

+ Quick Guide



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EE260 - Humidity and Temperature Probe for Meteorological Applications

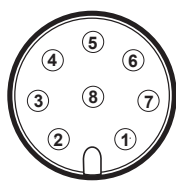
i PLEASE NOTE

Find this document and further product information on our website at www.epluse.com/ee260.

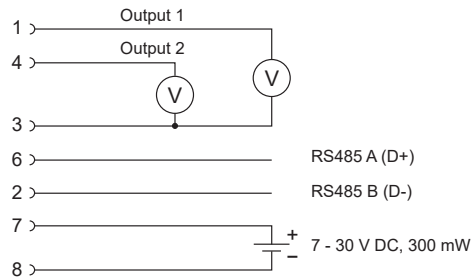
Electrical Connection

! WARNING

Incorrect installation, wiring or power supply may cause overheating and can therefore lead to personal injuries or damage to property. For correct cabling of the device, always observe the presented wiring diagram for the product version used. The manufacturer cannot be held responsible for personal injuries or damage to property as a result of incorrect handling, installation, wiring, power supply and maintenance of the device.



M12 device
plug front view



Pin number	Function	Wire colours for connection cable HA010322/23/24/25
1	Analogue output 1, voltage	white
2	RS485 B (D-)	brown
3	GND analogue output	green
4	Analogue output 2, voltage	yellow
5	n.c.	grey
6	RS485 A (D+)	pink
7	Supply voltage	blue
8	GND	red

i PLEASE NOTE

To meet the EMC Directive 2004/108/EC a shielded connection cable must be used.

Compliance with EN61000-4-3 and EN 610004-6: Electromagnetic interferences may cause additional deviations <2 %RH.

Installation

i PLEASE NOTE

The probe shall be mounted vertically with the filter cap upside, a proper air circulation around the probe must be ensured (e.g. with HA010511). Please avoid any improper mechanical stress onto the probe.



Mounting in a radiation shield
Accessory HA010511



Wall/pole mount by means of a mounting clip
Accessory HA010227

Modbus Setup

Modbus Setup	Factory settings	User selectable values (via PCS10)
Baud rate	9600	9600, 19200, 38400, 57600, 76800, 115200
Data bits	8	8
Parity	Even	None, odd, even
Stop bits	1	1, 2
Modbus address	235	1...247

Modbus address, baud rate, parity and stop bits can be set via:

- PCS10, Product Configuration Software, the Modbus configuration adapter HA011018 and the EE260 configuration cable HA011020. The PCS10 can be downloaded free of charge from www.epluse.com/pcs10.
- Modbus protocol in the register 1 (0x00) and 2 (0x01) See Application Note Modbus AN0103 (available on www.epluse.com/ee260)

FLOAT 32 bit

Parameter	Unit	Register number ¹⁾ [DEC]	Register address ²⁾ [HEX]
Read register: function code 0x03 / 0x04			
Temperature	°C	1003	3EA
	°F	1005	3EC
Relative humidity RH, Uw	%RH	1021	3FC
Water vapour partial pressure e	mbar	1101	44C
	psi	1103	44E
Dew point temperature Td	°C	1105	450
	°F	1107	452
Wet bulb temperature Tw	°C	1109	454
	°F	1111	456
Absolute humidity dv	g/m ³	1113	458
	gr/ft ³	1115	45A
Mixing ratio r	g/kg	1121	460
	gr/lb	1123	462
Specific enthalpy h	kJ/kg	1125	464
	BTU/lb	1129	468
Frost point temperature Tf	°C	1131	46A
	°F	1133	46C
Volume concentration Wv	ppm	1151	47E
Saturation vapor pressure above water ew	mbar	1221	4C4
	psi	1223	4C6
Saturation vapor pressure above ice ei	mbar	1225	4C8
	psi	1227	4CA
Ice bulb temperature Ti	°C	1237	4D4
	°F	1239	4D6
Specific humidity qv	g/kg	1247	4DE
	gr/lb	1249	4E0

INTEGER 16 bit

Parameter	Unit	Scale ³⁾	Register number ¹⁾ [DEC]	Register address ²⁾ [HEX]
Read register: function code 0x03 / 0x04				
Temperature T	°C	100	4002	FA1
	°F	50	4003	FA2
Relative humidity RH, Uw	%RH	100	4011	FAA
Water vapour partial pressure e	mbar	10	4051	FD2
	psi	1000	4052	FD3
Dew point temperature Td	°C	100	4053	FD4
	°F	100	4054	FD5
Wet bulb temperature Tw	°C	100	4055	FD6
	°F	100	4056	FD7
Absolute humidity dv	g/m ³	10	4057	FD8
	gr/ft ³	10	4058	FD9
Mixing ratio r	g/kg	10	4061	FDC
	gr/lb	10	4062	FDD
Specific enthalpy h	kJ/kg	1	4063	FDE
	BTU/lb	1	4065	FE0
Frost point temperature Tf	°C	100	4066	FE1
	°F	100	4067	FE2
Volume concentration Wv	ppm	0.1	4076	FEB
Saturation vapor pressure above water ew	mbar	100	4111	100E
	psi	100	4112	100F
Saturation vapor pressure above ice ei	mbar	100	4113	1010
	psi	100	4114	1011
Ice bulb temperature Ti	°C	100	4119	1016
	°F	100	4120	1017
Specific humidity qv	g/kg	10	4124	101B
	gr/lb	10	4125	101C

1) Register number (decimal) starts from 1. 2) Register address (hexadecimal) starts from 0

3) Examples: For scale 100, the reading of 2550 means a value of 25.5. For scale 50, the reading of 2550 means a value of 51.

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