trafag
sensors ◆ controls

⚠ Warning: Before installation, commissioning, and operation, ensure that the pressure transmitter is suitable for the application in terms of measuring range, design and environmental conditions. Non-observance can result in serious injury and/or damage to equipment.

Intended use: This instrument converts pressure into an electrical signal.

The instrument has been designed and built solely for the intended use described here and may only be used accordingly. If the equipment is used in a different manner, the protection provided by the equipment may be impaired and Trafag shall not be liable for any claims at all.
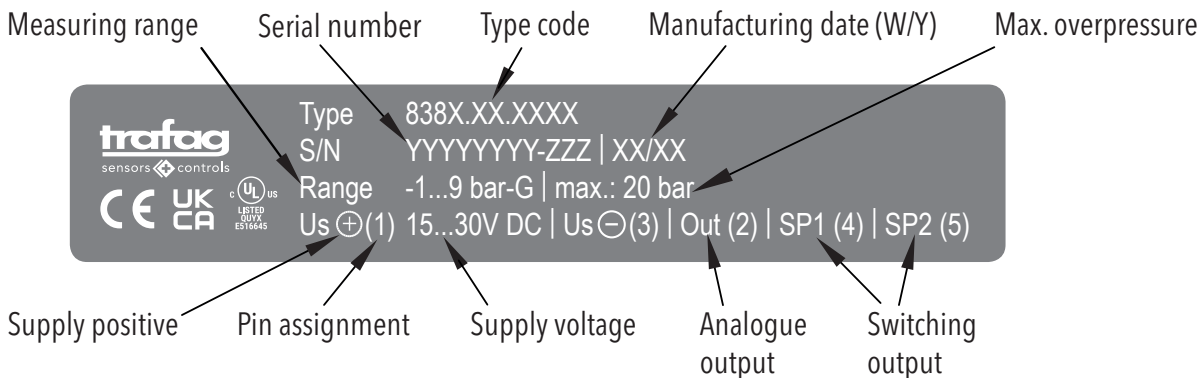
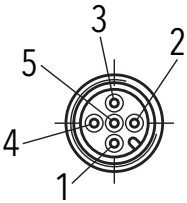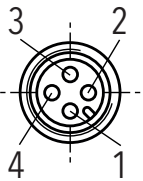## Datasheets

DPC 8380

www.trafag.com/H72320

DPS 8381

www.trafag.com/H72321

Type label description (example)

Measuring range | Serial number | Type code | Manufacturing date (W/Y) | Max. overpressure

Type 838X.XX.XXXX
S/N YYYYYYYY-ZZZ | XX/XX
Range -1...9 bar-G | max.: 20 bar
Us ⊕(1) 15...30V DC | Us ⊖(3) | Out (2) | SP1 (4) | SP2 (5)

Supply positive | Pin assignment | Supply voltage | Analogue output | Switching output

Electrical connections

Designation	M12x1 5–pol.	M12x1 4–pol.
Ambient temperature range	-25°C ... +85°C	-25°C ... +85°C
UL-rated ambient temperature range	-20°C ... +80°C	-20°C ... +80°C
Type code	**838X**.XX.XXXX.**35**	**838X**.XX.XXXX.**32**
Pin configuration		

Output	I_{SUPPLY}	U_{SUPPLY}
4 ... 20 mA	≤ 30 mA	15 ... 30 VDC
0 ... 10 VDC	≤ 30 mA	15 ... 30 VDC
0 ... 5 VDC	≤ 30 mA	15 ... 30 VDC
1 ... 6 VDC	≤ 30 mA	15 ... 30 VDC

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Connection of the measuring equipment

