

## Electrical Connection

| Plug<br>M 12 x 1,<br>4-pin | Model with<br>2 switching outputs<br>(DESINA®) | Model with<br>2 switching outputs<br>and 1 analog output |
|----------------------------|--|--|
| Pin 1                      | +Ub (15...32 V DC)                             | +Ub (15...32 V DC)                                       |
| Pin 2                      | SP2 (0,5 A max.)                               | analog   |
| Pin 3                      | 0 V  | 0 V  |
| Pin 4                      | SP1 (0,5 A max.)                               | SP1 (0,5 A max.)   |
| Pin 5                      |  | SP2 (0,5 A max.)   |

## Sensor Connection UAS 7

| M 12 x 1    | Analog measuring input      |
|-------------|-----------------------------|
| 1 = +Ub     | Optional:                   |
| 2 = Signal  | Current input : 4...20 mA   |
| 3 = -Ub (*) | Voltage input : 0...10 V DC |



(\*) in combination with 2-wire circuit pin 2 is not needed.

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Item-No.: 923-1407

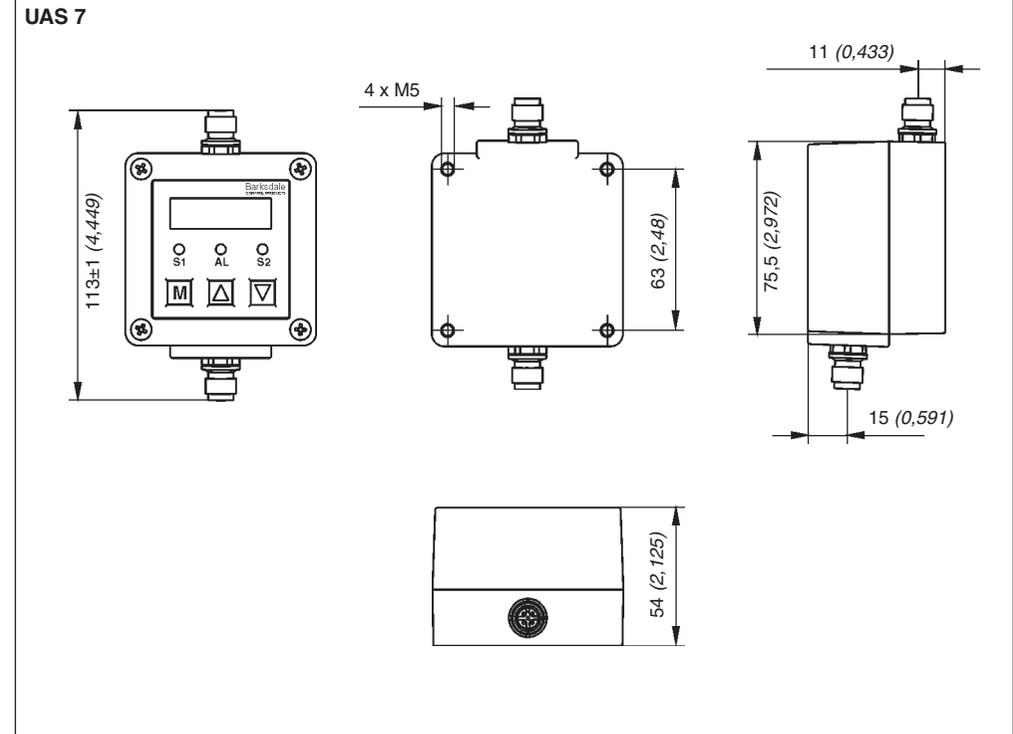
Index A, 01. 06. 2006 Software version: V1. or higher  
Specifications are subject to changes without notice.

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## Operating Instructions Electronic Display Type UAS 7

Dimensions in mm (inch)



### 1. Product Description

#### Intended applications

- The electronic display is a device to monitor system pressure, temperature, flow, level, etc. and has two switching outputs and one analog output.
- The electronic display is only to be connected to input signals according to the values on the type label at the bottom side of the device.
- **Attention:** This device is not designed to be used as the only safety relevant element in pressurized systems according to PED 97/23/EC.

### 2. Starting Operations

- The pressure switch should be installed and operated only by authorized personnel.
- For wall mounting there are four threads M4 on the back side.  
To damp strong vibrations shock mounts must be used.
- Connect the sensor and the UAS 7 with the 4-pin plug M 12 x 1 at the bottom side of the device.
- The electrical connection (supply, analog output and switching contacts) must be carried out according to the connection table on the top of the device.
- The electrical connection must be carried out in accordance with the VDE 0100 regulations.

