

DMT340 Series Dewpoint and Temperature Transmitters for low dew point Applications

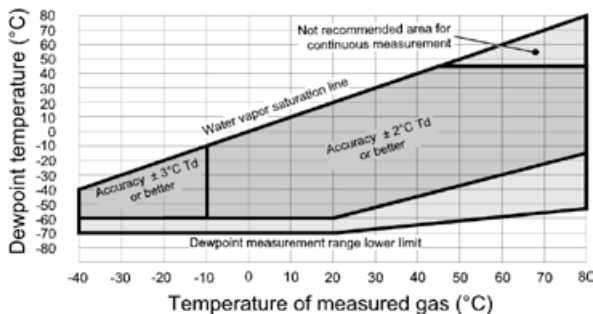
Technical data



Measured parameters

DEW POINT

Sensor	Vaisala DRYCAP®180M	
Measurement range	-60 ... +80 °C (-76 ... +176 °F) Td	
For continuous use	-60 ... +45 °C (-76 ... +113 °F) Td	
Accuracy		
up to 20 bar/290 psia	±2 °C/±3.6 °F see the accuracy graph below	
20 ... 50 bar/290 ... 725 psia	additional inaccuracy +1 °C Td	



Dew point accuracy vs. measurement conditions

Response time	63% [90%] at +20°C gas temperature	
Flow rate	1 l/min and 1 bar pressure	
-60 ... -20 °C Td (-76 ... -4 °F Td)	5s [10s]	
-20 ... -60 °C Td (-4 ... -76 °F Td)	45s [10min]	

TEMPERATURE

Measurement range	0 ... +80 °C (+32 ... +176 °F)	
Accuracy	±0.2 °C at room temperature	
Temperature sensor	Pt 100 IEC 751 1/3 class B	

Probe specifications

DMT342 with Small Size Flanged Probe

Pressure range	0 ... 50 bar/0 ... 725 psia
Mechanical durability	up to 250 bar/3625 psia
Probe diameter	12 mm/0.5 inch
Installation	
Flange	36 mm/1.4 inch
Sampling cell	HMP302SC

DMT344 with Probe for High Pressures

Pressure range	0 ... 50 bar/0 ... 725 psia
Mechanical durability	up to 100 bar/1450 psia
Probe diameter	12 mm/0.5 inch
Installation	
Fitting Body	M22 x 1.5
Fitting Body	NPT 1/2"

DMT347 with Small Sized Probe

Pressure range	0 ... 10 bar/0 ... 145 psia
Mechanical durability	up to 10 bar/145 psia
Probe diameter	12 mm/0.5 inch
Installation	
Fitting Body	R 3/8" ISO
Fitting Body	G 1/2" ISO
Fitting Body	NPT 1/2"

DMT348 with Probe for Pipeline Installations

Pressure range	0 ... 40 bar/0 ... 580 psia
Adjustable length	41 ... 149/371 mm/1.61 ... 5.87/14.6 inch
Installation	
Fitting Body	R1/2" ISO
Fitting Body	NPT 1/2"
Ball Valve Set	BALLVALVE-1
Sampling Cell	DMT242SC or DMT242SC2

Technical data

RELATIVE HUMIDITY

Measurement range	0 ... 70 %RH
Accuracy (RH <10 %RH, at + 20 °C)	±0.004 %RH + 20 % of reading
PPM	
Measurement range (typical)	10 ... 2500 ppm
Accuracy (at + 20 °C, 1 bar)	1 ppm + 20 % of reading
Other measurement parameters available (depends on model) mixing ratio, absolute humidity, pressure dew point calculated to 1 bar, temperature difference (T _{Td}), water vapor pressure	

Operating environment

Operating temperature	
for probes	-40 ... +80 °C (-40 ... +176 °F)
Mechanical durability	Up to +180 °C (+356 °F)
for transmitter body	-40 ... +60 °C (-40 ... +140 °F)
with display	0 ... +60 °C (+32 ... +140 °F)
Storage temperature range	-55 ... +80 °C (-67 ... +176 °F)
Pressure range for probes	See probe specifications
Sample flow rate	No effect
Measured gases	non corrosive
Complies with EMC standard EN61326-1, Electrical equipment for measurement, control and laboratory use - EMC requirements; Industrial environment.	

Inputs and outputs

Operating voltage	10 ... 35 VDC, 24 VAC
with optional power supply module	100 ... 240 VAC 50/60 Hz
Power consumption @ 20 °C (U _{in} 24VDC)	
RS-232	max 25 mA
U _{out} 2 x 0...1V / 0...5V / 0...10V	max 25 mA
I _{out} 2 x 0...20 mA	max 60 mA
display and backlight	+ 20 mA
during sensor purge	+ 110 mA max
Analog outputs (2 standard, 3rd optional)	
current output	0 ... 20 mA, 4 ... 20 mA
voltage output	0 ... 1 V, 0 ... 5 V, 0 ... 10 V
Accuracy of analog outputs at 20 °C	0.05 % full scale
Temperature dependence of the analog outputs	± 0.005 %/°C full scale
External loads	
current outputs	R _L < 500 ohm
0 ... 1V output	R _L > 2 kohm
0 ... 5V and 0 ... 10V outputs	R _L > 10 kohm
Max wire size	0.5 mm ² (AWG 20) stranded wires recommended

Digital outputs	RS-232, RS-485 (optional)
Service connection	RS-232, USB
Relay outputs	0.5 A, 250 VAC, SPDT (optional)
Ethernet interface (optional)	
Supported standards	10/100Base-T
Connector	RJ45
Protocols	Telnet
WLAN interface (optional)	
Supported standards	802.11b
Antenna connector type	RP-SMA
Protocols	Telnet
Security	WEP 64/128, WPA
Authentication / Encryption	
Open / no encryption	
Open / WEP	
WPA Pre shared key / TKIP	
WPA Pre shared key / CCMP (a.k.a. WPA2)	
Optional data logger with real-time clock	
Logged parameters	max. three with trend/min/max values
Logging interval	10 sec (fixed)
Max. logging period	4 years 5 months
Logged points	13,7 million points per parameter
Battery lifetime	min. 5 years
Display	LCD with backlight, graphic trend display of any parameter
Display menu languages	English, Chinese, Spanish, German, French, Japanese, Russian, Swedish, Finnish

Mechanics

Cable bushing	M20x1.5 for cable diameter 8 ... 11 mm / 0.31 ... 0.43"
Conduit fitting	1/2" NPT
User cable connector (optional)	M12 series 8 pin (male)
option 1	with plug (female) with 5 m / 16.4 ft black cable
option 2	with plug (female) with screw terminals
USB-RJ45 Serial Connection Cable	order no. 219685
Probe cable diameter	5.5 mm
Probe cable lengths	2 m, 5 m or 10 m
Housing material	G-AlSi 10 Mg (DIN 1725)
Housing classification	IP 65 (NEMA 4X)

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