P / U/I Out
⊕ Us +
⊖ Us −
Out analogue
SP 1
SP 2
shield *)
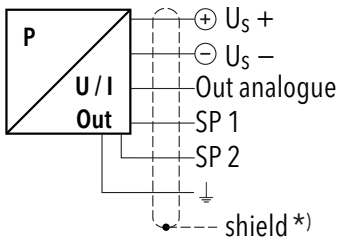
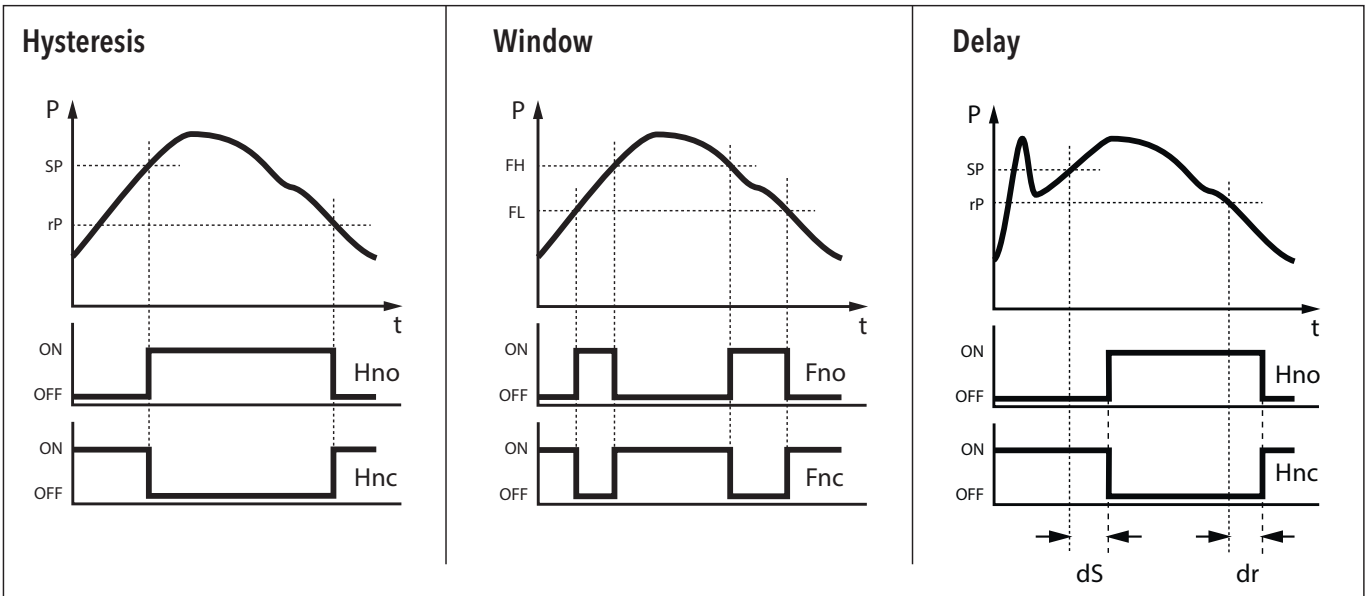*) The use of a shielded cable is recommended

P
US +
US −
I
SP 1, SP 2
RL
US −
earth
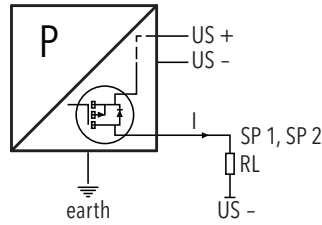
Connection of loads to switching output

4...20mA: min./max resistor vs. supply voltage @ Pmax = 100%

- - - R max @ 85°C
—— R min @ 85°C

Customer Load Resistor (Ohm)

Customer Supply Voltage (V)
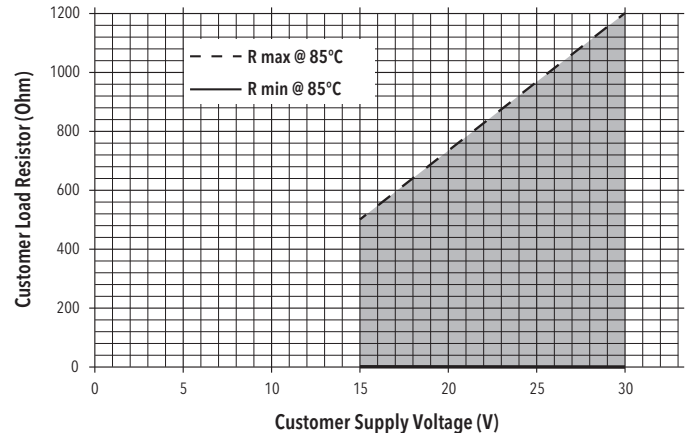
Switching output functions

