



## DMT346, Reliable in Very Hot Processes

When process temperatures range between 140 °C to 350 °C, the DMT346 provides the best measurement performance.

The DMT346 comes with a cooling set as a standard feature. The cooling effect may be regulated by adding the cooling fins, or removing them from the set for the best measurement performance.

The cooling system operates without moving parts, additional power or cooling utilities, thereby eliminating the risk of sensor damage due to a mechanical cooling failure.

Additionally, sensor warming minimizes the risk of condensing on the sensor. In low humidity the combination of auto-calibration and DRYCAP® ensures accurate measurement.

## Graphical Display

The DMT345 and DMT346 transmitters can be ordered with a large numerical and graphical display, which allows the user to clearly monitor operational data, measurement trends and up to one-year measurement history.

The optional data logger with real-time clock makes it possible to generate more than four years of the measured history and zoom in on any desired time or time frame.

## Versatile Outputs and (Wireless) Data Collection

The transmitter can be connected to a network with an optional (W)LAN interface, which enables a (wireless) Ethernet connection.

For serial interface also the USB connection, RS232 and RS485 can be used. Additionally an alarm relay option is available.

The transmitter can have up to three analog outputs. Galvanic isolation of supply power and analog outputs are also offered. The recorded measurement data can be viewed on the display or transferred to a PC with Microsoft Windows® software.

DMT345-346 is also capable in applying the MODBUS communication protocol and together with an appropriate connection option provides either MODBUS RTU (RS485) or MODBUS TCP/IP (Ethernet) communication.

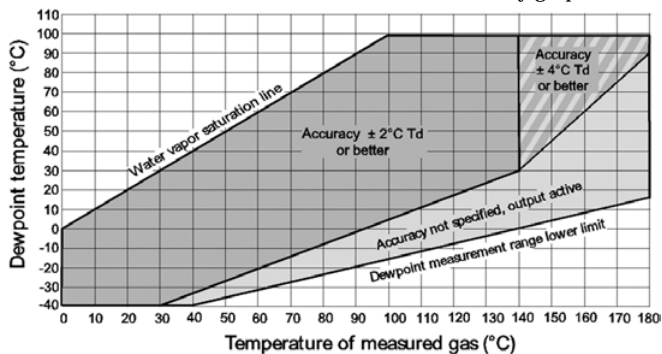
Units are delivered installation-ready.

# Technical Data

## Measured Variables DMT345

DEWPOINT DMT345	
Sensor	Vaisala DRYCAP®180S
Measurement range	-40 ... +100 °C (-40 ... +212 °F) Td
Accuracy	±2°C (±3.6 °F) Td

See the accuracy graph below



Dewpoint accuracy vs. measurement conditions

Response time 63 % [90 %] flow rate 1 l/min and 1 bar pressure	
from dry to wet	5s [10 s]
from wet to dry including auto-calibration	45s [5 min]



TEMPERATURE DMT345	
Measurement range	0 ... +180 °C (+32 ... +356°F)
with sensor warming	upper range limited by humidity (at 80% RH warming is switched on and T reading not actual process Temperature)
Accuracy	±0.4 °C at 100 °C
Temperature sensor	Pt100 RTD Class F0.1 IEC 60751
RELATIVE HUMIDITY DMT345	
Measurement range	0 ... 100 % RH
with sensor warming	0 ... 80 % RH
Accuracy	
below 10 % RH	±10 % of reading
above 10 % RH	±1,5% RH + 1,5 % of reading
MIXING RATIO DMT345	
Measurement range (typical)	0 ... 1000 g/kg (0 ... 7000 gr/lbs)
Accuracy (typical)	±12% of reading

**System Integrator: Helon Lighting Limited**

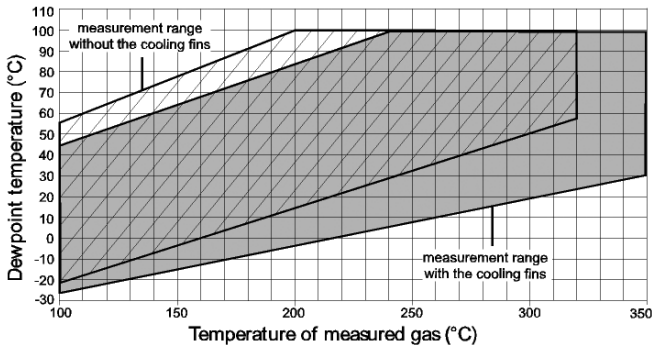
Tel: (852) 3976 5100 | Fax: (852) 3583 4869 | <http://www.helon.com.hk> | [info@helon.com.hk](mailto:info@helon.com.hk)

