

Pressure switch with display



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



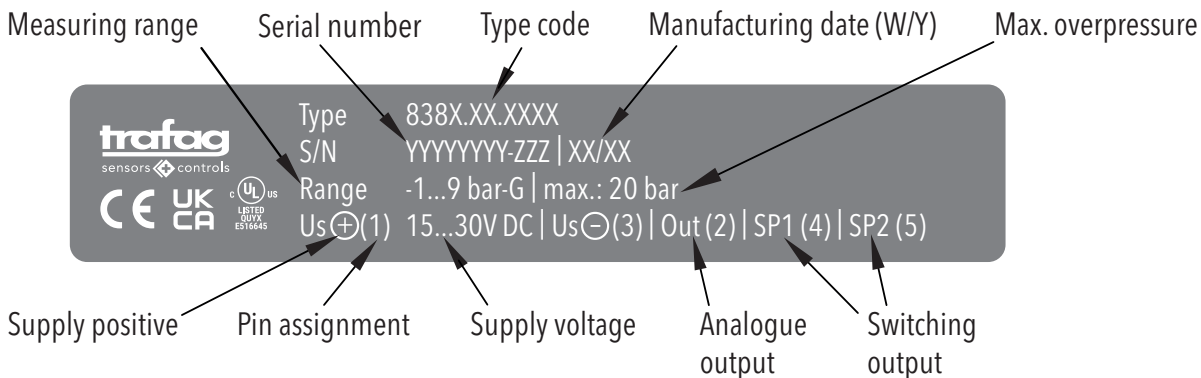
www.trafag.com/H72320

DPS 8381

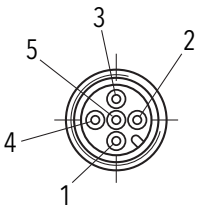
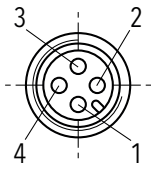


www.trafag.com/H72321

Type label description (example)



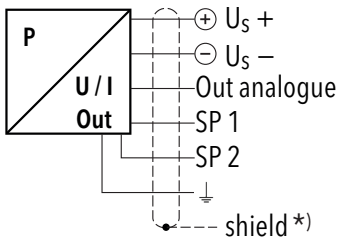
Electrical connections

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		

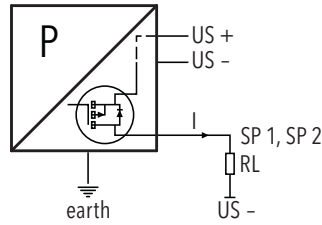
The device is designed to be used in an industrial, electromagnetic environment in accordance with IEC 61326-2-3, IEC 61326-1, IEC 61000-6-2, IEC 61000-6-3.

