E+E

your partner
in sensor
technology.

Product Catalog

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Made in Austria

E+E Elektronik develops and produces sensing elements, modules and sensors for air velocity, carbon dioxide, dew point, flow, humidity, moisture in oil, pressure and temperature. Handheld measuring devices, humidity calibration systems and calibration services complete the Austrian sensor specialist‘s product portfolio.

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Elements & Modules

Our sensor elements and modules are developed in-house and manufactured in own state of the art clean rooms.

Custom-engineered electronics and unequalled calibration know how allow for the highest flexibility in meeting customer specific requirements. This makes E+E Elektronik the ideal partner for OEM applications.

Carbon Dioxide

EE894

CO_2 Module Measures Four Climate Parameters

Measuring range – CO_2	0...2,000 ppm / 0...5,000 ppm / 0...10,000 ppm
Measuring range – Humidity	0...95 % RH (non condensing)
Measuring range – Pressure	700...1,100 mbar (10.15...15.95 psi)
Measuring range – Temperature	-40...60 °C (-40...140 °F)
Digital interface	I^2C / E2
Supply	4.75-7.5 V DC

EE895

Miniature Module for CO_2, Temperature and Barometric Pressure

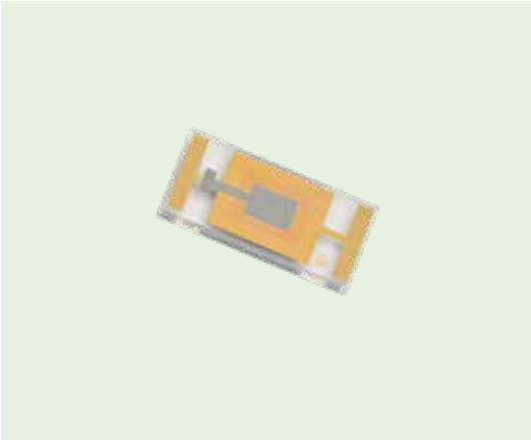
Measuring range – CO_2	0...2,000 ppm / 0...5,000 ppm / 0...10,000 ppm
Measuring range – Pressure	700...1,100 mbar (10.15...15.95 psi)
Measuring range – Temperature	-40...60 °C (-40...140 °F)
Digital interface	I^2C / UART
Supply	3.3-5 V DC

Humidity

EE03

Digital Humidity and Temperature Module

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...85 °C (-40...185 °F)
Accuracy	± 3 % RH / ± 0.3 °C (± 0.54 °F)
Digital interface	E2
Supply	2.5-5.5 V DC



HC103M2

Very Fast Humidity Element for Radiosondes

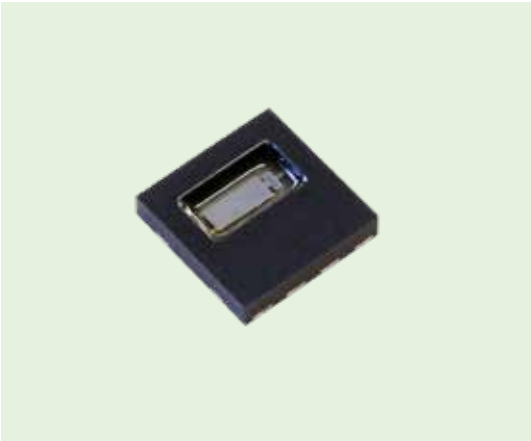
Nominal capacitance C_0 (at 30 °C / 86 °F)	160 ± 40 pF
Sensitivity	0.55 pF / % RH
Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-80...60 °C (-112...140 °F)
Response time t_{63}	< 3 s at 23 °C (-5 °F) / < 15 s at -20 °C (-29 °F)

HC201

Capacitive Humidity Element with Leads

Nominal capacitance C_{76} (at 20 °C / 68 °F)	200 ± 30 pF
Sensitivity	0.6 pF / % RH
Measuring range – Humidity	10...95 % RH
Measuring range – Temperature	-40...110 °C (-40...230 °F)

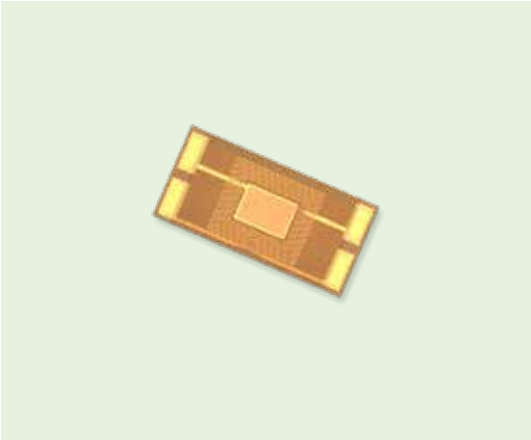
Humidity



HCT01

Humidity and Temperature Element

Nominal capacitance C_0 (at 30 °C / 86 °F)	70 pF
Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...140 °C (-40...284 °F)
Accuracy	Non-adjusted up to ± 2 % RH (20...80 % RH) up to ± 3 % RH (20...80 % RH)
Sensing element protection	E+E proprietary coating