Hysteresis

P
SP
rP
t
ON OFF Hno
ON OFF Hnc

Window

P
FH
FL
t
ON OFF Fno
ON OFF Fnc

Delay

P
SP
rP
t
ON OFF Hno
ON OFF Hnc
dS   dr

Dimensions

Ø 37
335° max. 2.5 Nm
M12x1
343° max. 5 Nm
93
45.5
Ø 32
48
SW27 / Ø 29.5

Protective cap

43.5
Ø 43
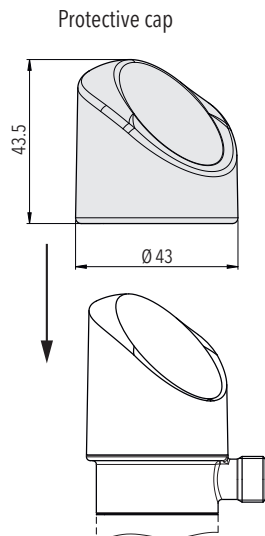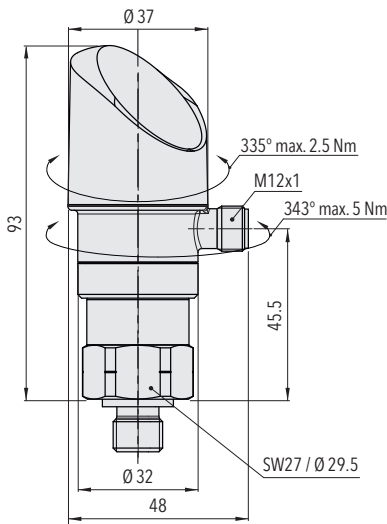
Mounting

Tighten the device

max. 2.5 Nm
max. 5 Nm
15 ... 20 Nm
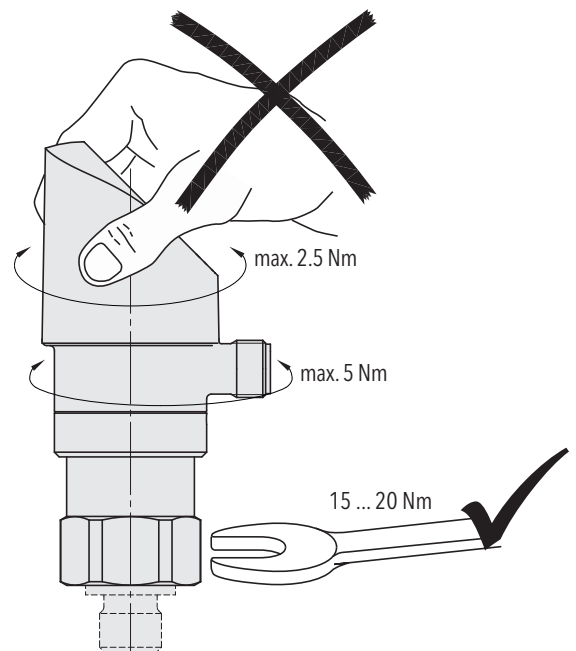
Display indication

