Origo10 Series Modular Humidity, Temperature, Carbon Dioxide, and Dew Point Transmitters for HVAC Applications





FEATURES:

- Modular transmitter platform with fully interchangeable, factory-calibrated measurement probes for quick, tool-free recalibration and minimal downtime
- Measures relative humidity, temperature, carbon dioxide, and dew point, depending on connected probe
- Compatible with Vaisala XMP10, HMP60, HMP63, HMP110, and HMP113 probes (humidity/temperature/dew point); TMP115 and TMM10 (temperature); GMP251 and GMP252 (carbon dioxide); and DMT143 (dew point)
- Available in two configurations: **Origo10A** (3-wire, with 3 configurable analog outputs, Modbus® RTU, or BACnet® MS/TP, plus optional relay output / binary input) and **Origo10L** (2-wire, loop-powered, 4 ... 20 mA)
- Wall-mounted or duct-mounted installation, with probe-with-cable, direct-mount, or duct installation kit options
- Optional local display shows up to four measurement parameters simultaneously
- Splitter cable option allows two probes to be connected to a single transmitter
- IP65-rated enclosure; cleanroom compatible
- Configurable, calibrated, and adjusted on-site using Vaisala Insight PC software
- Traceable calibration certificate

BID SPECIFICATION INFORMATION

Ambient parameters, including but not limited to temperature, relative humidity, dew point, and carbon dioxide, shall be measured using **Vaisala Origo10 Series** transmitters. The following requirements shall be applied:

a) The transmitter shall accommodate interchangeable measurement probes and/or modules for the measured parameters, to enable flexible system design and to simplify calibration, replacement and maintenance.

b) Measurement probes shall be field-replaceable. Calibration services for the measurement probes shall be available globally.

c) The transmitter shall support an optional integrated display, capable of displaying up to four measurement parameters simultaneously.

d) The transmitter shall include an LED for status indications.

e) The transmitter shall support either of the following output configurations available within the same product family:

   i. Two loop-powered 4-20 mA analog outputs; or

   ii. Three analog outputs with selectable signal types of 4-20 mA, 0-10 V, or 0-5 V, and an RS-485 communication interface supporting selectable Modbus RTU and BACnet MS/TP protocols.

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f) The transmitter's three-output and RS-485 configurations shall support simultaneous multi-parameter measurement using two probes connected to a single transmitter via a splitter cable.

g) The transmitter's RS-485 configuration shall support daisy-chaining using an optional M12 connector.

h) The transmitter shall support an optional digital input for binary signals from external devices, such as door contacts.

i) The transmitter shall support an optional digital output for controlling external relays.

j) The transmitter shall be suitable for demanding indoor environments and housed in an IP65-rated enclosure.

k) The transmitter shall have a cleanroom-compatible design with smooth, easy-to-clean surfaces and low particle emission.

l) The enclosure shall be designed for tool-free opening and closing to facilitate rapid access for installation, inspection, and maintenance.

m) Magnetic mounting accessories shall be available to simplify transmitter installation.

n) Wall-mounting and duct-mounting accessories and outdoor radiation shields shall be available for the measurement probes.

o) The product family shall include both wall-mount and duct-mount options based on the same transmitter hardware and firmware to simplify specification, installation, maintenance, and spare-parts management.

p) The transmitter shall support configuration and field calibration via a service port.

q) The manufacturer shall provide a minimum 5-year warranty for the transmitter.

r) The temperature transmitter shall use a Class A Pt1000 RTD sensor or a Class A Pt100 RTD sensor and shall achieve an accuracy of up to ±0.1 °C (±0.18 °F).

s) The humidity transmitter shall use Vaisala HUMICAP® capacitive thin-film sensor technology. Accuracy specifications shall include options of ±1 %RH, ±1.5 %RH, and ±2 %RH. Measurement stability shall be ±0.5 %RH/year or better.

t) Calculated humidity parameters, such as dew point/frost point, wet-bulb temperature, absolute humidity, mixing ratio, and enthalpy, shall be available directly from the humidity transmitter.

u) The dew point transmitter for dry room applications shall use Vaisala DRYCAP® sensor technology.

v) The carbon dioxide transmitter shall use Vaisala CARBOCAP® non-dispersive infrared (NDIR) sensor technology.

w) The transmitter shall be supplied with a NIST-traceable calibration certificate, in either electronic or paper format.

x) The transmitter shall have an expected service life of at least 12 years under normal operating conditions.

AVAILABLE CONFIGURATIONS:

Vaisala **Origo10A** (3-wire; RH, T, CO_2, or Td; 3 analog outputs, Modbus® RTU, or BACnet® MS/TP; optional relay output and binary input, optional display)

Vaisala **Origo10L** (2-wire, loop-powered; RH and T; 2 analog outputs; optional display)

Mounting: Wall-mounted (probe with cable, without cable, or with cable and duct installation accessory) or duct-mounted, available for both configurations.

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