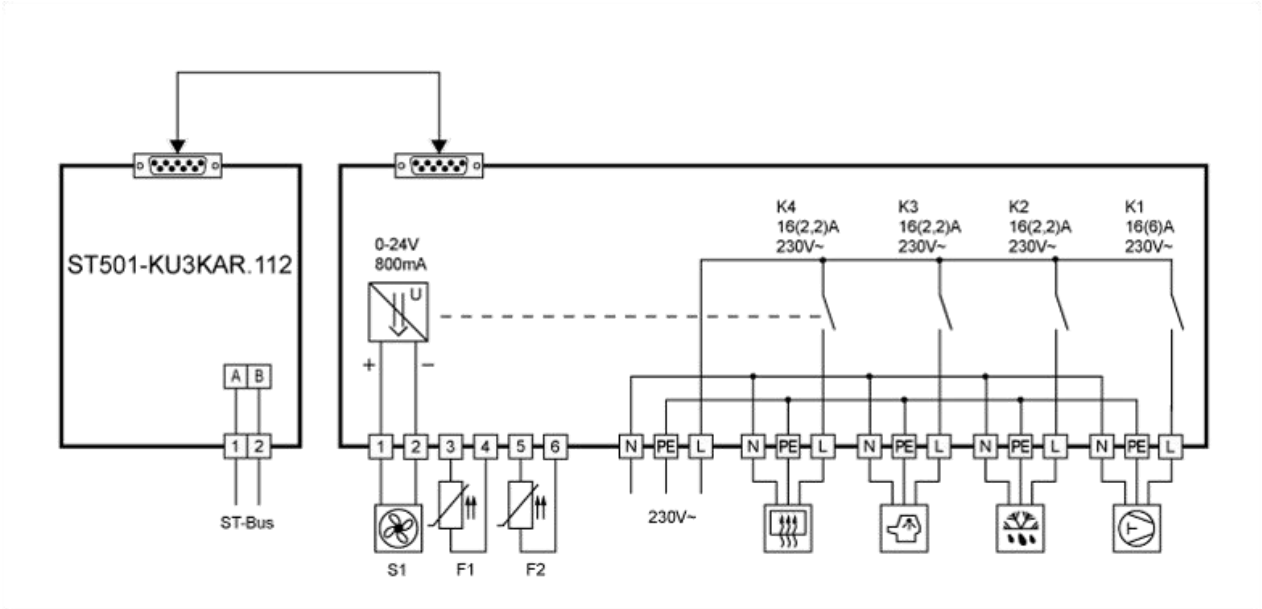
ST501-KU3KAR.112FP

Controller for cooling applications

Order number 900390.008

Wiring diagram



Product description

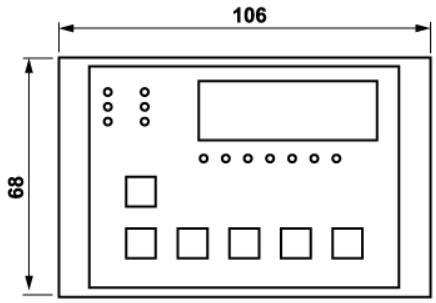
The microprocessor-controlled controller ST501-KU3KAR.112FP consists of a service and a separate power pack plate and is used for thermostatic temperature regulation in simple refrigerating plants. It is supplied with 230V AC and has four relay outputs as well as an exit for a DC voltage fan.

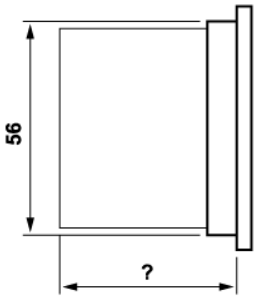
The relays can be used for different functions, e.g. for a compressor, a defroster, an alarm relay, etc. (see parameters U1-U4). The two resistance sensors seize the refrigerating chamber temperature and the evaporator temperature.

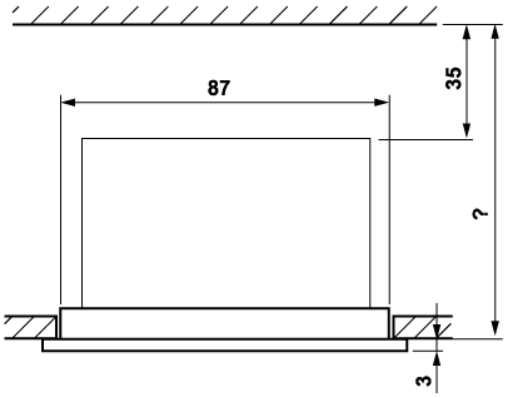
Networking of the controller takes place via the ST-Bus interface

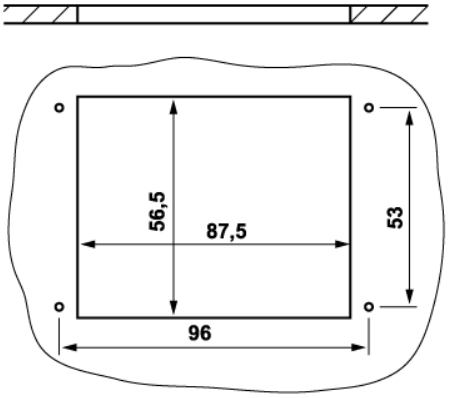
Sensor: PTC
Range: -50...150°C
Front size: 106mm x 68mm
Panel cut-out: 87.5mm x 56.5mm
Tightness: Front IP65
Connector: plug and socket

ST 501 ...









Technical data of ST501-KU3KAR.112FP

Measuring input

F1: Temperature sensor, refrigerating chamber
F2: Temperature sensor, evaporator
Measuring range: PTC (KTY81-121) -50°C...+130°C
PT1000 -99°C...+300°C
NTC -40°C...+105°C
Pt100 -80°C...+400°C (line resistance < 1 Ohm)
Accuracy: ±0.5K ± 0.5 % at 25°C, without sensor
±1K ± 0.5 % of scale range (0 – +55°C), without sensor

Outputs

K1: Relay, 30(6)A 250V~, normally-open contact, function see U1,
permanent current max. 16(6)A, limited by connectors and/or conductive strips
K2: Relay, 16(2.2)A 250V~, normally-open contact, function see U2
K3: Relay, 16(2.2)A 250V~, normally-open contact, function see U3
K4: Relay, 16(2.2)A 250V~, normally-open contact, fan function
S1: voltage output for DC-fan: 0..24V, max. 800mA (corresponds 20W)

Display

One 3-digit LED-Display, height 13 mm, for temperature display
Three LEDs, diameter 3mm, for status display of the outputs

ST-Bus communication interface

Interface driver: RS485, not galvanically separated
The network has to be installed in lines topology and terminated with a 120 Ohm resistance on each side. In case of networking always connect port “A” with port “A” and port “B” with port “B”. Crossing over is not permissible.

Power supply

230V 50/60Hz

Connectors

Cage clamp 4 x 3-pole, for cable up to 2.5mm²
Cage clamp 6 x 2-pole, for cable up to 1.5mm²

Ambient conditions:

Storage temperature: -20...+70°C
Operating temperature: 0...+55°C
Relative humidity: max. 75% without dew

Weight

ca. 520g, without sensor

Enclosure

Front IP65, IP00 from back

Installation data

The unit is to be installed in an instrument panel.

Front size	106 x 68mm
Panel cut-out:	87.5 x 56.5 mm
Installation depth	ca. 50mm
Power pack plate:	100 x 160mm