



FA 550 dew point sensor - in robust die-cast aluminum housing

The FA 550 is ideal for outdoor dew point measurements or rougher industrial environment



Special features:

- Robust, waterproof die-cast aluminum housing, IP 67
- Alarm relay - limit value adjustable via buttons (max 60 VDC, 0.5 A)
- 4...20 mA analog output
- Optional: 2 pieces 4 ... 20 mA analog output e.g. for dew point and temperature
- Extremely stable in the long term
- Quick adaption time
- Pressure-resistant up to 7251 psi (optional)
- **NEW:** Modbus-RTU interface
- **NEW:** Ethernet interface (optional)
- **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 [ppm-V/V], partial vapor pressure [hPa], atmospheric dew point [° Ctd.atm]

APPLICATION:

- Dew point measurement in the compressed air after adsorption dryers/membrane dryers and refrigeration dryers
- Residual moisture measurement / dew point measurement in gases such as: oxygen, nitrogen, argon, hydrogen, natural gas, biogas ...

Easy operation via the keys on the display

-47.8 °Ctd <small>HW: 1.02 SW: 1.00 MBID: 1 1/3</small>	22.10 °C 0.1940 %rH 0.0378 g/m ³ <small>HW: 1.02 SW: 1.00 MBID: 1 2/3</small>	0.0321 g/kg 50.88 ppm 0.0522 hPa -47.80 °Ctd <small>HW: 1.02 SW: 1.00 MBID: 1 3/3</small>
<input checked="" type="checkbox"/> Alarm Unit: °Ctd Value: -60.00 Hysterese: 2.00 overrun [back]		
State: on Unit: °Ctd Scale 4mA: -80.00°Ctd Scale 20mA: 20.00°Ctd [back]		
State: on Unit: g/m ³ Scale 4mA: 0g/m ³ Scale 20mA: 10g/m ³ [Save] [Cancel]		
DHCP: <input checked="" type="checkbox"/> 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]		

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 analog output can be scaled freely or 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.



Example order code FA 550: [0699 0550_A1_B1_C1_D1_E1_F1_G1_H1_I1](#)

Measuring range	
A1	(-112 to 68 °Ftd) -80...+20 °Ctd.
A2	(-4 to 122 °Ftd) -20...+50 °Ctd.
A3	(-40 to 86 °Ftd) -40...+30 °Ctd.
A4	(-76 to 86 °Ftd) -60...+30 °Ctd.
A5	(-112 to 68 °Ftd) -80...+20 °Ctd. (scaling 4...20 mA = -148...68 °Ftd.)
A6	(-112 to 68 °Ftd) -80...+20 °Ctd. (scaling 4...20 mA = -166...68 °Ftd.)

Display option	
B1	with integrated display
B2	without display

Option Signal output / Bus connection	
C1	2 x 4 ... 20 mA analog output (electrically isolated), alarm relay, RS 485 (Modbus-RTU)
C4	1 x 4 ... 20 mA analog output (not electrically isolated), alarm relay, RS 485 (Modbus-RTU)
C5	Ethernet interface (Modbus / TCP), 1 x 4 ... 20 mA analog output (not electrically isolated), alarm relay, RS 485 (Modbus-RTU)
C8	M-Bus
C9	Ethernet interface PoE (Power over Ethernet) Modbus / TCP, 1 x 4 ... 20 mA analog output (not electrically isolated), alarm relay, RS 485 (Modbus-RTU)

Special version analog output	
D1	No special version
D2	Special version 2...10 V

Scaling analog output	
E1	Standard scaling
E2	Special scaling 4...20 mA = 0...x g/m ³ , ppm, g/kg etc.

Sensor protection cap	
F1	Stainless steel sintered cap (~ 50 µm)
F2	perforated stainless steel cap

Connection thread	
G1	G 1/2"
G2	UNF 5/8"
G3	1/2" NPT

Maximum pressure	
H1	725 psi
H2	5076 psi
H3	7251 psi

Surface condition	
I1	standard version
I2	special cleaning - oil and grease free (e.g. for oxygen applications and so on)
I3	Silicone-free version including special cleaning oil- and grease-free

DESCRIPTION	ORDER NO.
FA 550 Dew point sensor in robust die-cast aluminum housing	0699 0550
Further accessories:	
Standard measuring chamber up to 232 psi	0699 3390
High pressure measuring chamber for compressed air up to 5076 psi	0699 3590
Stainless steel bypass measuring chamber for dew point measurement in gases under pressure	0699 3290
Connection cables:	
Connection cable for probes 16 ft with open ends	0553 0108
Connection cable for probes 32 ft with open ends	0553 0109
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
Power supply in wall housing for max. 2 sensors VA / FA series 5xx, 100-240 VAC, 23 VA, 50-60 Hz / 24 VDC, 0.35 A	0554 0110
CS Service Software VA 550 incl. interface cable to PC (USB) and power supply - for configuration / parametrisation VA 550/570	0554 2007
PNG cable screwing - for FA 550, VA 550/570	0553 0552
Calibration and adjustment:	
Precision calibration at -40 °Ctd...37.4 °Ftd incl. ISO certificate	0699 3396
Additional calibration point freely selectable	0700 7710

TECHNICAL DATA FA 550

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:	-14.5...725 psi, Special version up to 5076 psi or 7251 psi
Power supply:	24 VDC (10...36 VDC)
Protection class:	IP 67
EMC:	In acc. with DIN EN 61326-1
Operating temperature:	-4...122 °Ftd
Outputs:	Standard: Modbus-RTU, 4...20 mA active (not electrically isolated), alarm relay (max. 48 VDC, 0.5 A) Options: See order code
Burden:	< 500 Ω
Material:	Die-cast aluminum housing, sensor tube stainless steel 1.4571
Screw-in thread:	G 1/2", optional 5/8" UNF, 1/2" NPT