FA 550 dew point sensor - In robust die-cast aluminium housing

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

Special features:

- Robust, waterproof die-cast aluminium housing, IP 67
- Alarm relay - limit value adjustable via buttons (max 60 VDC, 0.5 A)
- 4...20 mA analogue output
- Optional: 2 pieces 4 ... 20 mA analogue output e.g. for dew point and temperature
- Extremely stable in the long term
- Quick adaption time
- Pressure-resistant up to 500 bar (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 [ppmV/V], partial vapour pressure [hPa], atmospheric dew point [° Ctd.atm]

APPLICATON:

- 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

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/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.

Dew point

Example order code FA 550: 0699 0550_A1_B1_C1_D1_E1_F1_G1_H1_I1

Measuring range	
A1	-80…+20 °Ctd. (-112 to 68 °F)
A2	-20…+50 °Ctd. (-4 to 122 °F)
A3	-40…+30 °Ctd. (-40 to 86 °F)
A4	-60…+30 °Ctd. (-76 to 86 °F)
A5	-80…+20 °Ctd. (-112 to 68 °F) (scaling 4…20 mA = -100…+20 °Ctd.)
A6	-80…+20 °Ctd. (-112 to 68 °F) (scaling 4…20 mA = -110…+20 °Ctd.)

Display option	
B1	with integrated display
B2	without display

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

Special version analogue output	
D1	No special version
D2	Special version 2…10 V

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Further accessories:
Standard measuring chamber up to 16 bar
High pressure measuring chamber for compressed air up to 350 bar
Stainless steel bypass measuring chamber for dew point measurement in gases under pressure

Connection cables:
Connection cable for probes 5 m with open ends
Connection cable for probes 10 m with open ends
Ethernet connection cable length 5 m, M12 plug x-coded (8 pin) to RJ 45 plug
Ethernet connection cable length 10 m, M12 plug x-coded (8 pin) to RJ 45 plug
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
CS Service Software VA 550 incl. interface cable to PC (USB) and power supply - for configuration / parametrisation VA 550/570
PNG cable screwing - for FA 550, VA 550/570

Calibration and adjustment:
Precision calibration at -40 °Ctd or 3 °Ctd incl. ISO certificate
Additional calibration point freely selectable

Scaling analogue output	
E1	Standard scaling
E2	Special scaling 4…20 mA = 0…x g/m³, 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	50 bar
H2	350 bar
H3	500 bar

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

0699 0550
0699 3390
0699 3590
0699 3290
0553 0108
0553 0109
0553 2503
0553 2504
0554 0110
0554 2007
0553 0552
0699 3396
0700 7710

TECHNICAL DATA FA 550	
Measuring range:	-80…20 °Ctd, -60…30 °Ctd, -20…50 °Ctd, or 0…100% RH
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 350 bar or 500 bar
Power supply:	24 VDC (10…36 VDC)
Protection class:	IP 67
EMC:	In acc. with DIN EN 61326-1
Operating temperature:	-20…50 °C
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, NPT 1/2"