HMC03M

Heated Humidity Element for Radiosondes

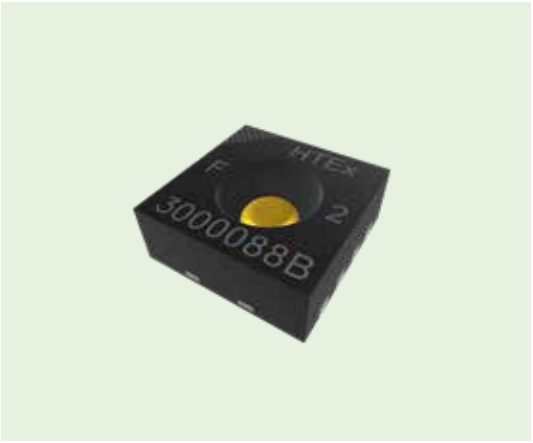
Nominal capacitance C_0 (at 30 °C / 86 °F)	120 ± 40 pF
Sensitivity	0.41 pF / % RH
Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-80...60 °C (-112...140 °F)
Response time t_{63}	< 8 s at -30 °C (-22 °F) / < 11 s at -40 °C (-40 °F)

HTE301

Cost Optimised Digital Element for Humidity and Temperature Measurement

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...125 °C (-40...257 °F)
Accuracy	up to ± 1.8 % RH (incl. hysteresis) up to ± 0.2 °C (0.36 °F)
Features	E+E proprietary coating / Constant current heater (max. 16 mW)
Digital interface	I^2C with 4 selectable addresses and 16 bit unsigned integer
Supply	2.35-3.60 V

Humidity



HTE501

Digital Element for Highly Accurate Humidity and Temperature Measurement

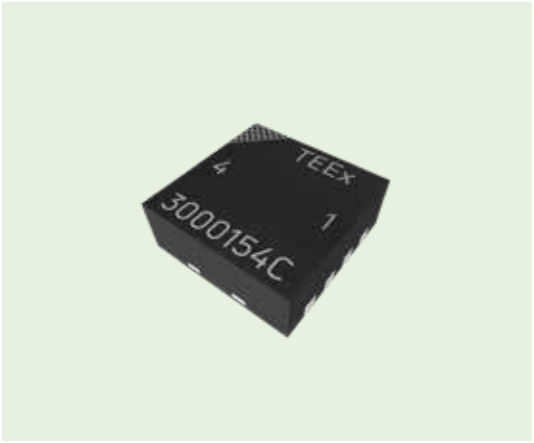
Measuring range - Humidity	0...100 % RH
Measuring range - Temperature	-40...135 °C (-40...275 °F)
Accuracy	up to ± 1.8 % RH (incl. hysteresis) up to ± 0.2 °C (0.36 °F)
Features	E+E proprietary coating / Constant current heater / Dew point calculation
Digital interface	I^2C with 8 selectable addresses and direct 16 bit integer output
Supply	2.35-3.60 V

HTM502

Digital Humidity and Temperature Module

Measuring range - Humidity	0...100 % RH
Measuring range - Temperature	5...60 °C (41...140 °F)
Accuracy - Humidity	typ. ±(2.0 + 0.01*measured value) % RH
Accuracy - Temperature	±0.3 °C (0.54 °F)
Digital interface	I^2C
Supply	2.35-3.60 V

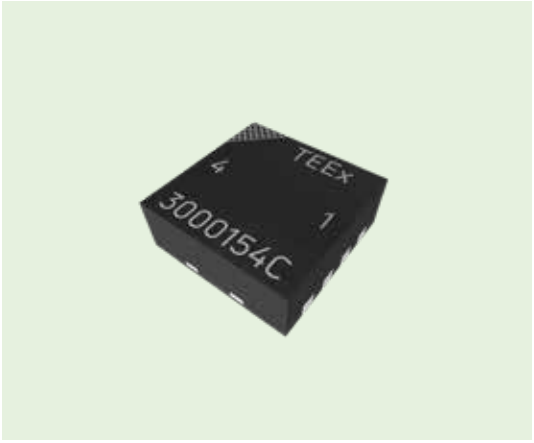
Temperature



TEE301

Cost Optimised Digital Temperature Sensing Element

Measuring range – Temperature	-40...125 °C (-40...257 °F)
Accuracy	± 0.2 °C (0.36 °F)
Digital interface	I^2C with 4 selectable addresses and 16 bit unsigned integer
Supply	2.35-3.60 V