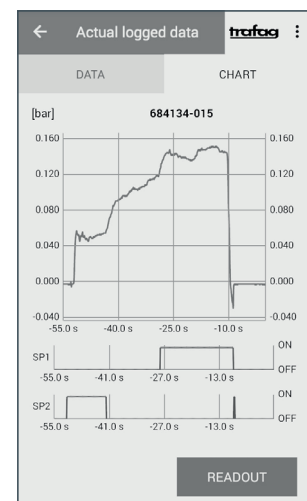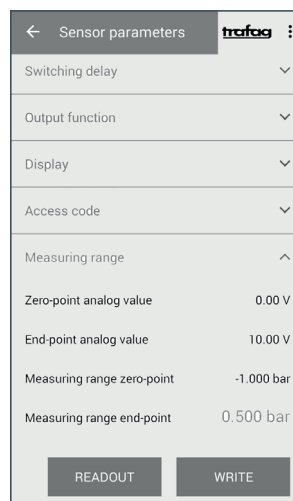|	Description
OL	The measured pressure is >3% above the measuring range end-point ➤ The indication disappears as soon as the pressure is reduced again
UL	The measured pressure is >3% below the measuring range zero-point ➤ The indication disappears as soon as the pressure is reduced again
Perr	Signal processing is faulty. ➤ Please replace measuring device
FALS	Incorrect access code ➤ Enter the correct access code
Sbrk	Sensor break; the sensor element is defective ➤ Please replace the pressure measuring device
Fi2c	Internal device communication is interrupted ➤ Please replace the pressure measuring device
Ecrc	Internal memory damage occured ➤ Execute a factory reset. If the recovery is not successful, replace the pressure measuring device
FE2P	Internal memory damage occurred ➤ Execute a factory reset. If the recovery is not successful, replace the pressure measuring device
EnFc	NFC communication was not successful ➤ Try again to communicate again. If the error persists, replace the pressure measuring device
E.0FC	Zero-set out of range The measured pressure value is outside of the valid range for the zero-set function ➤ Press [Enter] ⟨⟩ on the measuring device to reset the error indication This error indication does not appear when performing the zero-set function by means of the Sensor Master App (Android smartphone)

Parametrisation

The display pressure switches DPC 8380 and DPS 8381 can be parametrised either with the 3 buttons on the display and the menu navigation on page 4 of this instruction, or via Sensor Master App installed on a NFC capable Android smartphone.

Android App Trafag Sensor Master

With the free Android app „Trafag Sensor Master", available in the Google Play Store, the parameters of the Trafag display pressure transmitter DPS 8381 and DPC 8380 can be set very simply through a smartphone. In addition to a variety of parameters for the switch points, the measurement range can be scaled. Communication is conducted via the NFC interface on the display. Through this interface, the measurement values of the internal data logger can also be read out and then processed further via smartphone.