### List of functions

| Dialog item | Value                      | Description  |
|-------------|----------------------------|--|
| Act         |                            | Actually displayed measuring value   |
| SI          | mbar, bar, psi, text, etc. | Select the measuring unit. "text" allows the display of the unit stored in the "STXT" menu.<br>nbor, bor, nPo, PS 1, PSK*, C, F, StHt  |
| StHt        | ABCD..., 1234...           | Store any desired text:<br>AbCd... 1234...   |
| Und         | On, OFF                    | Activation of the unit display      on off   |
| SP 1        | Std<br>win<br>Err          | Std = Standard decreasing / increasing<br>win = Window technology<br>Err = Error evaluation  |
| on 1        | 0...xxx                    | Switch-on point for SP1; set the ON-value lower than the OFF-value for decreasing switch point evaluation  |
| OF 1        | 0...xxx                    | Switch-off point for SP1   |
| ds 1        | 0,0 s...9,9 s              | Switch-on delay for SP1  |
| dr 1        | 0,0 s...9,9 s              | Switch-off delay for SP1   |
| lnu 1       |                            | HLFS = High-level-fail-save (normally open function)<br>LLFS = Low-level-fail-save (normally closed)   |
| SP2         | Std<br>win<br>Err          | Std = Standard decreasing / increasing<br>win = Window technology<br>Err = Error evaluation  |
| on2         | 0...xxx                    | Switch-on point for SP2; set the ON-value lower than the OFF-value for decreasing switch point evaluation  |
| OF2         | 0...xxx                    | Switch-off point for SP2   |
| ds2         | 0,0 s...9,9 s              | Switch-on delay for SP2  |
| dr2         | 0,0 s...9,9 s              | Switch-off delay for SP2   |
| lnu2        |                            | HLFS = High-level-fail-save (normally open function)<br>LLFS = Low-level-fail-save (normally closed)   |
| AO2S        | 0...xxx                    | Scaling the analog output start-value (e. g.: 0 bar = 4 mA)  |
| AOFS        | 0...xxx                    | Scaling the analog output end-value (e. g.: 400 bar = 20 mA) (Start-value of the output signal is always the display start-value, e. g.: 0 bar = 4 mA), max. turn-down 4:1, that means the analog output is switched off at values below 25% of the measuring range. |
| nRH         | 0...xxx                    | Display of peak value "MAX" (xxx: = max. 125% f. s.)   |
| CLr         |                            | no = no deletion      YES = deletion of the value  |

### List of functions

| Dialog item | Value       | Description  |
|-------------|-------------|--|
| Err         |             | Error messages:<br>OH = no error      SP2 = Error switching output 2<br>nRH = pos. MB-Überschreitung      dAt = Data error (EEProm)<br>nIn = neg. MB-Überschreitung      PrG = Microcontroller error<br>SEn = Sensor error      CAL = Calibration error<br>SP 1 = Error switching output 1      onO = Error analog out |
| Ent         | 0000...0000 | Select the decimal places in the display   |
| nOnn        | 0...xxx     | Scaling the start-value in the measuring display   |
| nOnH        | 0...xxx     | Scaling the end-value in the measuring display   |

**Note:** When changing the units the parameters for setpoints and analog output have to be updated manually.

\* PSK = psi / 10

### 4. Operation

After the unit is switched on, the unit starts an automatic self-test. The device is menu operated and configured by the three keys on the front. With the „M“ key (= mode) you change between the operation/indicating level and the menu. With the keys "↑" = up and "↓" = down you select the dialog items. A change of any configuration starts always with the M-key and is indicated by the flashing cursor. After a change has been made with the "up"- resp. "down"-key the M-mode key must be pressed to save each configuration; to set numbers "digit by digit", each digit has to be entered and confirmed with the M-Mode before adjusting the next one. By confirming the last digit the new configuration will be saved in the memory. To finish programming from any point in the menu and return to the operating mode press the M-key for five seconds. If the dialog is not continued within two minutes the device automatically returns to the measuring mode.

### 5. Key lock

Activating the "↑" = up and "↓" = down keys together for more than 5 seconds will block any changings in all menus, shown by "LOCK" = locked the display. Repeating this action will unlock the configuration menu and the display shows "UNLK". In the "LOCK" mode, all configuration values can be checked only, but not changed.

### 6. Error handling

The internal self-check software will monitor the proper functioning of the unit. Any failures will be indicated with a flashing yellow LED.

| Display | Error                                  | Cause  |
|---------|--|--|
| max     | Positive excess of the measuring range | Measured value exceeds the max. of the range       |
| min     | Negative excess of the measuring range | Measured value is lower than the min. of the range |
| anao    | Failure of the analog output           | Output loop is not closed or short circuited       |
| sens    | Sensor error (internal)                | Pressure sensor overcharged or defect              |
| data    | Data error (EEProm) (internal)         | Memory failure                                     |
| prog    | Program error (internal)               | Microcontroller failure                            |
| cal     | Calibration error (internal)           | Faulty calibration data                            |

# Menu Structure UAS 7

