OPA-S
Operation and display for intelligent transmitters

Features

- Display of sensor values and adjustment according to real values not signals.
- Display and reset of minimum and maximum values.
- Password protected programmable configuration parameters
- Available in various designs and materials.

Applications

- Configuration of intelligent transmitters.
- Supervision of critical environments using minimum and maximum memory feature of transmitter.

General Description

The OPA-S is a remote display and operation terminal for intelligent transmitters of the SDA, SDC, SOA, SOC, SRA and SRC series.

Ordering

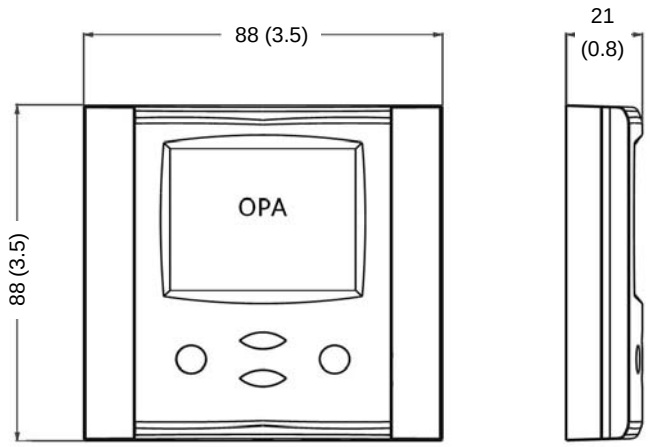
The OPA-S may be used together with the following transmitters

Item Name	Description / Option
SDA-Series SDA-T1, SDA-H1, SDA-H1T1, SDA-H1T SDA-P	 Humidity / temperature transmitters for air ducts Differential pressure transmitter
SDC-Series SDC-T1, SDC-H1, SDC-H1T1, SDC-H1T	 Humidity / temperature transmitters for air ducts
SOA-Series SOA-T1, SOA-H1, SOA-H1T1, SOA-H1T	 Outdoor humidity / temperature transmitters
SOC-Series SOC-T1, SOC-H1, SOC-H1T1, SOC-H1T	 Outdoor humidity / temperature transmitters
SRA-Series SRA-T1, SRA-H1, SRA-H1T1, SRA-H1T	 Indoor humidity / temperature transmitters
SRC-Series SRC-T1, SRC-H1, SRC-H1T1, SRC-H1T	 Indoor humidity / temperature transmitters

Technical Specification

Power Supply	Operating Voltage	5 V DC 5%
	Power Consumption	Max 1 VA
	Electrical Connection	Pre-wired with plug
Communication	Communication Type Cable Type Max Distance	VPP (Vector Proprietary Protocol) Copper wire 4 x 0.8…2.5 mm^2. Unshielded 20 m, Shielded > 50 m
Display (LCD)	Actual values and setpoint Resolution value < 1000 Resolution value > 1000 Digital Signals	4 digits 0.1 1 ON, OFF
Environment	Operation Climatic Conditions Temperature Humidity	To IEC 721-3-3 class 3 K5 0…50 °C (32…122 °F) <95 % r.H. non-condensing
	Transport & Storage Climatic Conditions Temperature Humidity Mechanical Conditions	To IEC 721-3-2 and IEC 721-3-1 class 3 K3 and class 1 K3 -25…70 °C (-13…158 °F) <95 % r.H. non-condensing class 2M2
Communication	Communication Type Cable Type Max Distance	VPP (Vector Proprietary Protocol) Twisted pair 0.5mm^2, max 400 pF capacity Unshielded 20 m, Shielded 50 m
Standards	CE conform according to EMC Standard 89/336/EEC EMEI Standard 73/23/EEC	EN 61 000-6-1/ EN 61 000-6-3
	Product standards Automatic electrical controls for household and similar use Special requirement on temperature dependent controls	EN 60 730 –1 EN 60 730 – 2 - 9
	Degree of Protection	IP30 to EN 60 529
	Safety Class	III
General	Dimensions (H x W x D)	88 x 88 x 21 mm (3.5 x 3.5 x 0.8 in)
	Housing Material	Fire proof ABS plastic (UL94 class V-0)
	Mounting Plate	Zinc coated steel
	Standard Color	White RAL 9003
	Weight (including package)	130 g (4.6 oz)

