Technical Datasheet

Fume Cupboard Controller iCM500

SCHNEIDER
SCHAKO Group

1 Technical Data

General	
Operating temperature	+15 °C to +40 °C
Storage temperature	-20 °C to +65 °C
Recovery time	5 to 10 s
Humidity	≤ 80 % (relative, non-condensing)
Overvoltage category	II
Degree of contamination	2
Protection Class	Class III
Environment	dry indoor areas
Altitude	≤ 2000 m above sea level
Housing	
Ingress Protection Rating	IP 20
Material	Galvanized sheet steel, coated on one side
Color	similar RAL 9002
Dimensions (L × W × D)	158 × 84 × 42 mm
Weight	ca. 250 g
Low-voltage power supply input X1	
Input voltage range	22,8 to 26,4 V DC
Rated current	1,25 A
Rated power	30 W
Connection type	Socket for hollow plug 5,5 × 2,5 mm
Fusing (internal)	Short circuit, overload, overvoltage
Hat rail power supply unit (optional)	
Type	Mean Well HDR-30-24
Input voltage range	85 to 264 V AC
Frequency range	47 to 63 Hz (AC)
Rated current	1,5 A
Connection type	Screw terminals
Wire cross-section (rigid/flexible)	0,08 to 1,5 mm²
Fusing (internal)	Short circuit, overload, overvoltage
Plug-in Power Supply Unit (optional)	
Input voltage range	80 to 264 V AC
Frequency range	47 to 63 Hz (AC)
Efficiency	88,5 %
AC current	1 A / 115 V AC 0,6 A / 230 V AC
Output voltage	23,52 to 24,48 V DC

Rated current	1,25 A
Rated power	30 W
Peribus X2	
Quantity	1
Output power (max.)	1,2 W
Airflow Sensor AFS100 X3	
Measuring principle	dynamic, hot-wire anemometric principle
Measuring range	0.2 to 1.0 m/s
Response time	< 100 ms
Relay Outputs X4	
Quantity	2
Contact type	Changeover contact (SPDT)
Switching voltage (max.)	24 V AC / DC
Continuous current (max.)	3 A, external protection required
Wire cross-section (rigid/flexible)	0,08 to 1,5 mm²
Digital Inputs X4	
Quantity	2
Input voltage	24 V AC / DC
Input current (max.)	≤ 10 mA
Switching threshold (active)	1,2 V to 28 V DC
Switching threshold (inactive)	0 V to 1,2 V DC
Auxiliary voltage (internal)	24 V DC for external switching contact
Fusing (internal)	Short circuit, overload, overvoltage
Wire cross-section (rigid/flexible)	0,08 to 1,5 mm²
Differential Pressure Sensor	
Quantity	1
Pressure range	10 bis 300 Pa
Response time	< 10 ms
Sensor burst pressure	0,3 bar
Relay Output for Fume Cupboard Light X5	
Quantity	1 relay for fume cupboard light
Contact type	Normally open contact (NO contact)
Switching voltage (max.)	230 V AC
Continuous current (max.)	3.15 A
Fusing (internal)	3.15 A
Analog Output X6	
Quantity	1
Output voltage	0 V to 10 V DC ± 1%, freely programmable
Resolution	10 bit

Load resistance	$R_L \geq 1000\ \Omega$
Fusing (internal)	Short circuit, overload, overvoltage
Wire cross-section (rigid/flexible)	0,08 to 1,5 mm²
High-speed Modulating Damper Actuator X7	
Quantity	1
Nennspannung	24 V AC / DC
Torque	4 Nm, optionally 8 Nm
Running time	2.5 s at 4 Nm, 4 s at 8 Nm for 90° rotation
Control signal	Analog, 0(2) to 10 V DC
Feedback	Analog, 0(2) to 10 V DC
Resolution	< 0,5°
RS-485 Interface X8	
Quantity	1
Data rate (max.)	115 kBaud
Protocols	Modbus RTU
Cable	e.g. JY(St)Y 2 × 2 × 0.8 shielded
Position Sensor SPS100 X9	
Measuring principle	static, draw-wire potentiometer
Measuring range	0 to 1000 mm, optionally 0 to 2000 mm
Response time	< 1 ms

Table 1 – Technical Data

2 Terminal Diagram iCM500

X1
Power supply
24 V DC / 1 A / 24 W

X2
RJ12 - 6P6C
Communication interface for SCHNEIDER devices

X3
RJ10 - 4P4C
Communication interface for airflow sensor AFS100

X4
Terminal configuration:
1: Relais 1, NO
3: Relais 1, NC
5: Relais 1, COM
2: Relais 2, NO
4: Relais 2, NC
6: Relais 2, COM
7: DIN 1, DIN -
9: DIN 1, DIN +
8: DIN 2, DIN -
10: DIN 2, DIN +

JP1 JP2 ON JP3 JP4
DIN1 DIN2
Wiring by external potential-free contact (relay) - Default