TEE501

High-Precision Digital Temperature Sensing Element

Measuring range – Temperature	-40...135 °C (-40...275 °F)
Accuracy	± 0.2 °C (0.36 °F)
Digital interface	I^2C with 8 selectable addresses and direct 16 bit integer output
Supply	2.35-3.60 V

Sensors

Sensors by E+E Elektronik are renowned for their high quality, outstanding measuring accuracy and excellent long-term stability. They are used worldwide in a wide variety of fields.

The main areas of application are in industrial measurement technology, HVAC and building automation but also many other industries such as meteorology, the pharmaceuticals and food industries or in cleanrooms.

Air Velocity

EE576

Probe for Very Low Air Velocity

Measuring range - Air velocity	0...1 m/s (0...200 ft/min) 0...2 m/s (0...400 ft/min)
Working range – Temperature	-20...60 °C (-4...140 °F)
Analogue output	0-5 V / 0-10 V

EE650

Air Velocity Sensor for HVAC Applications

Measuring range – Air velocity	0...10 m/s (0...2,000 ft/min) 0...15 m/s (0...3,000 ft/min) 0...20 m/s (0...4,000 ft/min)
Working range – Temperature	-25...50 °C (-13...122 °F)
Analogue output	0-10 V 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP

EE660

Low Air Velocity Sensor

Measuring range – Air velocity	0...1 m/s (0...200 ft/min) 0...1.5 m/s (0...300 ft/min) 0...2 m/s (0...400 ft/min)
Working range – Temperature	-25...50 °C (-13...122 °F)
Analogue output	0-10 V 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP

Air Velocity

EE671

HVAC Air Velocity Probe

Measuring range – Air velocity	0...5 m/s (0...1,000 ft/min) 0...10 m/s (0...2,000 ft/min) 0...15 m/s (0...3,000 ft/min) 0...20 m/s (0...4,000 ft/min)
Working range – Temperature	-20...60 °C (-4...140 °F)
Analogue output	0-1 V / 0-5 V / 0-10 V
Digital interface	Modbus RTU

EE680

Air Velocity and Temperature Sensor for Laminar Flow

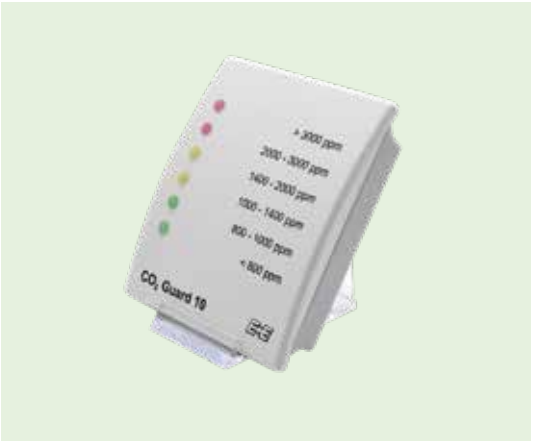
Measuring range – Air Velocity	0...2 m/s (0...400 ft/min)
Measuring range – Temperature	-20...70 °C (-4...158 °F)
Analogue output	0-5 V / 0-10 V 0-20 mA / 4-20 mA
Digital interface	Modbus RTU
LED Ring	Status indication

EE75

High-Precision Air and Gas Velocity Sensor for Industrial Applications

Measuring range – Air Velocity	0...2 m/s (0...400 ft/min) 0...10 m/s (0...2,000 ft/min) 0...40 m/s (0...8,000 ft/min)
Measuring range – Temperature	-40...120 °C (-40...248 °F)
Pressure rating	10 bar (145 psi)
Analogue output	0-10 V 0-20 mA / 4-20 mA

Carbon Dioxide



CO_2 Guard 10

CO_2 Monitor with Traffic Light Indication

Measuring range – CO_2	0...5,000 ppm
CO_2 thresholds	800 / 1,000 / 1,400 / 2,000 / 3,000 ppm
CO_2 level / threshold indication	optic (LEDs) / acoustic (buzzer)
Battery lifetime	6 months (4 alkaline batteries / 1.5 V / 1,200 mAh) 4 months (4 rechargeable batteries /1.2 V / 1,100 mAh)
Protection rating	IP30 (wall mount) / IP20 (tabletop)