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

Connection of the measuring equipment

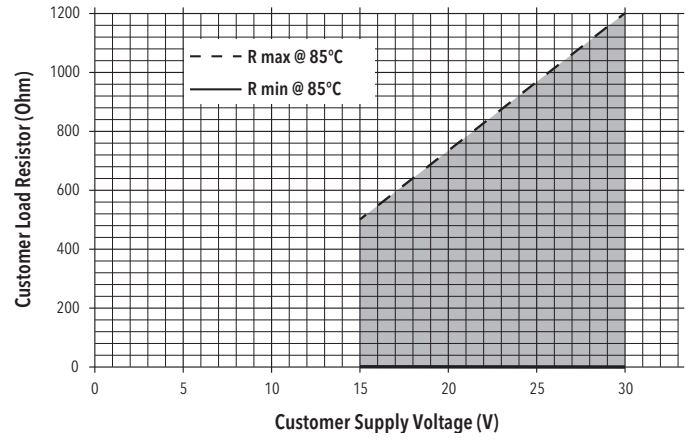


*) The use of a shielded cable is recommended

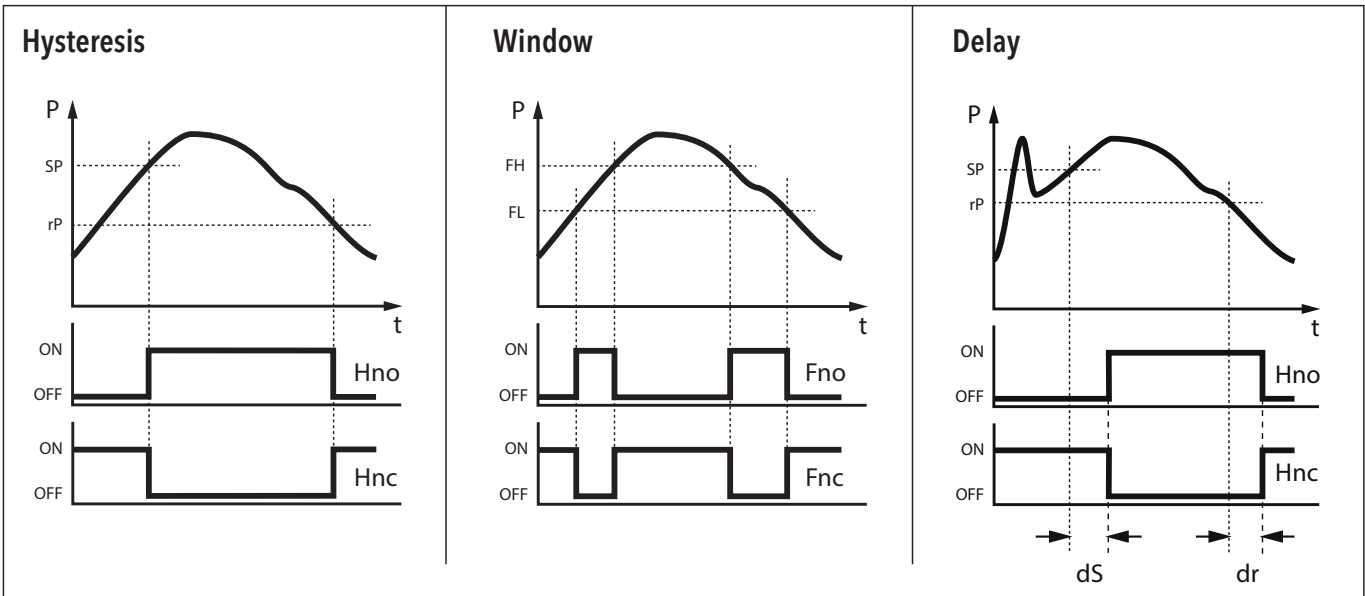


Connection of loads to switching output

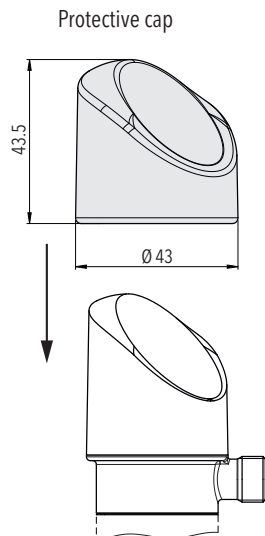
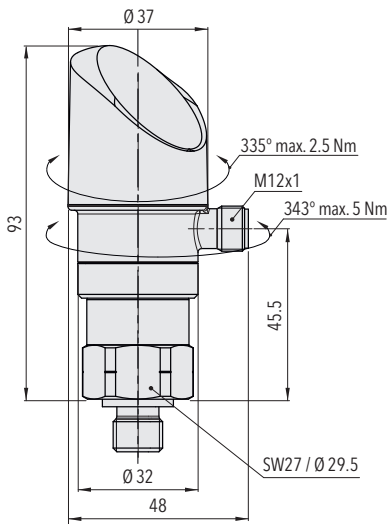
4...20mA: min./max resistor vs. supply voltage @ Pmax = 100%



