

Instruction Manual

Digital Display DS 52 in wall housing

Order no. 0500 0007

*for dew point and consumption sensors
of CS Instruments with digital signal
processing (SDI)*



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Introduction

Dear customer,

Thousands of customers buy our high standard products every year. There are a few good reasons for doing so:

- The cost-performance ratio - reliable quality at a fair price.
- We have the ideal solutions for your measuring tasks based on our expert experience gained over 20 years.
- Our high quality standard.
- Of course, our instruments carry the CE symbol required by the EU.
- We issue calibration certificates and hold seminars.
- Also after the purchase we do not leave you out in the cold - we offer a good after sales service.

Our service grants you a fast help.



Measuring instrument conforms with **DIN EN 61326**

1. Safety instructions

Observe measuring ranges of the sensors!

Observe the admissible storage and transportation temperature as well as the permitted operating temperature (e. g. protect the instrument from direct insolation)

Adjustments and calibrations should only be carried out by qualified employees from the measurement and control technology branch.

We offer you to take back the instruments DS 52, which you would like to dispose of.

The manufacturer cannot be held liable for any damage which occurs as a result of non-observance or non-compliance with these instructions. Should the device be tampered with in any matter other than a procedure which is described and specified in the manual, the warranty is cancelled and the manufacturer is exempt from liability.

CS Instruments GmbH offers no guarantee for the suitability for any other purpose and is not liable for errors which may have slipped into this operation manual. CS Instruments GmbH is also not liable for consequential damage resulting from the delivery, capability or use of this device.

Initiation (electrical connection)

When operating electrical instruments it is unavoidable that certain components are energised dangerously. Work at electrical installations or equipment is only allowed to be carried out by electrical technicians or instructed staff under the guidance and supervision of an electrical technician according to the electrical regulations.

Warning

Any non-observance of the warning notes may cause grievous bodily harm or property damages. Qualified staff has to be well familiar with all warnings according to this instruction manual. The correct and safe operation is subject to a proper transport, professional installation and accurate initiation. The following notes on safety are applied in order to stress safety relevant procedures in this instruction manual - every note is marked by a corresponding icon.



This symbol means: **Note!**

"Note" marks activities or procedures which have a fundamental influence on correct operation. Any non-observance may possibly lead to subsequent damages.



This symbol means: **Warning!**

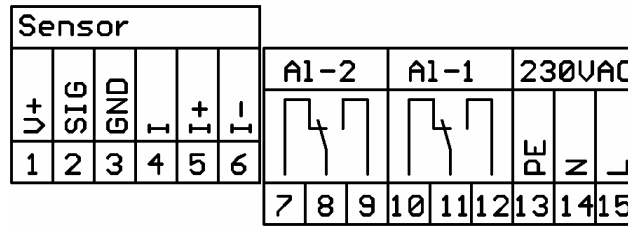
"Warning" indicates activities or procedures which may lead to a safety risk for persons and property damages in case of non-observance.

2. Short-form instruction DS 52 with CS dew point sensors

Power supply and alarm connection:



Attention!
Mains voltage!



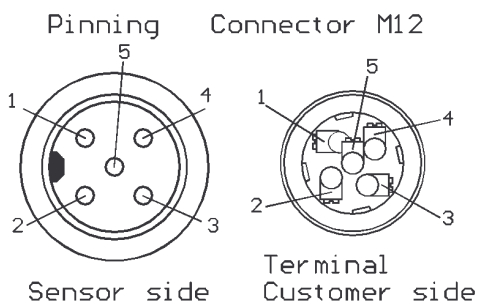
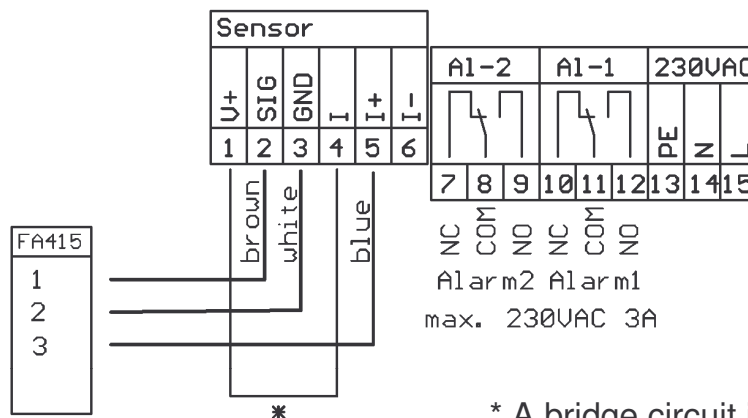
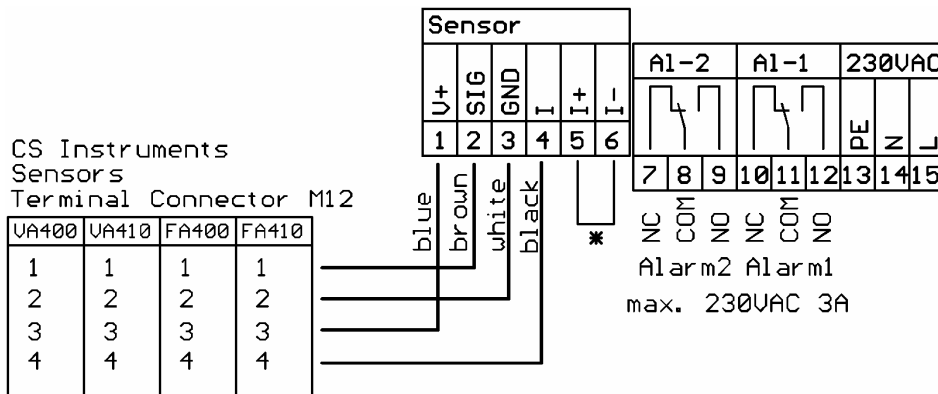
AC Power
230 VAC
50 Hz