EE800

Room Sensor for CO_2, Temperature and Relative Humidity

Measuring range – CO_2	0...2,000 ppm / 0...5,000 ppm
Measuring range – Humidity	10...90 % RH
Measuring range – Temperature	-20...60 °C (-4...140 °F)
Analogue output	0-10 V 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP

EE820

CO_2 Sensor for Demanding Applications

Measuring range – CO_2	0...2,000 ppm / 0...5,000 ppm / 0...10,000 ppm
Working range – Temperature	-20...60 °C (-4...140 °F)
Analogue output	0-10 V 4-20 mA
Protection rating	IP54

Carbon Dioxide

EE850

CO_2, Humidity and Temperature Duct Sensor

Measuring range – CO_2	0...2,000 ppm / 0...10,000 ppm
Measuring range – Humidity	0...95 % RH
Measuring range – Temperature	-20...60 °C (-4...140 °F)
Analogue output	0-10 V 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP

EE872

Modular Probe for CO_2, Humidity, Temperature and Ambient Pressure

Measuring range – CO_2	0...2,000 / 0...5,000 / 0...10,000 ppm 0...3 / 0...5 %
Measuring range – Humidity	0...100 % RH
Measuring range – Pressure	700...1,100 mbar (10.15...15.95 psi)
Measuring range – Temperature	-40...60 °C (-40...140 °F)
Analogue output	0-5 V / 0-10 V 0-20 mA / 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP

EE8915

CO_2 Sensor for Railway Applications

Measuring range – CO_2	0...2,000 ppm / 0...5,000 ppm / 0...10,000 ppm
Working range – Temperature	-40...60 °C (-40...140 °F)
Analogue output	0-5 V / 0-10 V 0-20 mA / 4-20 mA
Compliance	Railway standards
Protection rating	IP65 / NEMA 4X

Dew Point

EE1950

Dew Point Measurement Module for High Humidity Applications

Measuring range – Dew point	-20...100 °C Td (-4...212 °F Td)
Working range – Temperature	-70...180 °C (-94...356 °F)
Sensing element	E+E proprietary coating, heated for high humidity operation, Automatic sensor ReCovery (ARC)
Analogue output	0-1 V / 0-5 V / 0-10 V 0-20 mA / 4-20 mA

EE354

Dew Point Sensor

Measuring range – Dew point	-20...50 °C Td (-4...122 °F Td)
Working range – Temperature	40...60 °C (-40...140 °F)
Pressure rating	80 bar (1,160 psi)
Analogue output	4-20 mA
Digital interface	Modbus RTU

EE355

Dew Point Sensor

Measuring range – Dew point	-60...60 °C Td (-76...140 °F Td)
Working range – Temperature	-40...70 °C (-40...158 °F)
Pressure rating	80 bar (1,160 psi)
Analogue output	4-20 mA
Digital interface	Modbus RTU

Dew Point

EE371

Dew Point Sensor

Measuring range – Dew point	-60...60 °C (-76...140 °F Td)
Working range – Temperature	-40...70 °C (-40...158 °F)
Pressure rating	100 bar (1,450 psi)
Analogue output	0-10 V 4-20 mA

Flow

EE741

Inline Flow Sensor for Compressed Air and Gases

Pipe diameter	DN15 up to DN50 (1/2"-2")
Measuring range – Flow	0.2-848.2 m^3/h (0.12-493.35 SCFM)
Pressure rating	16 bar (232 psi)
Output	0-20 mA / 4-20 mA Pulse / Switch
Digital interface	Modbus RTU / M-Bus / IO-Link

EE771

Flow Sensor for Compressed Air and Gases

Pipe diameter	DN15 up to DN50 (1/2"-2")
Measuring range – Flow	0.5-200 m/s (100...39,370 SFPM)
Pressure rating	16 bar (232 psi)
Output	0-10 V 0-20 mA / 4-20 mA Pulse / Switch
Digital interface	Modbus RTU / M-Bus

EE772

Multifunctional Flow Sensor for Compressed Air and Gases

Pipe diameter	DN40 up to DN80 (1 1/2"-3")
Measuring range – Flow	0.5-200 m/s (100...39,370 SFPM)
Pressure rating	40 bar (580 psi)
Gauge mounting block	with hot tap valve for installation and removal without interruption of the flow
Output	0-10 V 0-20 mA / 4-20 mA Pulse / Switch
Digital interface	Modbus RTU / M-Bus

