



FA 510/515 - Dew point sensor

FA 510/515 for residual moisture measurement in compressed air and gases



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

Special features:

- 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)
- **NEW:** Modbus RTU interface
- **NEW:** Higher resolution of the sensor signal due to improved evaluation electronics
- **NEW:** Sensor diagnosis on site with mobile device or CS service software
- Readable via Modbus:
 - Pressure dew point [° Ctd.]
 - Temperature [° 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 [° Ctd.atm]

DESCRIPTION	ORDER-NO.
FA 510 dew point sensor for desiccant driers -80°...20°Ctd incl. inspection certificate, 4...20 mA output signal (3-wire connection) and Modbus-RTU interface	0699 0510
FA 515 dew point sensor for desiccant driers -80°...20°Ctd incl. inspection certificate, 4...20 mA output signal (2-wire connection) or Modbus-RTU interface	0699 0515
FA 510 dew point sensor for desiccant driers -20...50°Ctd incl. inspection certificate, 4...20 mA output signal (3-wire connection) and Modbus-RTU interface	0699 0512
FA 510 dew point sensor for desiccant driers -20...50°Ctd incl. inspection certificate, 4...20 mA output signal (2-wire connection) and Modbus-RTU interface	0699 0517
Connection cables:	
Connection cable for VA/FA sensors, 5 m	0553 0104
Connection cable for VA/FA sensors, 10 m	0553 0105
Option for FA 510:	
Option: analogue output FA510, Special version 2...10 Volt	Z699 0510
Options for FA 510/515:	
Option: max. pressure FA5xx 350 bar	Z699 0515
Option: special scaling FA5xx 4...20 mA=___ ... ___ g/m³, ppm etc.	Z699 0514
Option: connection thread FA5xx, 5/8" UNF	Z699 0511
Option: connection thread FA5xx, 1/2" NPT	Z699 0512
Option: surface condition FA5xx, free of oil & grease	Z699 0517
Additional accessories:	
Standard measuring chamber up to 16 bar	0699 3390
High pressure measuring chamber up to 350 bar	0699 3590
Measuring chamber, stainless steel 1.4305	0699 3290
CS Service Software for dew point sensors incl. PC connection set (Modbus to USB Interface)	0554 2007
Calibration and adjustment:	
Precision calibration at -40°Ctd or 3° Ctd including ISO certificate	0699 3396
Additional calibration point freely selectable	0700 7710

TECHNICAL DATA FA 510/515	
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 FA 510: 4...20 mA (3-wire) FA 515: 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