Switching output functions

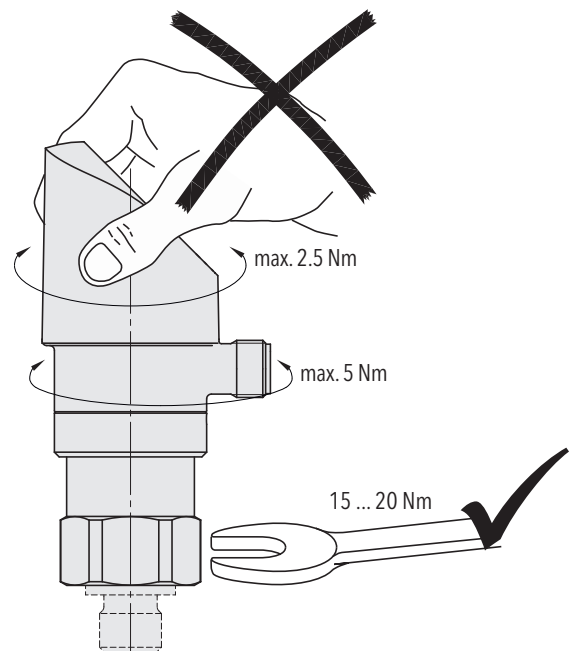


Dimensions



Mounting

Tighten the device



Display indication

	Description
E.crc	Internal memory damage occurred. → Execute a factory reset. If the recovery is not successful, replace the device.
E.FPA	Internal error: Invalid factory page data. → Execute a factory reset. If recovery is unsuccessful, replace the device.
E.Mat	Internal error: Invalid serial number. → Execute a factory reset. If recovery is unsuccessful, replace the device.
EnFc	NFC communication was not successful. → Try again to communicate again. If the error persists, replace the device.
E.OFC	Zero-point offset 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).
E.Par	Internal error: Invalid parameters data. → Execute a factory reset. If recovery is unsuccessful, replace the device.
E.SPt	Internal error: Invalid setpoint data. → Double-check setpoint settings vs. device specifications and re-enter setpoint settings if necessary. Alternately, execute a factory reset. If recovery is unsuccessful, replace the device.
E.Tar	Internal error: Invalid calibration data → Execute a factory reset. If recovery is unsuccessful, replace the device.
FALS	Incorrect access code. → Enter the correct access code.
F.E2P	Internal memory damage occurred. → Execute a factory reset. If the recovery is not successful, replace the device.
F.i2c	Internal device communication is interrupted. → Replace the device.
OL	The measured pressure is >3% below the measuring range zero-point. → The indication disappears as soon as the pressure is reduced again.
P.err	Signal processing is faulty. → Replace the device.
S.brk	Sensor break; the sensor element is defective. → Replace the device.
UL	The measured pressure is >3% below the measuring range zero-point. → The indication disappears as soon as the pressure is reduced again.

Parametrisation

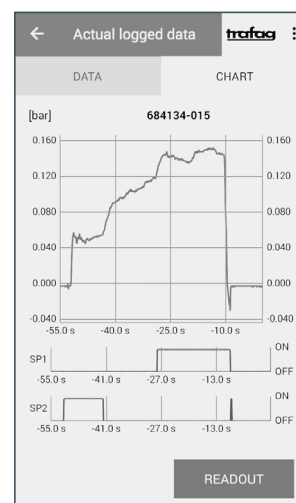
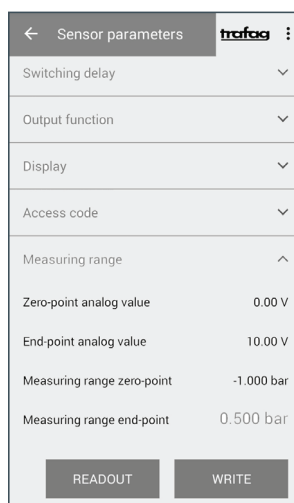
The display pressure switches DPC 8380 and DPS 8381 can be parametrised either with the 3 buttons on the display and the menu navigation on page 4 of this instruction, or via Sensor Master App installed on a NFC capable Android smartphone.