Flow

EE776

Insertion Flow Sensor for Compressed Air and Gases

Pipe diameter	DN50 up to DN700 (2"-28")
Measuring range – Flow	0.2-200 m/s (40...39,370 SFPM)
Pressure rating	16 bar (232 psi)
Protection	with patented non-return protection
Output	0-10 V 0-20 mA / 4-20 mA Pulse / Switch
Digital interface	Modbus RTU / M-Bus

Humidity

EE040
OEM Humidity and Temperature Sensor

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...85 °C (-40...185 °F)
Sensing element protection	E+E proprietary coating
Analogue output	0-2.5 V
Supply	5 V DC

EE046
Condensation Monitor

Measuring range – Humidity	10...100 % RH
Switching point	90 ± 3 % RH
Sensing element protection	E+E proprietary coating
Output	Switch / max. 24 V AC/DC / 1 A
Mounting	Wall, pipe or snap-on mount

EE07-M1
Interchangeable Humidity and Temperature Probe with Digital Output

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...80 °C (-40...176 °F)
Sensing element protection	E+E proprietary coating
Enclosure material	Polycarbonate or stainless steel
Digital interface	E2
Supply	Standard: 3.8-5.5 V DC with energy saving option: 2.7-5.5 V DC

Humidity

EE072

Humidity and Temperature Probe with Digital Interface

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...80 °C (-40...176 °F)
Sensing element protection	E+E proprietary coating
Enclosure material	Polycarbonate or stainless steel
Digital interface	Modbus RTU / CANopen

EE08

High-Precision Miniature Humidity and Temperature Probe

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...80 °C (-40...176 °F)
Analogue output	0-1 V / 0-2.5 V / 0-5 V / 0-10 V / T passive
Digital interface	E2
Supply	4.5-15 V DC / 7-30 V DC

EE10

Humidity and Temperature Room Sensor

Measuring range – Humidity	0...95 % RH
Measuring range – Temperature	-5...55 °C (23...131 °F)
Analogue output	0-10 V 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP

Humidity

EE100Ex

Intrinsically Safe Humidity and Temperature Sensor

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...60 °C (-40...140 °F)
Sensing element protection	E+E proprietary coating
Analogue output	4-20 mA
Ex certifications	ATEX, IECEx, KCs, CSA
Types	Wall mount / remote probes fixed or pluggable

EE150

Humidity and Temperature Sensor for HVAC Applications

Measuring range – Humidity	10...90 % RH
Measuring range – Temperature	-5...55 °C (23...131 °F)
Analogue output	0-10 V 4-20 mA
Types	Wall mount / duct mount

EE160

HVAC Humidity and Temperature Sensor

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...60 °C (-40...140 °F)
Sensing element protection	E+E proprietary coating
Analogue output	0-10 V 4-20 mA / T passive
Digital interface	Modbus RTU / BACnet MS/TP
Types	Wall mount / duct mount

Humidity

EE1900

Humidity Measurement Module for OEM Applications

Measuring range – Humidity	0...100 % RH
Measuring range – Dew point	-20...80 °C Td (-4...176 °F Td)
Working range – Temperature	-70...180 °C (-94...356 °F)
Sensing element	E+E proprietary coating Automatic sensor ReCovery (ARC)
Analogue output	0-1 V / 0-5 V / 0-10 V 0-20 mA / 4-20 mA

EE210

Humidity and Temperature Sensor for Demanding Climate Control

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...60 °C (-40...140 °F), remote probe -40...80 °C (-40...176 °F)
Sensing element protection	E+E proprietary coating
Analogue output	0-5 V / 0-10 V 0-20 mA / 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP

EE211

Humidity and Temperature Sensor for Continuous High Humidity

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...60 °C (-40...140 °F)
Sensing element	E+E proprietary coating Heated for high humidity operation
Analogue output	0-5 V / 0-10 V 0-20 mA / 4-20 mA
Digital interface	Modbus RTU

Humidity

EE212

Modular Humidity and Temperature Sensor

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...60 °C (-40...140 °F)
Sensing element	E+E proprietary coating / Interchangeable module with rapidX technology
Analogue output	0-5 V / 0-10 V 0-20 mA / 4-20 mA
Types	Wall mount / duct mount
Feature	with rapidX Technology

EE220

Humidity and Temperature Sensor with Interchangeable Probes

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...80 °C (-40...176 °F)
Sensing element protection	E+E proprietary coating
Analogue output	0-1 V / 0-10 V 4-20 mA
Enclosure material	Polycarbonate or Metal ($AlSi_9Cu_3$)

