



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 desiccant driers.



Special features:

- Integrated display
- Threshold value adjustable via keypad alarm relay (max. 60 VDC, 0.5 A)
- Pressure-tight up to 350 bar (special version)
- Extreme long-term stability
- Quick response time
- 4...20 mA analog output
- 2 versions: Refrigeration dryers and desiccant dryers
- **NEW:** Modbus-RTU interface
- **NEW:** Higher resolution of sensor signal caused by 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]
 - Moisture content [g / m³]
 - Moisture content V / V [ppmV / V]
 - Water vapor particle pressure [hPa]
 - Atmospheric dew point [° Ctd.atm]



The integrated keys enable an easy menu-driven operation



Upper connection:

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

Lower connection:

Alarm relay

Easy operation via 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 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 resp. also allocated to one further parameter, e. g. g/m³.

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 driers, -20...50 °Ctd	0699 0501
FA 500 dew point sensor for desiccant driers, -80...20 °Ctd	0699 0502
FA 500 dew point sensor for desiccant driers, -60...30 °Ctd	0699 0503
Connection cables:	
Connection cable for VA/FA series, 5 m	0553 0104
Connection cable for VA/FA series, 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
Options for FA 500:	
Option: max. pressure FA 5xx 350 bar	Z699 0515
Option: max. pressure FA 5xx 500 bar	Z699 0516
Option: special scaling FA 5xx 4...20 mA=___ ... __ g/m³, ppm etc.	Z699 0514
Option: connection thread FA 5xx, 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
Further accessories:	
Standard measuring chamber 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 V AC/ 24 V for VA/FA 500/520	0554 0109
Calibration and adjustment:	
Precision calibration at -40 °Ctd or +3 °Ctd including ISO certificate	0699 3396

TECHNICAL DATA FA 500	
Measuring range:	-80...20 °Ctd, -60...30 °Ctd, -20...50 °Ctd, resp. 0...100% RH
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 500 bar
Power supply:	24 VDC (18...30 VDC)
Protection class:	IP 65
EMC:	According to DIN EN 61326-1
Operation temp.:	-20...50 °C
Connection:	2 x M12, 5-pole for analog output, Modbus-RTU and alarm output, M-Bus (optional) Ethernet (PoE) (optional)
PC connection	Modbus-RTU interface (RS 485)
Output: (3-wire)	4...20 mA = -80...20°Ctd 4...20 mA = -60...30°Ctd 4...20 mA = -20...50°Ctd
Burden for analog output:	< 500 Ω
Alarm relay:	NC, max.60 VDC, 0,5 A
Screw-in thread:	G 1/2"
Dimensions of housing:	76,5 x 85 x 75 (BxHxT)