

PDP Sens 1/PDP Sens 1A/PDP Sens 2/PDP Sens 2A - Dew point sensor

Dew point sensor for residual moisture measurement in compressed air and gases

Features & Benefits

- ▶ Extremely long-term stable
- ▶ Analog output 4 - 20 mA for dew point
- ▶ Condensation insensitive
- ▶ Fast adjustment time
- ▶ Pressure resistant up to 350 bar (special version)
- ▶ Modbus RTU interface
- ▶ Higher resolution of the sensor signal due to improved evaluation electronics
- ▶ Sensor diagnosis on site with mobile device or PMH service software
- ▶ Readable via Modbus:
 - Pressure dew point [$^{\circ}$ Ctd.]
 - Temperature [$^{\circ}$ C]
 - Rel. humidity [% RH]
 - Abs. humidity [g / m³]
 - Moisture content [g / m³]
 - Moisture content V / V [ppmV / V]
 - Partial vapor pressure [hPa]
 - Atmospheric dew point [$^{\circ}$ Ctd.atm]

Typical applications:

- ▶ Dew point measurement in the compressed air after adsorption dryer, membrane dryer, refrigeration dryer
- ▶ Residual moisture/ dew point measurement in gases like oxygen, nitrogen, argon
- ▶ Residual moisture/ dew point measurement after granulate dryers in plastics industry

Recommendation:

- ▶ Mounting with standard measuring chamber for compressed air up to 16 bar
- ▶ Advantage: Easy installation via quick coupling



Description	Order no.
PDP Sens 2 dew point sensor for desiccant driers -80°-20°Ctd incl. inspection certificate, 4...20 mA output signal (3-wire connection) and Modbus-RTU interface	2255330413
PDP Sens 2A dew point sensor for desiccant driers -80°-20°Ctd incl. inspection certificate, 4...20 mA output signal (2-wire connection) or Modbus-RTU interface	2255331723
PDP Sens 1 dew point sensor for refrigerated driers -20-50°Ctd incl. inspection certificate, 4...20 mA output signal (3-wire connection) and Modbus-RTU interface	2255330412
PDP Sens 1A dew point sensor for refrigerated driers -20-50°Ctd incl. inspection certificate, 4...20 mA output signal (2-wire connection) or Modbus-RTU interface	2255332552
Connection cables	
Connection cable for Flow/ PDP sensors, 5 m	2255460213
Connection cable for Flow/ PDP sensors, 10 m	2255460214
Option for PDP Sens 1/ PDP Sens 2:	
Option: analogue output PDP Sens 1/2, Special version 2...10 Volt	2255332553
Option for: PDP Sens 1/ PDP Sens 1A/ PDP Sens 2/ PDP Sens 2A	
Option: max. pressure PDP sens 350 bar	2255332591
Option: special scaling PDP sens 4...20 mA=___ ... ___ g/m³, ppm etc.	2255332592
Option: connection thread PDP sens, 5/8" UNF	2255332593
Option: connection thread PDP sens, 1/2" NPT	2255332594
Option: surface condition PDP sens, free of oil & grease	2255332595
Further accessories	
Standard measuring chamber up to 16 bar	2255460229
High pressure measuring chamber up to 350 bar	2255332544
Measuring chamber, stainless steel 1.4305	2255332596
PMH Service Software for dew point sensors incl. PC connection set (Modbus to USB Interface)	2255332597
Calibration and adjustment	
Precision calibration at -40°Ctd or 3° Ctd including ISO certificate	2255332542
Additional calibration point freely selectable	2255332543

Technical data PDP Sens 1/ PDP Sens 1A/ PDP Sens 2/ PDP Sens 2A	
Measure range	-80-20°Ctd, -20-50°Ctd
Accuracy	± 1°C to 50--20°Ctd ± 2°C to -20--50°Ctd ± 3°C to -50--80°Ctd
Pressure range	-1-50 bar special version up to 350 bar
Power supply	24 VDC (16-30 VDC)
Protection class	IP 65
EMV	according to DIN EN 61326-1
Operating temp.	-20-70 °C
Connection	M12, 5-pole
PC connection	Modbus-RTU interface (RS 485)
Analog output	4-20 mA = -80-20°Ctd 4-20 mA = -20-50°Ctd PDP Sens 1/2: 4-20 mA (3-wire) PDP Sens 2A : 4-20 mA (2-wire)
Burden for analog output	< 500 Ω
Screw-in thread	G 1/2" optional: UNF 5/8", NPT 1/2"
Dimensions	Ø 30 mm, length approx. 130 mm
Via service software Choose units	% RH, °Ctd, g/m³, mg/m³, ppm V/V
Scaling	Change 4-20 mA