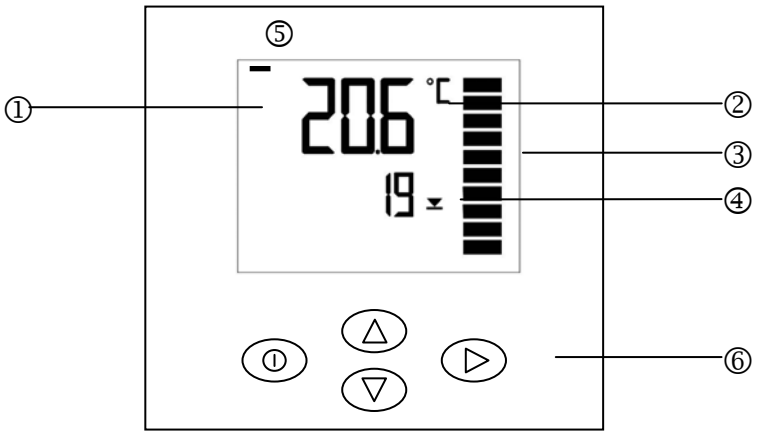
Dimensions



Display and Operation

The OPA-S terminal is designed with a modular casing structure. The user has the choice of a variety of designs and materials. See separate brochure for details regarding different styles, colors and materials of operation terminals.

The operation terminal uses an LCD display and four operation buttons.



Legend:

1. 4-digit display of current value, Minimum, Maximum or control parameter
2. Unit of displayed value, °C, °F, % or none
3. Graphical display of output or input signal with a resolution of 10%
4. 4-digit display of current value or control parameter
5. Left bar = display of minimum value
   Right bar = display of maximum value

6. Buttons for operating the controller:
   LEFT key: Operation mode (On, Off) Not used
   UP key: Display Maximum values, pressing for more than 2 seconds resets Maximum value
   DOWN key: Display Minimum values, pressing for more than 2 seconds resets Minimum value
   RIGHT key: Select transmitter, For transmitters with more than one input.

Operation of the Terminal Unit

Idle display

Used for combination transmitters (Temperature and Humidity, Temperature and Pressure). This display mode is active if no key has been pressed during the previous 30 seconds. The current temperature is displayed in the large digits and the humidity or pressure is displayed in the small digits.

Pressing the RIGHT key will step through available sensor inputs, indicating the current, minimum or maximum value in the large digits and input number in the small digits and the output signal in the vertical bar.

Indication and reset of minimum and maximum values

Activate the desired transmitter for dual transmitter by pressing the RIGHT key. Press UP to display Maximum values, press DOWN key to display minimum values.

Resetting minimum or maximum values: Pressing either UP or DOWN keys for longer than 3 seconds while the minimum or maximum values are displayed.

Error messages

The OPA-S may display the following error condition:

Err1: Communication time out between terminal unit and transmitter. Terminal unit will reset after 10 seconds.

Err2: Temperature sensor faulty. The connection to the temperature sensor may be interrupted or the temperature sensor is damaged. As a consequence the output of this transmitter are switched off.

Installation

1. Install the mounting plate straight to the wall or the flush mounting box. Make sure that the nipple with the front holding screw is facing to the ground. Make sure the screw heads do not stand out more than 5 mm of the surface of the mounting plate.
2. Connect the wires of the terminals to the communication wires according wiring diagram
3. Slide the two latches located on the top of the front part into the hooks of the mounting plate.
4. Lower the front part until located flat on the wall and the mounting plate is not visible anymore. Make sure the connection cable does not get into the way.
5. Tighten the front holding screw to secure the front part to the mounting plate.

Connection to Base Unit

- Max. Distance: 50 m using shielded copper wire
- Always use shielded copper wire if distance > 20 m and electro magnetic interference is present.

Setting of configuration parameters

Intelligent sensors can be adapted to fit perfect into your application. The preparation of the sensing signal is defined by parameters.

The parameters are password protected. The parameters can be changed as follows:

1. Press UP and DOWN key simultaneously for three seconds. The display will indicate CODE.
2. Select a password using UP or DOWN keys. Dial **0009** in order to get access to the configuration parameters. Press the RIGHT key after selecting the correct password.
3. Once logged in, choose IP for input configuration or OP for output configuration using UP or DOWN. Press the RIGHT key after selection.
4. The parameters are now displayed. The small digits show the parameter number, the large one its value.
5. Select the parameters with the UP/DOWN keys. Change a parameter by pressing the RIGHT key. The MIN and MAX symbols show up and indicate that the parameter may be modified now. Use UP and DOWN key to adjust the value.
6. After you are done, press RIGHT or LEFT key in order to return to the parameter selection level.
7. Press the LEFT key again so as to leave the menu. The unit will return to normal operation if no key is pressed for more than 5 minutes.
8. The parameters and its values depend on the transmitter. Please use the respective datasheet for the list of parameters

Electrical connections

Normal cables maybe used for wiring in an EMC-save environment. In an extremely impaired EMC environment use only shielded cables.

The operating voltage must comply with the requirements for safety extra-low voltage (SELV) as per EN 60 730. Connect the cable using the four-pin plug provided.