EE23

Humidity and Temperature Sensor for Industrial Applications

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...180 °C (-40...356 °F)
Sensing element protection	E+E proprietary coating
Analogue output	0-10 V 0-20 mA / 4-20 mA
Enclosure material	Polycarbonate or Metal ($AlSi_9Cu_3$)

Humidity

EE260

Heated Humidity and Temperature Probe for Meteorological Applications

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-60...60 °C (-76...140 °F)
Sensing element	E+E proprietary coating / Dual heating system for high humidity operation
Analogue output	0-1 V / 0-2.5 V / 0-5 V / 0-10 V
Digital interface	Modbus RTU

EE300Ex-M1

Humidity and Temperature Sensor for Intrinsically Safe Applications

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...180 °C (-40...356 °F)
Pressure range	0.1...20 bar (1.5...290 psi)
Analogue output	4-20 mA
Ex certifications	ATEX, IECEx, FM, NEPSI, KCs, TIIS

EE310

High-End Humidity and Temperature Sensor for Industrial Applications

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...180 °C (-40...356 °F)
Pressure range	0.01...20 bar (0.15...290 psi)
Analogue output	0-1 V / 0-5 V / 0-10 V 0-20 mA / 4-20 mA
Digital interface	Modbus RTU Ethernet-PoE with Modbus TCP

Humidity

EE33

Humidity and Temperature Sensor for High Humidity, Chemical and High-end Meteorological Applications

Measuring range – Humidity / Temperature	0...100 % RH -40...180 °C (-40...356 °F)
Sensing element	E+E proprietary coating / Heated for high humidity operation / Automatic sensor ReCovery (ARC)
Pressure range	0.01...100 bar (0.15...1,450 psi)
Analogue output	0-1 V / 0-5 V / 0-10 V 0-20 mA / 4-20 mA
Digital interface	RS232 / RS485

EE99-1

Humidity and Temperature Module for OEM Applications

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-50...180 °C (-58...356 °F) short term up to 200 °C (392 °F)
Sensing element protection	E+E proprietary coating
Output	Humidity: 4-20 mA T passive

HTP201

Humidity and Temperature Probe with Analogue Output

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...80 °C (-40...176 °F)
Sensing element protection	E+E proprietary coating
Enclosure material	Polycarbonate or stainless steel
Output	0-1 V / 0-5 V / 0-10 V 4-20 mA / T passive

Humidity

HTP501

Digital Humidity and Temperature Probe

Measuring range – Humidity	0...100 % RH
Measuring range – Temperature	-40...120 °C (-40...248 °F)
Sensing element protection	E+E proprietary coating
Enclosure material	Stainless steel
Digital interface	Modbus RTU
Electrical connection	M 12 x 1 plug on cable

Moisture in Oil

EE360

High-End Moisture in Oil Sensor

Measuring range – Water activity	0...1 aw
Measuring range – Temperature	-40...180 °C (-40...356 °F)
Pressure rating	20 bar (290 psi)
Analogue output	0-1 V / 0-5 V / 0-10 V 0-20 mA / 4-20 mA
Digital interface	RS485 with Modbus RTU Ethernet PoE with Modbus TCP

EE364

Moisture in Oil Sensor

Measuring range – Water activity	0...1 aw
Measuring range – Temperature	-40...100 °C (-40...212 °F)
Pressure rating	20 bar (290 psi)
Analogue output	4-20 mA
Digital interface	Modbus RTU

EE381

Moisture in Oil Sensor

Measuring range – Water activity	0...1 aw
Measuring range – Temperature	-40...120 °C (-40...248 °F)
Pressure rating	100 bar (1,450 psi)
Analogue output	0-10 V 4-20 mA

Moisture in Oil

MOP301

Insertion Moisture in Oil Probe with Modbus RTU

Measuring range – Water activity	0...1 aw
Accuracy - Water activity	±0.02 aw
Measuring range – Temperature	-40...120 °C (-40...248 °F)
Accuracy - Temperature	±0.15 °C (±0.27 °C)
Digital Interface	Modbus RTU

Pressure

EE600

Differential Pressure Sensor

Measuring range – Pressure	0...250 / 500 / 750 / 1,000 Pa 0...2,500 / 5,000 / 7,500 / 10,000 Pa
Accuracy	± 0.5 % FS
Working range – Temperature	-20...60 °C (-4...140 °F)
Feature	Auto-zero function
Analogue output	0-5 V / 0-10 V 0-20 mA / 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP

