



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 such as oxygen, nitrogen, argon...
- Residual moisture/dew point measurement after granulate dryers in the plastics industry

Recommendation:

Mounting with standard measuring chamber for compressed air up to 16 bar

Advantage: Easy installation via quick coupling

Special features:

- Extremely stable in the long term
- Analog output 4...20 mA for dew point
- Condensation-resistant
- Quick adaption time
- Pressure-tight up to 350 bar (special version)
- **NEW:** Modbus-RTU interface
- **NEW:** Higher resolution of sensor signal due to the improved evaluation electronics
- **NEW:** Sensor diagnosis on site with a portable device or CS Service Software
- **Readable via Modbus:**
 - Pressure dew point [°Ctd.]
 - Temperature [°C]
 - rel. humidity [% RH]
 - abs. humidity [g/m³]
 - Degree of humidity [g/kg]
 - Moisture content V/V [ppmV/V]
 - Partial vapour pressure [hPa]
 - Atmospheric dew point [°Ctd.atm]

DESCRIPTION	ORDER NO.	TECHNICAL DATA FA 510/515
FA 510 dew point sensor for adsorption dryers -80...20 °Ctd incl. factory certificate, 4...20 mA analogue output (3-wire connection) and Modbus-RTU interface	0699 0510	Measuring range: -80...20 °Ctd, -20...50 °Ctd Accuracy: ± 1 °C at 50...-20 °Ctd ± 2 °C at -20...-50 °Ctd ± 3 °C at -50...-80 °Ctd Pressure range: -1...50 bar Special version up to 500 bar Power supply: 24 VDC (10...36 VDC) Protection class: IP 66 EMC: In acc. with DIN EN 61326-1 Operating temperature: -20...70 °C Connection: M12, 5-pin PC connection: Modbus-RTU interface (RS 485) Analogue 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 analogue output: < 500 Ω Screw-in thread: G 1/2" Stainless steel 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 4...20 mA change
FA 515 dew point sensor for adsorption dryers -80...20 °Ctd incl. factory certificate, 4...20 mA analogue output (2-wire connection) or Modbus-RTU interface	0699 0515	
FA 510 dew point sensor for refrigeration dryer -20...50 °Ctd incl. factory certificate, 4...20 mA analogue output (3-wire connection) and Modbus-RTU interface	0699 0512	
FA 515 dew point sensor for refrigeration dryer -20...50 °Ctd incl. factory certificate, 4...20 mA analogue output (2-wire connection) or Modbus-RTU interface	0699 0517	
Connection cables: Connection cable for VA/FA series, 5 m	0553 0104	
Connection cable for VA/FA sensors, 10 m	0553 0105	
Option for FA 510: Option: analogue output FA 510, special version 2...10 volts	Z699 0510	
Options for FA 510/515: Option: max. pressure FA5xx 350 bar	Z699 0515	
Option: max. pressure FA5xx 500 bar	Z699 0516	
Option: special scaling FA5xx 4...20 mA=___ ... __ g/m³, ppm etc.	Z699 0514	
Option: connection thread FA5xx, 5/8" UNF	Z699 0511	
Option: surface condition FA 5xx, free of oil & grease	Z699 0517	
Further accessories: Standard measuring chamber up to 16 bar	0699 3390	
High pressure measuring chamber up to 350 bar	0699 3590	
Stainless steel bypass measuring chamber for dew point measurement in gases under pressure	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 incl. ISO certificate	0699 3396	
Additional calibration point freely selectable	0700 7710	

