

CAEL-SS27

Dew Point Transmitter for Industrial Control

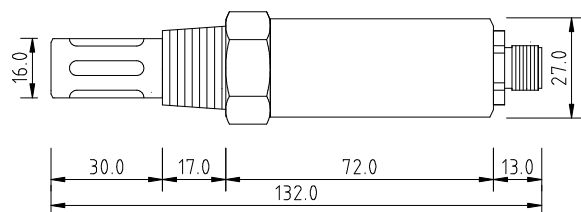


Features

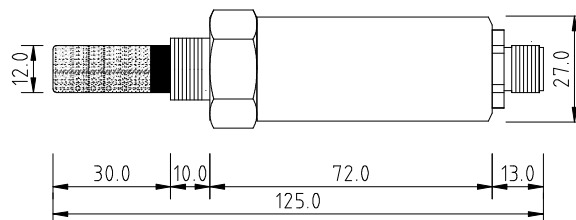
- Measuring range -40 ...60°C Td
- Analog output 4...20mA
- MODBUS RTU protocol with integer and floating type
- Both analog and digital output
- Td or PPM selectable output
- Free software with data log
- Unit support metric or imperial
- Working temperature up to +85°C (185 °F)
- Pressure up to 100 bar
- Excellent quality and stable measurement
- Quick response time
- IP-65 housing

DIMENSIONS (mm)

G 1/2" PT 1/2"

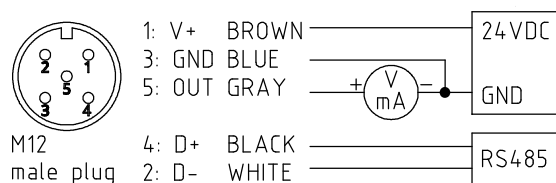


UNF 5/8"



CONNECTION DIAGRAMME

Analog and RS485 output



PHYSICAL QUANTITY OUTPUT RANGE

	Metric	Imperial
- Temperature <u>T</u>	-40 ... 60 °C	-40... 140 °F
- Relativity Humidity <u>RH</u>	0 ... 100 %	0 ... 100 %
- Dew point <u>Td</u>	-40 ... 60 °C	-40 ... 140 °F
- PPMv <u>V</u>	0 ... 240000	0 ... 240000
- PPMw <u>W</u>	0 ... 150000	0 ... 150000

TECHNICAL DATA

Dew point

Measuring range

CAEL-SS27 -40 ... 60°C Td

CAEL-SS27B -20 ... 60°C Td

Accuracy (including non-linearity, hysteresis, and repeatability) $\pm 3^\circ\text{C Td@25}^\circ\text{C (-40...60}^\circ\text{C Td)}$

Temperature compensate Yes

Analog output

Channel 1

Type current or voltage

Current output 3-wire 4 ... 20 mA

Voltage output 0 ... 1 V / 5 V / 10 V

Accuracy of analog outputs at +25 °C $\pm 0.1\%$ full scale

Temperature dependence $\pm 0.005\%/^\circ\text{C}$ full scale

External loads current output RL < 400 ohm

voltage output 0 ... 1 V output RL > 2k ohm

0 ... 5 V and 0 ... 10 V outputs RL > 10k ohm

RS485 Modbus RTU (Standard)

ID 1...247

Baud rate 9600/19200/38400/57600/115200

Data format N81/N82/E81/E82/O81/O82

Psychrometric calculations

(V) PPMv, (W) PPMw

Power supply

DC 15 ... 35 V

AC 12 ... 29 V

Power consume (25 °C, V+ 24 VDC)

Current output max. 30mA

Voltage output typ. 10mA

During Auto-Calibration 150 mA

Mechanics

Housing material 316/304 stainless steel

Probe pressure 100bar

Housing classification IP 65

Screw in thread PT1/2" G1/2" UNF5/8"

Electrical connections M12-5 pin

Filter

G 1/2" and PT 1/2" stainless steel mesh (75µm)

or sintered stainless steel (30µm)

UNF 5/8" sintered stainless steel (100µm)

Operation temperature

-40 ... 85 °C (-40 ... 185 °F)

Electromagnetic compatibility

EN61326-1:2013 Emission

CISPR11:2009+A1:2010 Group 1 Class B

EN61326-1:2013 Immunity

IEC 61000-4-2:2008

IEC 61000-4-3:2006+A1:2007+A2:2010

IEC 61000-4-8:2009

**When the dew point is below 0 °C (32 °F), the transmitter outputs frost point*

ORDERING GUIDE

Model	Output	Dew point scale	Thread	Filter
CAEL-SS27	4 ... 20mA (2)	-20 ... 60°C (1)	PT 1/2" (P)	* Stainless steel mesh (M)
CAEL-SS27B	0 ... 10V (3)	-40 ... 60°C (2)	G 1/2" (G)	Sintered stainless steel (S)
	0 ... 5V (5)	-40 ... 20°C (4)	UNF 5/8" (U)	
	0 ... 1V (6)			

* only for G 1/2" PT 1/2" thread

ORDERING EXAMPLE

CAEL-SS27-24PM

Dew point measurement range: -40 ... 60°C Td

Output: 4 ... 20 mA

Dew point scale: -40 ... 20°C Td

Thread: PT 1/2"

Filter: Stainless steel mesh (75µm)

Accessories

SA020002 Stainless steel sintered, pores size: 30µm	
SA020004 Stainless steel mesh, pores size: 75µm	

SA020401 PT 1/2" stainless steel sample block with PT 1/4" inlet & outlet ports	
--	---

