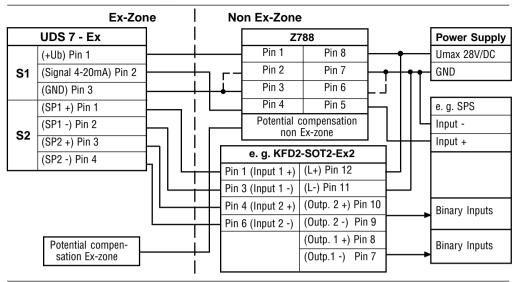
# Electrical connection diagram UDS 7 - Ex



# 4. Programming:

The setting menu is activated with the **mode** key. The dialog items are selected with the "  $\Uparrow$  " and " $\Downarrow$  " keys. If the mode key is pressed again the corresponding value for the dialog item is shown and can be altered with the "  $\Uparrow$  " and "  $\Downarrow$  " keys. If the dialog with the unit is not continued within two minutes the device automatically returns to the measuring mode without accepting the new values.

To terminate programming more quickly, you can switch back to the measuring mode (primary menu) from any item in the menu by holding the M-key pressed for five seconds.

If the software lock has been activated, the values can be shown, but no changes made, i.e. when Level 0 is active ("LOCK" appears in the display when an attempt is made to change values).

# 5. Maintenance / Malfunction:

The pressure switch is maintenance free.

Repairs and modifications of the switch must be done by the manufacturer exclusively.

# Barksdale

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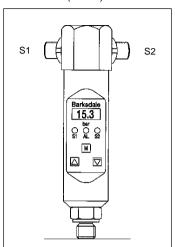
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Software version: V. 7.X
Specifications are subject to changes without notice.

# Operating Instructions Dual Pressure Switch UDS 7 - Ex

#### Dimensions (in mm)



#### **Approval Data**

Approval: (Ex) II 1 / 2 G EEx ia IIC T4

Certificate No.: TÜV 02 ATEX 1879X € 0032

Max. Ambient

Temperature: -20 °C...+80 °C

Ex-Data:

Supply-/Signal-Circuit

(Plug S1)

(Plug S2)

Ui1 ≤ 24 V DC (Supply)

li1 ≤ 301 mA Ui2 < 9.56 V DC (Signal)

9,56 V DC (Signal) Pi 49 mA

 $li2 \le 49 \text{ mA}$   $Li1/2 \le 37 \mu\text{H}$  $Ci1/2 \le 35 \text{ nF}$  Ui ≤ 10,5 V DC li ≤ 13 mA Pi < 34 mW

Namur-Digital-Circuit

## 1. Product description

#### Intended Applications

- The dual pressure switch is a device to monitor system pressure and has two NAMUR switching outputs and one analog output.
- The instruments must only be installed in systems where the maximum pressure Pmax is not exceeded (according to the values on the type label).
- The tolerance limits acc. to the safety requirements of the ATEX-certificate must not be exceeded. (Is supplied with the unit.)
- Attention: This device is not designed to be used as the only safety relevant element in pressurized systems according PED 97/23/EC.

# 2. Starting operations

# Only assemble or disassemble the device when depressurized! Connecting the switch

- Mount the pressure switch from bottom to the fitting with a wrench hex 19 (1/4") resp. hex 22 with 45 Nm torque.
- The errection has to be made acc. DIN EN 60079-14, especially chapter 12. Power supply and analog output must run via the zener barrier Typ Z788 from Pepperl & Fuchs.
   The NAMUR switching outputs must run via an isolation amplifier (e. g. type KFD2-SOT2-Ex2 from Pepperl & Fuchs). In both cases please follow the connection instructions of the manufacturer.

# 3. Operation:

The pressure switch should be installed and operated only by authorized persons.

After being switched on the UDS 7 runs through a self-test. The device is menu operated and configured with three keys on the front.