# Technical Data

## Measured Variables DMT346

DEWPOINT DMT346

Sensor Vaisala DRYCAP®180S  
 Measurement range -25 ... +100 °C (-13 ... +212 °F) Td  
 Accuracy ±2 °C (±3.6 °F) Td  
 See the accuracy graph below



*Dewpoint accuracy vs. measurement conditions*

Response time 63 % [90 %] flow rate 1 l/min and 1 bar pressure  
 from dry to wet 5s [10 s]  
 from wet to dry including auto-calibration 45s [5 min]

MIXING RATIO DMT346

Measurement range (typical) 0 ... 1000 g/kg (0 ... 7000 gr/lbs)  
 Accuracy (typical) ±12% of reading

## Operating Environment, Both Models

Mechanical durability Up to +180 °C (+356 °F) for DMT345  
 of probes Up to +350 °C (+662 °F) for DMT346  
 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 slight pressure difference (~ 200 mbar)  
 Measured gases non corrosive gases  
 Complies with EMC standard EN61326-1, Electrical equipment  
 for measurement, control and laboratory use - EMC requirements;  
 Industrial environment.

## Inputs and Outputs, Both Models

Operating voltage 10 ... 35 VDC, 24 VAC  
 with optional power supply module 100 ... 240 VAC 50/60 Hz  
 Default start-up time  
 initial reading after power-up 3 s  
 full operation after sensor Purge and Autocal about 6 min  
 Power consumption @ 20 °C (U<sub>in</sub> 24 VDC)  
 U<sub>out</sub> 2x0 ... 1V/0 ... 5V/0 ... 10V max 25 mA  
 I<sub>out</sub> 2x0 ... 20mA max 60 mA  
 RS-232 max 25 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<sub>L</sub> < 500 ohm  
 0 ... 1V output R<sub>L</sub> > 2 kohm  
 0 ... 5V and 0 ... 10V outputs R<sub>L</sub> > 10 kohm  
 Max wire size 0.5 mm<sup>2</sup> (AWG 20) stranded wires recommended  
 Digital outputs RS-232, RS-485 (optional)  
 Protocols ASCII commands, MODBUS RTU  
 Service connection RS-232, USB  
 Relay outputs 2+2 pcs (optional) 0.5 A, 250 VAC, SPDT  
 Ethernet interface (optional)  
 Supported standards 10BASE-T, 100BASE-TX  
 Connector 8P8C (RJ45)  
 IPv4 address assignment DHCP (automatic), static  
 Protocols Telnet, MODBUS TCP/IP  
 WLAN interface (optional) DHCP (automatic), static  
 Supported standards 802.11b  
 Antenna connector type RP-SMA  
 IPv4 address assignment DHCP (automatic), static  
 Protocols Telnet, MODBUS TCP/IP  
 Security WEP 64/128, WPA  
 WPA2/802.11i

Authentication / Encryption (WLAN)

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. four 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 (optional) LCD with backlight, graphic trend display  
 Display menu languages English, French, Spanish, Chinese, German, Japanese, Russian, Swedish, Finnish

## Mechanics, Both Models

Cable bushing M20x1.5 For cable diameter 8 ... 11mm/0.31 ... 0.43"  
 Conduit fitting (optional) 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 part. no 219685  
 Probe cable diameter 5.5 mm  
 Probe cable length 2 m, 5 m or 10 m  
 Housing material G-AISI 10 Mg (DIN 1725)  
 Housing classification IP 65 (NEMA 4X)  
 Housing weight 1.2 kg

**System Integrator: Helon Lighting Limited**

Tel: (852) 3976 5100 | Fax: (852) 3583 4869 | http: www.helon.com.hk | info@helon.com.hk

