FA 500 - Dew point sensor from -112 to 68 °Ftd

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 7251 psi (special version)
- Extremely stable in the long term
- Quick adaption time
- 4...20 mA analog 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 [°Ftd]
- Temperature [°F]
- rel. humidity [% RH]
- abs. humidity [g/m³]
- Degree of humidity [g/m³]
- Moisture content V/V [ppmV/V]
- Water vapor particle pressure [hPa]
- Atmospheric dew point [°Ftd.atm]

The integrated keys enable simple, menu-controlled operation

Upper connection:
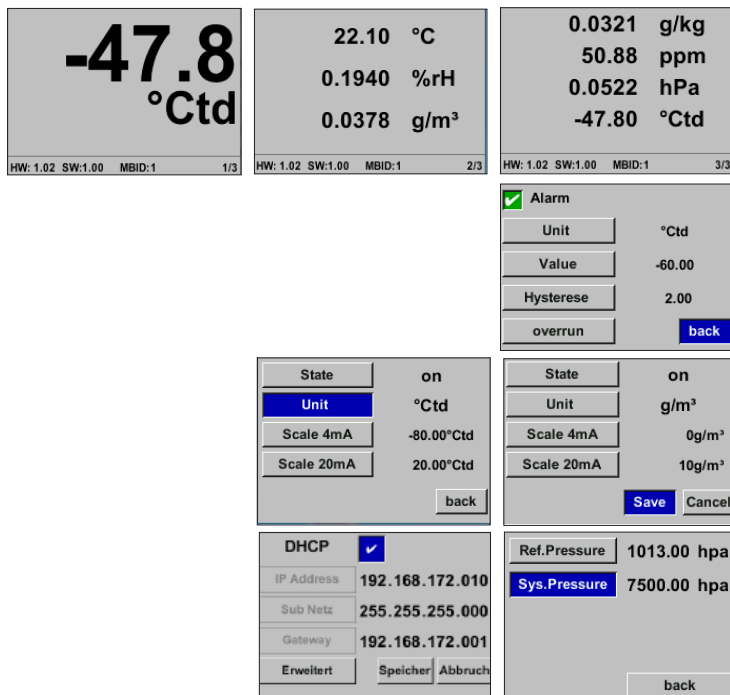Power supply, 4…20 mA output, Modbus-RTU output

Lower connection:
Alarm relay

Option: Ethernet interface (PoE)

Easy operation via keys on display

-47.8 °Ctd
HW: 1.02 SW:1.00   MBID:1   1/3

22.10 °C
0.1940 %rH
0.0378 g/m³
HW: 1.02 SW:1.00   MBID:1   2/3

0.0321 g/kg
50.88 ppm
0.0522 hPa
-47.80 °Ctd
HW: 1.02 SW:1.00   MBID:1   3/3

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.

Alarm
Unit	°Ctd
Value	-60.00
Hysterese	2.00
overrun	back

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.

State	on
Unit	°Ctd
Scale 4mA	-80.00°Ctd
Scale 20mA	20.00°Ctd
	back

State	on
Unit	g/m³
Scale 4mA	0g/m³
Scale 20mA	10g/m³
	Save Cancel

The 4…20 mA analog output can be scaled freely or also allocated to one further parameter, e. g. g/m³.

DHCP	✔
IP Address	192.168.172.010
Sub Netz	255.255.255.000
Gateway	192.168.172.001
Erweitert	Speicher Abbruch

Ref.Pressure	1013.00 hpa
Sys.Pressure	7500.00 hpa
	back

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, -4…122 °Ftd	0699 0501
FA 500 dew point sensor for adsorption dryers, -112 to 68 °Ftd	0699 0502
FA 500 dew point sensor for adsorption dryers, -76...86 °Ftd	0699 0503
Connection cables:	
Connection cable for VA/FA series, 16 ft	0553 0104
Connection cable for VA/FA sensors, 32.81 ft	0553 0105
Cable for alarm/pulse output, with M12 plug, length 16 ft	0553 0106
Cable for alarm/pulse output, with M12 plug, length 32.81 ft	0553 0107
Ethernet connection cable length 16 ft, M12 plug x-coded (8 pin) to RJ 45 plug	0553 2503
Ethernet connection cable length 32 ft, M12 plug x-coded (8 pin) to RJ 45 plug	0553 2504
Options for FA 500:	
Option: Max. pressure FA5xx 5076 psi	Z699 0515
Option: Max. pressure FA5xx 7251 psi	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
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 for compressed air up to 232 psi	0699 3390
High pressure measuring chamber up to 5076 psi	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
Calibration and adjustment:	
Precision calibration at -40 °...37.4 °Ftd incl. ISO certificate	0699 3396

TECHNICAL DATA FA 500	
Measuring range:	-112 to 68 °Ftd, -76...86 °Ftd, -4…122 °Ftd, or 0…100% RH
Accuracy:	± 1.8°F to 122...-4°Ftd ± 3.6°F to -4...-58°Ftd ± 5.4°F to -58...-112°Ftd
Pressure range:	-1…50 bar Special version up to 7251 psi
Power supply:	24 VDC (10…36 VDC)
Protection class:	IP 65
EMC:	In acc. with DIN EN 61326-1
Operating temperature:	-4…122 °F
Connection:	2 x M12, 5-pin 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 = -112 to 68 °Ftd 4…20 mA = -76...86 °Ftd 4…20 mA = -4…122 °Ftd
Burden for analog output:	< 500 Ω
Alarm relay:	NC, max. 60 VDC, 0.5 A
Screw-in thread:	G 1/2″
Dimensions housing:	3.01 x 3.35 x 2.95 inch (WxHxD)