Download the Android app in the Google Play Store

Operating menu
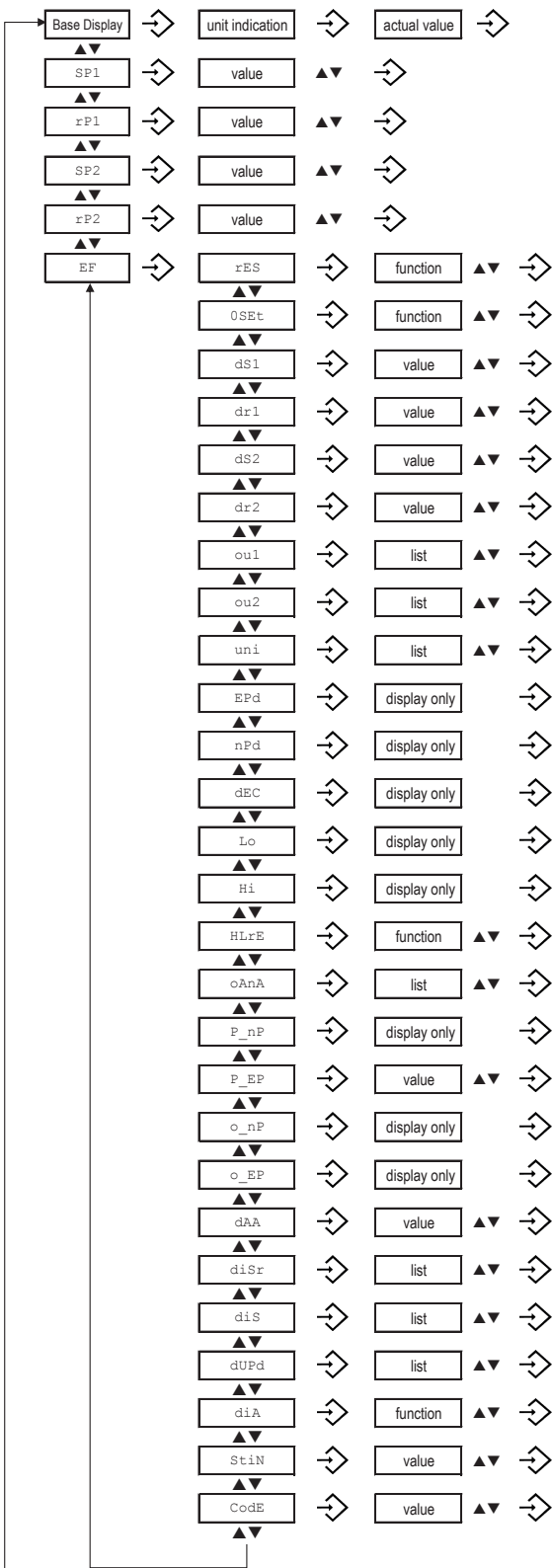
Description	Value range
Switch point SP1 (Hysteresis) or Window high FH1	SP1 > rP1, FH1 > FL1 Hysteresis ≥ 1 % FS
Reset point rP1 (Hysteresis) or Window low FL1	rP1 < SP1, FL1 < FH1 Hysteresis ≥ 1 % FS
Switch point SP2 (Hysteresis) or Window high FH2	SP2 > rP2, FH2 > FL2 Hysteresis ≥ 1 % FS
Reset point rP2 (Hysteresis) or Window low FL2	rP2 < SP2, FL2 < FH2 Hysteresis ≥ 1 % FS
Reset to factory settings	
Zero set, offset correction [1]	± 2 % FS
Switching delay time for SP1/FH1	0.01 ... 99.99s
Switching delay time for rP1/FL1	0.01 ... 99.99s
Switching delay time for SP2/FH2	0.01 ... 99.99s
Switching delay time for rP2/FL2	0.01 ... 99.99s
Function switching output 1	Hysteresis NO (Hno), Hysteresis NC (Hnc) Window NO (Fno), Window NC (Fnc)
Function switching output 2	Hysteresis NO (Hno), Hysteresis NC (Hnc) Window NO (Fno), Window NC (Fnc)
Pressure unit	bar / MPa / kPa / psi / mWC / mmWC / inchWC / % / user scale [1]
End-point display value (option user scale unit)	-998 ... 9999 [1]
Zero-point display value (option user scale unit)	-999 ... 9998 [1]
Decimal point (option user scale unit)	0, 1, 2, 3 (value depending)
Lowest measured pressure	
Highest measured pressure	
Reset highest and lowest pressure value	
Analogue output type	I, U, off
Pressure zero-point	0 % ... 50 % FS [1] [2]
Pressure end-point	50 % ... 100 % FS [2]
Analogue output zero-point	Voltage: 0 ... 2 VDC Current loop: 3.9 ... o_EP - 8 mA [1]
Analogue output end-point	Voltage: o_nP + 4 ... 10.5 VDC Current loop: o_nP + 8 ... 20.1 mA [1]
Damping analogue output rise time 10 ... 90 % nominal pressure	0.01 ... 3.00 s
Display rotate	no, yes (180°)
Display mode	actual, highest, lowest, off, act. – 1 decimal, act. – 2 dec., act. – 3 dec.
Display update rate	1, 2, 5, 20 Hz
Diagnostic mode	
Sampling time for logger	0.1 ... 999.9 s, off (0)
Access code	4-digit code

[1] optional function package
[2] P_EP – P_nP ≥ 50 % FS
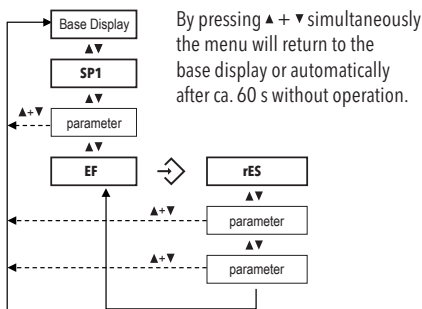
By pressing ▲ + ▼ simultaneously the menu will return to the base display or automatically after ca. 60 s without operation.

pw* When performing a parameter change by pressing ▲ o ▼ rand if an access code has been defined, it has to be entered digit by digit.
After confirming the new parameter value, the menu item of the changed parameter will be displayed.