With the "M" key (= mode) you change between the dialog values and the adjusted / actual values. With the keys "  $\uparrow$  " = up and "  $\downarrow$  " = down you change between the dialog values in the menu or change the values / functions in the menues (see below: "List of functions").

If the dialog is not continued within two minutes the device automatically returns to the measuring mode. When the software lock is entered, "LOCK" appears in the display when an attempt is made to change values.

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Dialog item	Value	Description
MENÜ	-19999	Primary display, e.g. the value selected in the DISP menu appears here
DISP		Display value which should be permanently in the display:
		act actually measured value
		sp1 switching point SP1
		sp2 switching point SP2
		max maximum peak value
		min minimum peak value
ACT.	-19999	Display of actually measured value in bar
UNIT		Fixing the unit
(only V 7.X)	bar	bar = bar The unit is shown in the display appr.
	psi	psi x = psi x 10 every 30 sec. for appr. 5 sec.
	psi	psi = psi
	HPa	HPa = Hekto-Pascal
	mbar	mbar = millibar
SP.1		none switching output deactivated
		wind window technology
		stnd standard evaluation SP2
		erro error output
ON-1	-1 xxxx	Switch-on point for SP1; if the ON value is smaller than the OFF value
		the switching point evaluation is falling
OFF-1	-1 xxxx	Switch-off point for SP1
DLY1	0,0s9,9s	Switch-on / switch-off delay for SP1 in seconds
INV-1		Inversion of switching output SP1
		hlfs high-level-fail-save (normally open function)
		Ilfs low-level-fail-save (normally closed function)
SP.2		none switching output deactivated
		wind window technology
		stnd standard evaluation SP2
		erro error output
ON-2	-1 xxxx	Switch-on point for SP2;
		if the ON value is smaller than the OFF value
		the switching point evaluation is falling
OFF-2	-1 xxxx	Switch-off point for SP2
DLY2	0,0s9,9s	Switch-on / switch-off delay for SP2 in seconds
INV-2		Inversion of switching output SP2
		hlfs high-level-fail-save (normally open function)
		Ilfs low-level-fail-save (normally closed function)
MAX	-1 xxxx	Display of peak value "Max" (xxxx: = max. 125 % f. s.)
CLRH		Delete the maximum value memory
		no deletion
		clr delete value
	ļ	

CDLY	0,0s9,9s	Time setting to delete the maximum value memory after switching
		point SP1 is reached (manual deletion is still possible)
MIN	-1 xxxx	Display of peak value "Min"
CLRL		Delete the minimum value memory
		no deletion
		clr delete value
OFFS	-9,9+xx	Measured value offset in bar
CUT	0,0 +xx	Cut-off. e.g. signal suppression at measuring range start in bar
DLDS	0,0 9,9s	Time delay for currently displayed value in seconds
ERRC		Error messages:
		-ok- no error
		max exceeding pos. measuring range
		min exceeding neg. measuring range
		dig1 switching output 1 error
		dig2 switching output 2 error
		anao analog output error
		sens sensor error
		data data error (EEProm)
		prog program error
		cal calibration error
V 7.X	Lev0Lev2	Software lock:
		Version display with actual input level:
		0: only display of operating parameters, no changes possible
		1: only switching points can be set ("max" and "min" memories)
		2: release user level (all operating parameters for customer)
AOZS	0 9999	Scale the analog output - start value (e. g. 0 bar = 4 mA)
AOFS	0 9999	Scale the analog output - end value (e. g. 400 bar = 20 mA)
		(output signal start value always corresponds to the display initial value,
		e. g. 0 bar = 4mA)
		Maximum turn-down 4:1, i.e. at values below 25 % of the measuring
		range the analog output is switched off
CODE	0000 9999	Enter the code level: as key combination:
		Lev1: 471 (up + down five seconds)
		Lev2: 740 (up + down + M five seconds)
		Lev0: 999 (up + down + M five seconds)
OPT		Display of the unit options, deposited at the manufacturer Barksdale
(onlyV 7.X)		Control Products GmbH.
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