Android App Trafag Sensor Master

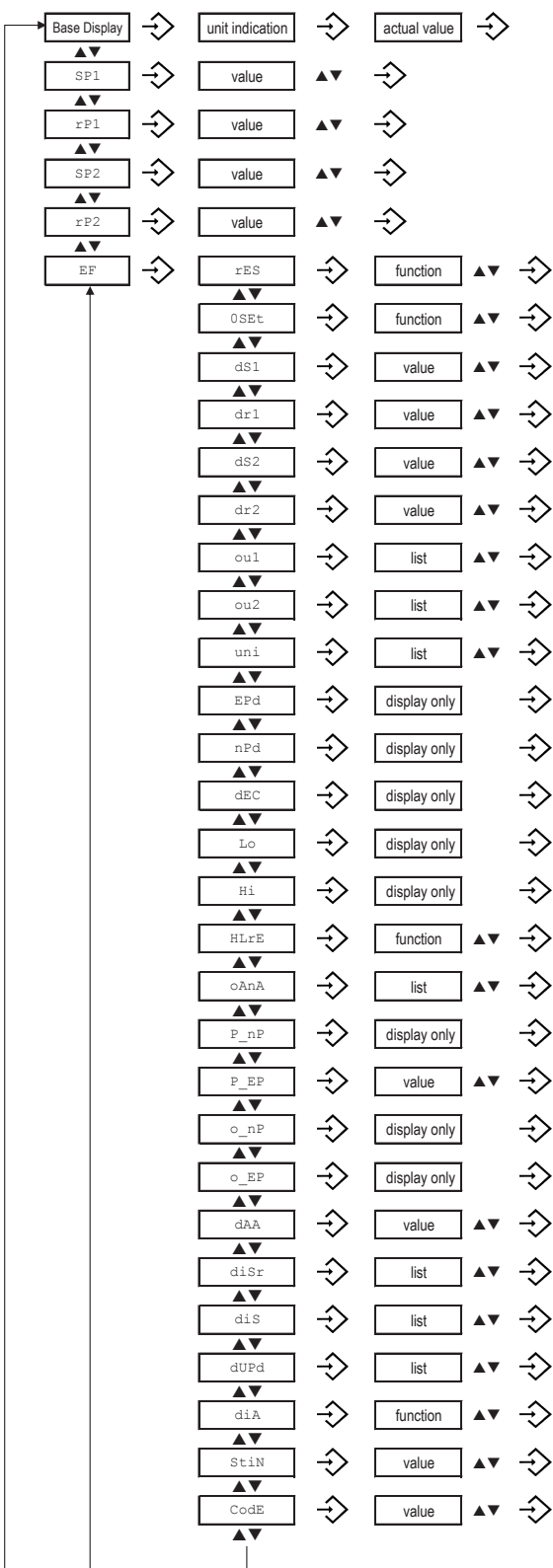


With the free Android app „Trafag Sensor Master“, available in the Google Play Store, the parameters of the Trafag display pressure transmitter DPS 8381 and DPC 8380 can be set very simply through a smartphone. In addition to a variety of parameters for the switch points, the measurement range can be 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



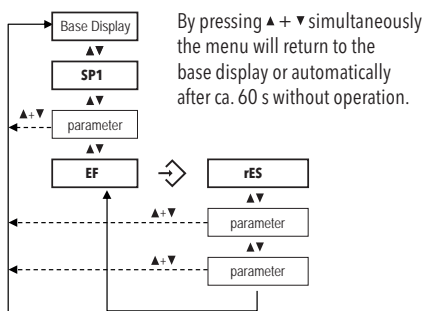
Operating menu



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 ▲ or ▼ and 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.