JP1 JP2 OFF JP3 JP4
DIN1 DIN2
Wiring by external Voltage 24 V AC / DC

X5
Terminal configuration:
1: L
2: L'
Connection with switched phase for the fume cupboard light
X5 L 6 A L 230 V AC PE N 230 V AC L'

X6
Terminal configuration:
1: 0 V to 10 V DC
2: GND
Analogue output for actual value or frequency inverter

X7
Terminal configuration:
1: PGND
2: + 24 V DC / 0.5 A
3: Y-Signal 2 V to 10 V DC
4: SGND
5: U-Signal 2 V to 10 V DC
Connection for actuator

X8
Terminal configuration:
1: D+ / D1 / A
2: D- / D0 / B
3: GND (ISO)
4: SHIELD

JP6 JP5 1 2 3 4 A A B B
RS485 without termination resistor „Standard"

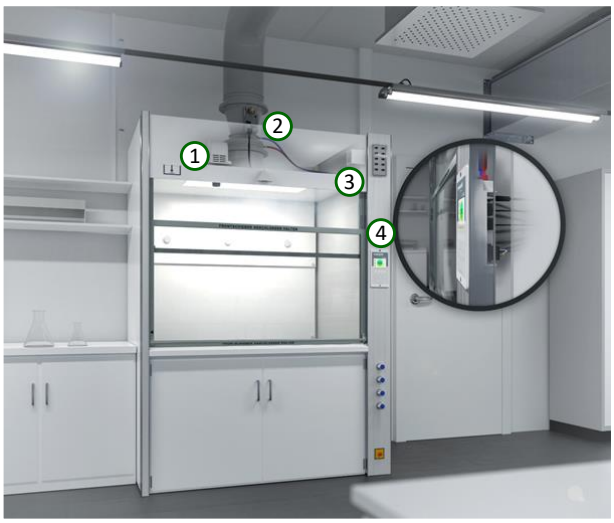
JP6 JP5 1 2 3 4 A A B B
RS485 with a 120 Ω termination resistor without bias voltage

JP6 JP5 1 2 3 4 VCC A A B B GND
RS485 with a termination resistor and bias voltage

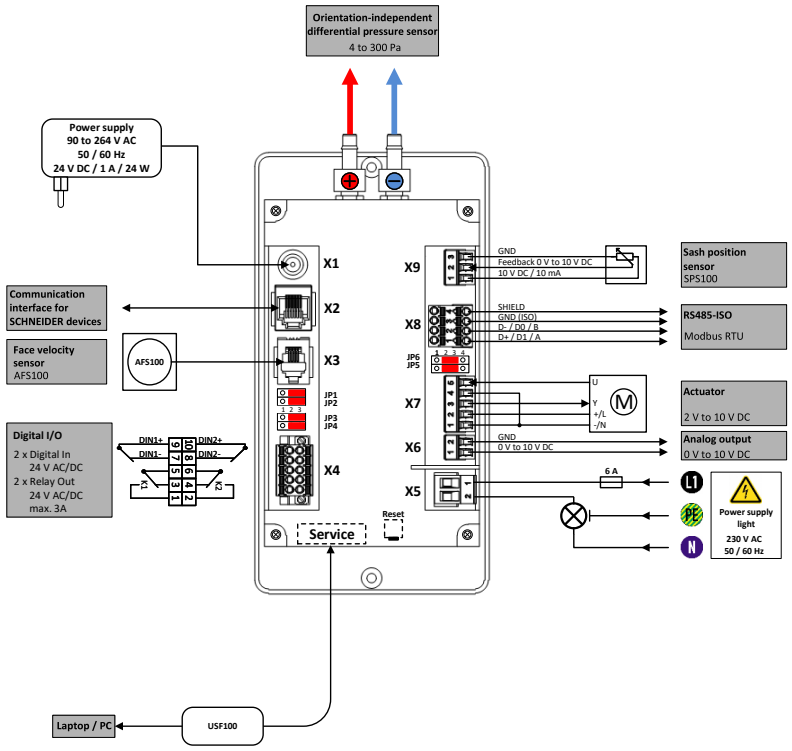
X9
Terminal configuration:
1: + 10 V DC / 10 mA
2: Signal
3: GND
SPS100 1 2 3

Commissioning Instruction:

- The assembly and wiring may only be carried out by trained technician.
- In the case of assembly, wiring and commissioning, the recognized rules of technology, in particular the safty and accident prevention regulations must be observed.
- Observe assembly and operating instructios.



1 Airflow sensor 2 Damper with actuator 3 Sash position sensor 4 iCM500



FUME CUPBOARD CONTROLLER with integrated monitor acc. to DIN EN 14175		
Terminal diagram, complete		iCM500
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The information and data contained in this documentation have been compiled to the best of our knowledge and in accordance with the current state of the art (subject to technical changes). The currently valid version applies. The proven properties of SCHNEIDER products are based on the use of the products recommended in this documentation. Diverging situations and individual cases are not taken into account, so that we cannot assume any warranty and liability.

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Do you have any questions? We look forward to your message:

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