NC und COM are closed in case of:

- alarm exceeding
- voltage drop
- sensor break



DS 52 has one sensor input. This sensor input is configured on our premises (according to the customers specification in the order).

In case of digital dew point/consumption sensors of CS (e.g. FA 400, FA 410, etc.) the sensors are connected according to the following wiring schemes.



* A bridge circuit is inserted ex factory . For signal transfer please remove the bridge circuit and attach the connection cables. Attention: Current loop has to be closed!

3. Menu with limited functions (only "adjust alarm threshold")

The operation is effected via 4 keys:  and  as well as in order to access the menu/to confirm the selection and .

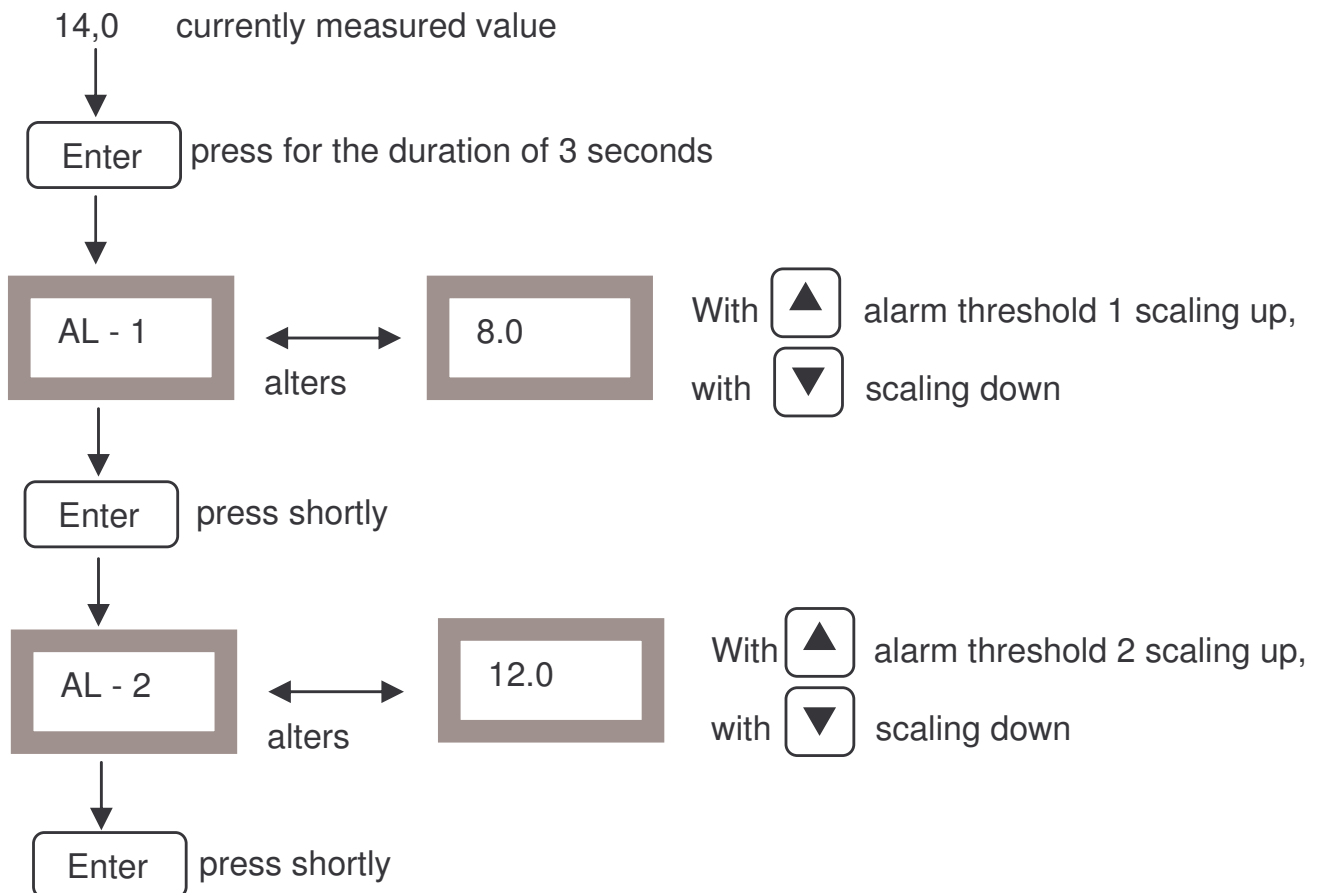
The adjustment of the alarm thresholds is indicated by the example of a connected dew point sensor, however, it applies also to connected sensors with other parameters.

