



## FA 500 - Dew point sensor from -80 to 20 °Ctd

FA 500 is the ideal dew point measuring instrument with integrated display and alarm relay for refrigeration, membrane and adsorption dryers.



### Special features:

- Integrated display
- Threshold value adjustable via keypad, alarm relay (max. 60 VDC, 0.5 A)
- Pressure-tight up to 500 bar (special version)
- Extremely stable in the long term
- Quick adaption time
- 4...20 mA analogue output for dew point
- Different refrigeration and adsorption dryer versions
- **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/m<sup>3</sup>]
- Degree of humidity [g/m<sup>3</sup>]
- Moisture content V/V [ppmV/V]
- Water vapour particle pressure [hPa]
- Atmospheric dew point [°Ctd.atm]



The integrated keys enable simple, menu-controlled operation



### Upper connection:

Power supply, 4...20 mA output, Modbus-RTU output

### Lower connection:

Alarm relay



**Option:** Ethernet interface (PoE)

## Easy operation via the keys on the display



The integrated display shows the dew point in big figures as well as further humidity parameters on two more display pages. The arrow key can be used to scroll between the display pages.

The alarm threshold value for the integrated relay can be freely entered via the keys. In addition to the alarm threshold, the hysteresis can also be freely entered.

The 4...20 mA analogue output can be scaled freely or also allocated to one further parameter, e. g. g/m<sup>3</sup>.

After entering the system pressure of the compressed air system and the reference pressure (atmospheric pressure), the sensor can also calculate back to the atmospheric dew point from the measured pressure dew point if desired.

DESCRIPTION	ORDER NO.
FA 500 dew point sensor for refrigeration dryers, -20...50 °Ctd	0699 0501
FA 500 dew point sensor for adsorption dryers, -80...20 °Ctd	0699 0502
FA 500 dew point sensor for adsorption dryers, -60...30 °Ctd	0699 0503
<b>Connection cables:</b>	
Connection cable for VA/FA series, 5 m	0553 0104
Connection cable for VA/FA sensors, 10 m	0553 0105
Cable for alarm/pulse output, with M12 plug, length 5 m	0553 0106
Cable for alarm/pulse output, with M12 plug, length 10 m	0553 0107
Ethernet connection cable length 5 m, M12 plug x-coded (8 pin) to RJ 45 plug	0553 2503
Ethernet connection cable length 10 m, M12 plug x-coded (8 pin) to RJ 45 plug	0553 2504
<b>Options for FA 500:</b>	
Option: Max. pressure FA5xx 350 bar	Z699 0515
Option: Max. pressure FA5xx 500 bar	Z699 0516
Option: Special scaling FA5xx 4...20 mA=___ ... __ g/m <sup>3</sup> , ppm etc.	Z699 0514
Option: connection thread FA5xx, 5/8" UNF	Z699 0511
Option: surface condition FA 5xx, free of oil & grease	Z699 0517
Ethernet-Interface for VA 500/520 and FA 500	Z695 5006
Ethernet-Interface PoE for VA 500/520 and FA 500	Z695 5007
M-Bus board for VA 500/520 and FA 500	Z695 5004
<b>Further accessories:</b>	
Standard measuring chamber for compressed air up to 16 bar	0699 3390
High pressure measuring chamber up to 350 bar	0699 3590
CS Service Software for FA/VA sensors incl. PC connection set, USB connection and interface adapter to the sensor	0554 2007
Mains unit in wall housing for maximum 2 sensors of the series VA/FA 5xx, 100-240 V, 23 VA, 50-60 Hz / 24 VDC, 0.35 A	0554 0110
AC adapter plug 100-240 VAC / 24 VDC for VA/FA 5xx	0554 0109
<b>Calibration and adjustment:</b>	
Precision calibration at -40 °Ctd or +3 °Ctd incl. ISO certificate	0699 3396

### TECHNICAL DATA FA 500

<b>Measuring range:</b>	-80...20 °Ctd, -60...30 °Ctd, -20...50 °Ctd, or 0...100% RH
<b>Accuracy:</b>	± 1 °C at +50...-20 °Ctd ± 2 °C at -20...-50 °Ctd ± 3 °C at -50...-80 °Ctd
<b>Pressure range:</b>	-1...50 bar Special version up to 500 bar
<b>Power supply:</b>	24 VDC (10...36 VDC)
<b>Protection class:</b>	IP 65
<b>EMC:</b>	In acc. with DIN EN 61326-1
<b>Operating temperature:</b>	-20...50 °C
<b>Connection:</b>	2 x M12, 5-pin for analogue output, Modbus-RTU and alarm output, M-Bus (optional) Ethernet (PoE) (optional)
<b>PC connection:</b>	Modbus-RTU interface (RS 485)
<b>Output: (3-wire)</b>	4...20 mA = -80...20 °Ctd 4...20 mA = -60...30 °Ctd 4...20 mA = -20...50 °Ctd
<b>Burden for analogue output:</b>	< 500 Ω
<b>Alarm relay:</b>	NC, max. 60 VDC, 0.5 A
<b>Screw-in thread:</b>	G 1/2"
<b>Dimensions housing:</b>	76.5 x 85 x 75 mm (Wx-HxD)