EE610

Low Differential Pressure Sensor

Measuring range – Pressure	± 25 / ± 50 / ± 100 Pa / 0...100 Pa
Accuracy	± 0.5 Pa = ±0.5 % FS
Working range – Temperature	-20...60 °C (-4...140 °F)
Feature	Auto-zero function
Analogue output	0-5 V / 0-10 V 0-20 mA / 4-20 mA
Digital interface	Modbus / BACnet MS/TP

Temperature

EE07-M3

Interchangeable Humidity and Temperature Probe with Digital Output

Measuring range – Temperature	-40...80 °C (-40...176 °F)
Accuracy at 20 °C (68 °F)	±0.1 °C (±0.18 °F)
Enclosure material	Polycarbonate or stainless steel
Digital interface	E2
Supply	Standard: 3.8-5.5 V DC With energy saving option: 2.7-5.5 V DC

EE074

Temperature Probe with Modbus RTU

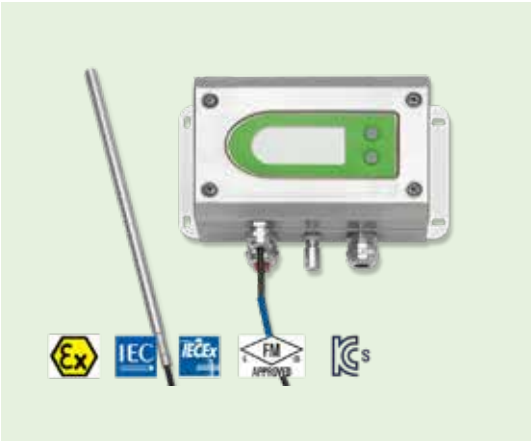
Measuring range – Temperature	Electronics: -40...80 °C (-40...176 °F) 70 & 155 mm probe: -40...80 °C (-40...176 °F) 305 mm probe: -70...105 °C (-94...221 °F)
Accuracy at 20 °C (68 °F)	± 0.1 °C (± 0.18 °F)
Digital interface	Modbus RTU
Protection rating	IP68 (electrical connection IP67)

EE10-M3

Room Temperature Sensor

Measuring range – Temperature	-5...55 °C (23...131 °F)
Accuracy at 20 °C (68 °F)	± 0.3 °C (± 0.54 °F)
Analogue output	0-10 V 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP
Protection rating	IP30

Temperature



EE300Ex-M3

Intrinsically Safe Temperature Sensor

Measuring range – Temperature	Remote probe: -70...200 °C (-94...392 °F) Wall mount: -40...60 °C (-40...140 °F)
Accuracy at 20 °C (68 °F)	± 0.2 °C (± 0,36 °F)
Pressure range	0.1...20 bar (1.45...290 psi)
Analogue output	4-20 mA
Protection rating	IP65 / NEMA 4

EE431

Duct or Immersion Temperature Sensor

Measuring range – Temperature	Duct sensor: -40...110 °C (-40...230 °F) Immersion sensor: -40...150 °C (-40...302 °F) Electronics: -40...70 °C (-40...158 °F)
Accuracy active output at 20 °C (68 °F)	± 0.1 °C (± 0.18 °F)
Analogue output	0-10 V 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP
Protection rating	IP65 / NEMA 4X
Probe length	65-300 mm (2.56-11.81“)

EE441

Strap-on Temperature Sensor

Working range – Temperature	-40...70 °C (-40...158 °F)
Accuracy active output at 20 °C (68 °F)	± 0.3 °C (± 0.54 °F)
Analogue output	0-10 V 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP
Protection rating	IP65 / NEMA 4X

Temperature

EE451
Wall Mounted Temperature Sensor

Measuring range – Temperature	-40...70 °C (-40...158 °F)
Accuracy active output at 20 °C (68 °F)	± 0.3 °C (± 0.54 °F)
Analogue output	0-10 V 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP
Protection rating	IP65 / NEMA 4X

EE461
Cable Temperature Sensor

Measuring range – Temperature	-30...105 °C (-22...221 °F)
Protection rating	IP67 / NEMA 4X
Insulation resistance at 20 °C (68 °F)	typ. > 100 MΩ
Wiring	2-wire / 4-wire
Cable length	0.5-6 m (1.6-19.7 ft)

EE462
Cable Temperature Sensor

Cable material	Glass fiber / silicone
Measuring range – Temperature	Glass fiber: 0...350 °C (32...662 °F) Silicone: -60...180 °C (-76...356 °F)
Cable length	2 m / 3 m
Protection rating	IP67
Insulation resistance at 20 °C (68 °F)	typ. > 100 MΩ