Alarm thresholds are preset on our premises:

In case of CS dew point sensors with measuring range -20...+50 °Ctd: Alarm 1: 8 °Ctd, Alarm 2: 12 °Ctd

In case of CS dew point sensors with measuring range -80...+20 °Ctd and -60...+30°Ctd: Alarm 1: -40°Ctd, Alarm 2: -35 °Ctd

Alarm and thresholds setting:

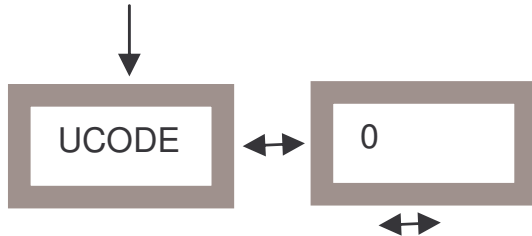


4. Lock operation menu - enter code - lock alarm values

The instruments operation (setting of alarm thresholds) can be locked by means of a code.





press simultaneously for the duration of 3 seconds



Factory setting: UCode = 0.

The menu points are not protected by a code and can be used by everybody.

With  and  any code from 0 to 999 can be set. This locks the menu point "Set alarm thresholds", they only can be changed if the correct code is entered at the beginning of the menu. If the menu should not be locked please enter Ucode = 0 resp. keep the factory settings without any changes



Code has been saved

In order to get into the operating menu the correct code has to be entered first.

If you have forgotten the code please enter Code = 978 then the code which has been entered for the last time will occur.

5. Calibration/adjustment

At CS Instruments

According to DIN ISO certification of the measuring instruments we recommend to calibrate and if applicable to adjust the instruments regularly at the manufacturer. The calibration intervals should comply with your internal specification. According to DIN ISO we recommend a calibration interval of one year for the instrument DS 52 including probes.

6. Warranty

If you have reason for complaint we will of course repair any faults free of charge if it can be proven that they are manufacturing faults. The fault should be reported immediately after it has been found and within the warranty time guaranteed by us. Excluded from this warranty is damage caused by improper use and non adherence to the instruction manual.

The warranty is also cancelled once the instrument has been opened - as far as this has not been mentioned in the instruction manual for maintenance purposes - or if the serial number in the instrument has been changed, damaged or removed.

The warranty time for DS 52 with accessories is 12 months, for the accessories the warranty time is 6 months. Warranty services do not extend the warranty time.

If in addition to the warranty service necessary repairs, adjustments or similar are carried out the warranty services are free of charge but there is a charge for other services such as transport and packaging costs. Other claims, especially those for damage occurring outside the instrument, are not included unless responsibility is legally binding.

After sales service after the warranty time has elapsed

We are of course there for you even after the warranty time has elapsed. In case of malfunctions please send us the instrument with a short-form description of the fault. Please do not forget to indicate your telephone number so that we can call you in case of any questions.

7. Technical data

Housing dimensions	118 mm x 92 mm x 133 mm
Display	LED red, 7 segments, height: 13 mm, 5 digits, 2 LED for switching outputs (alarm relays)
Keypad	4 keys: Enter, Back, Up, Down
Sensor input	1 x digital input for dew point and consumption sensors of CS Instruments GmbH (FA 415, FA 410, FA 400, VA 300, VA 400, VA 410)
Sensor supply	24 VDC with Polyfuse max. 100 mA
Voltage supply	230 V, 50/60 Hz
Outputs	2 x relays output, change-over contact, 250 VAC, max. 3 A
Operation temperature	-10 °C...+60 °C (storage temperature: -20 °C...+80 °C)
Interfaces	Serial interface by USB adapter via internal plug for programming calibration/test at the PC
Alarm thresholds	freeley adjustable
Hysteresis	2 °Ctd

8. Order information

<i>Description</i>	<i>Order no.</i>
DS 52 - LED display in wall housing (118 x 92 x 133 mm), Supply: 230 V, 50/60 Hz. Digital sensor input (SDI) for dew point or consumption sensors of CS Instruments GmbH. 2 alarm relays (change-over contact 250 VAC, max. 3 A), alarm values freely adjustable	0500 0007
<i>Options</i>	
Option for DS 52 LED display: Supply 24 VDC instead of 230 V, 50/60 Hz	Z500 0001
Option for DS 52 LED display: Supply 110 VAC instead of 230 V, 50/60 Hz	Z500 0002

Contact

- **Advice**
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