Temperature

EE471

Temperature Sensor with Remote Probe

Measuring range – Temperature	Remote probe: -30...105 °C (-22...221 °F) Electronics: -30...70 °C (-22...158 °F)
Accuracy active output at 20 °C (68 °F)	± 0.3 °C (± 0.54 °F)
Analogue output	0-10 V 4-20 mA
Digital interface	Modbus RTU / BACnet MS/TP
Protection rating	Remote probe: IP67 / NEMA 4X Electronics: IP65 / NEMA 4X
Cable length	0.5-10 m (1.64-32.8 ft)

Instruments & Systems

EE242

Base Station of the Wireless Sensor Network

Transmission frequency	2.4 GHz
Transmission protocol	IEEE 802.15.4
Transmission power	8 dBm
Transmission range	1,000 m (3,300 ft) in open field
Analogue output	0-5 V / 0-10 V 0-20 mA / 4-20 mA
Digital interface	RS485 with Modbus RTU or ASCII Ethernet with Modbus TCP or JSON

EE244

Industrial Wireless Transmitter or Router with External Sensing Probes

Number of external sensing probes	up to 3
Probe extension cable length, max.	10 m (33 ft)
Antenna	External, remote up to 2 m (6.6 ft)
Protection rating	IP65 / NEMA 4X
Supply	External supply or battery powered

EE245

Room Wireless Sensor for Temperature, Relative Humidity and CO_2

Measuring range – CO_2	0...2,000 ppm / 0...5,000 ppm
Measuring range – Humidity	0...90 % RH
Measuring range – Temperature	-5...55 °C (23...131 °F)
Modularity	Replaceable RH/T and CO_2 sensing modules
Supply	External supply or battery powered

Instruments & Systems

Humlog 20

Data logger for Humidity, Temperature, Air Pressure and CO_2

Measuring range – Humidity	10...95 % RH
Measuring range – Temperature	-20...50 °C (-4...120 °F)
Measuring range – Pressure	300...1,300 hPa
Measuring range – CO_2	0...5,000 ppm
Interface	USB / Ethernet

Humor 20

High-precision Humidity Calibrator

Operation principle	Dual pressure generator
Calibrator class	Primary standard
Calibration range	10...95 % RH
Accuracy	±0.3-0.9 % RH
Stabilisation time	< 3 min/measuring point

Oilport 30

Moisture in Oil Hand-held

- For transformer, lubrication, hydraulic and engine oil
- Water activity (aw), water content (x) and temperature (T) measurement
- Stores up to 10 sets of oil specific parameters
- Data logging function for up to 2 million measured values
- Carry case for hand-held, probes and accessories

Instruments & Systems

Omniport 30

Multifunctional Hand-held

- Wide choice of sensing probes for relative humidity, temperature, CO_2 and air velocity
- Data logging with time and date stamp
- Internal memory for 2 million measured values
- Capacitive TFT touch-screen
- Free data management software

Sigma 05

Host Device for Sensing Probes with Modbus RTU Interface

Number of sensing probes (max.)	3
Number of measurands (max.)	5
Enclosure material	Polycarbonate or metal
Analogue output	0-1 V / 0-2.5 V / 0-5 V / 0-10 V 0-20 mA / 4-20 mA
Protection rating	IP65 / NEMA 4 X

E+E Elektronik – Your Partner in Sensor Technology

E+E Elektronik Ges.m.b.H., with headquarters in Engerwitzdorf, Austria, has been established in 1979 and is part of Dr. Johannes Heidenhain group.

Diverse.

E+E Elektronik is a leading manufacturer of elements and sensors for a multitude of physical quantities and applications. Data loggers, hand-held meters as well as calibration systems and services round up the product portfolio.

Reliable.

Best quality made in Austria, high accuracy and outstanding long-term stability, together with advanced understanding of customer specific requirements are the main competitive advantages of E+E Elektronik.

Versatile.

Measuring devices from E+E Elektronik are used all over the world in most diverse industries such as building automation, meteorology, agriculture, food, pharmaceutical, process control or automotive.

Flexible.

With own clean room sensor manufacturing, in-house design of state-of-the-art electronics and highest competence in calibration, E+E Elektronik is the ideal partner for OEM customers.

Certified.

The E+E Elektronik quality assurance system is certified according to ISO 9001 and IATF 16949. The company also complies with the environmental standard ISO 14001. The in-house calibration laboratories are accredited according to DIN EN ISO/IEC 17025.

Global.

E+E Elektronik sales subsidiaries are located in China, Germany, France, Italy, Korea and the USA. Additionally, E+E Elektronik maintains a worldwide network of distribution partners.

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