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EW-070.36E

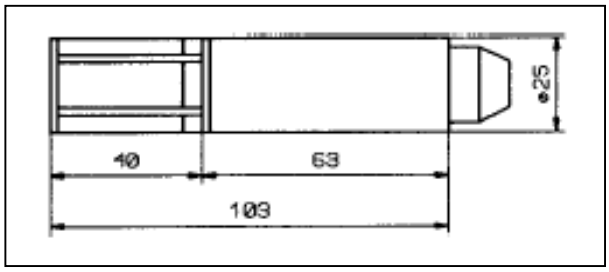
HUMIDITY SENSORS TRANSMITTERS

EWHS 280 MODEL

. Cylindrical probe IP54
. The sensor is not damaged but condense
. Resistive humidity sensor
. Operating temperature: -5 ... +55 ° C
. Dimensions: length 103 mm and Ø 25 mm

GENERAL DESCRIPTION
The humidity sensor 280 EWHS is ready to be plugged into an instrument for measuring humidity.
The output signal is a current signal (3 ÷ 18 mA)

INSTALLATION
To install the probe, use the clip and the cue in the box.
For electrical connections, check the label has built the spacecraft**.**
The moisture vapor, water splashes etc. can cause measurement errors of the probe due to the formation of condensate on the sensor.
During installation make sure the probe is protected against these factors.
For absolutely accurate measurement results, it is necessary to leave the tube for some time in the existing environment.Since the probe has a mass that affects the measurement, the acclimatization must be taken into account, especially when the probe is exposed to a temperature jump.
When there is rapid temperature change, from a low temperature (cold probe) to a high condensation can form on the sensor.However, this does not damage the humidity sensor.



SPECIFICATIONS

Degree of protection: IP54
Installation: use the clip supplied with the probe
Electrical Connections: Bipolar cable PVC
Connection cable: 1.5 m or 3.0 m
Dimensions (mm): 103x25
Power supply: 9 ... 28 Vdc
Absorption: 20mA max.
Ambient temperature: -10 ... +60 ° C
Humidity: 0 ... 100% RH
Humidity Sensor: resistive
Measuring range humidity: 15 ... 90% RH
Output current for mediciónde humidity:
3 (15%) ... 18 mA (90%)
Response time constant conditions (63%) at 23 ° C:
60 seconds
Recovery time from saturation: 360 seconds
Storage temperature: -20 ... +70 ° C
Number of interconnects: 2 (blue: power, brown: output)
Maximum load: 250 Ohm
Accuracy of measuring humidity 23 ° C):
± 5% RH (15 .. 90% RH)
Air filter: metal mesh
Protection against polarity reversal: a diode
Air Speed max.: 20m / s

EWHS 300 MODEL

GENERAL DESCRIPTION
The humidity probes EWHS 300/310 Series sensors are manufactured to be connected to instruments for measuring humidity / temperature characterized by high accuracy.

INSTALLATION
On the outside of the box body there are two slots to pair to wall mount with screws and plugs.
To access the terminal board, remove the cover by unscrewing the two screws.
Avoid touching the electronic parts. If necessary remove the protective cap, do not subject to mechanical stress sensors and especially do not touch the humidity sensor.
Use the grommet already planned to release the cable and connect to terminals as indicated on the label inside cover and on the printed circuit.
Possible errors in the measurement of humidity or temperature may be caused by a too short settling time, by splashing water, steam, or air, by direct exposure to sunlight, by the formation of condensate on the sensor or it is installed on a wall that has cooled because of the external temperature, during installation you have to protect the probe against any possible external influence.
For absolutely accurate measurement results, it is necessary to leave the tube for some time in the existing environment. Since the probe has a mass that affects the measurement, the acclimation should be considered especially when the probe is exposed to a temperature jump
When a rapid change of temperature, from a low temperature (cold probe) to a high, can be condensed into the humidity sensor

EWHS 300 CONNECTIONS	
HR	Humidity HR
V+	Power supply

CHEMICAL RESISTANCE
The data contained in the attached table are meant to guide values.
The chemical resistance of the probe depends largely on the humidity and temperature and duration of exposure to contaminants.
Shorter exposures are possible at higher concentrations, provided that the probe can be debugged in a "healthy" or in a gas stream (purification)
The tolerance level for exposure to the contaminant is within ± 2% RH

TABLE OF CONTAMINANTS

Contaminant	**Chemical formula**	**Maximum concentration in workplace**		**Allowable concentration for continuous**	
		Ppm	*mg/m3*	*ppm*	*mg/m3*
Acetone	CH3COCH3	1000	2400	3300	8000
Ammonía	NH3	25	18	5500	4000
Gasoline		300	1200		150000
Chlorin	Cl2	1	1.5		2
Acetic Acid	CH3COOH	10	25	800	2000
Ethyl acetate	CH3COOC2H5	400	1400	4000	15000
Ethanol	C2H5OH	1000	1900	3500	6000
Ethylene Glycol	HOCH2CH2OH	100	260	1200	3000
Ethylene Oxide	C2H4O	3		0	0
Formaldehyde	HCHO	1	1.2	2400	3000
Isopropanol	(CH3)2CHOH	400	980	4800	12000
2-Butanone (methyl ethyl ketone)	C2H5COCH3	200	590	3300	8000
Hydrochloric acid	HCl	5	7	300	500
Sulfur dioxide	SO2	5	13	5	13
Hydrogen Sulfide	H2S	10	15	350	500
Nitrogen oxide	NOx	5	9	5	9
Toluene / Xylene	C6H5CH3	100	380	1300	5000

SPECIFICATIONS
Degree of protection: IP65
Mounting: Through the two external slots
Electrical Connections: screw terminals
Dimensions (mm): 80x80x52
Power supply: 9 ... 30 Vc
Absorption: EWHS 300: 20mA max.
EWHS 310: 50mA max.
Ambient temperature: -30 ... +70 ° C
Humidity: 0 ... 100% RH
Humidity Sensor: Capacitive
Temperature Sensor(only EWHS 310): Pt100B
Measuring range temperature (Only EWHS 310): -30 ... +70 ° C
Measuring range humidity: 0 ... 100% RH
Output current for measuring humidity
EWHS 300: 4 (0%) ... 20mA (100%)
EWHS 310: 0 (0%) ... 20mA (100%)
Current output for measuring the temperature
EWHS 310: 0 (-30 ° C) ... 20 mA (+70 ° C)
Response time constant conditions (63%) at 23 ° C: 30 seconds
Recovery time from saturation: 90 seconds
Storage temperature: -30 ... +80 ° C
Number of interconnects:
- **EWHS 300**: 2
- **EWHS 310:** 4

Maximum load: 250 Ohm
Accuracy of measurement of humidity (at 23 ° C)
EWHS 300: ± 2% RH (10 .. 95% RH)
± 3% RH (<10%> 95% RH)
EWHS 310: ± 1.5% RH (10 .. 95% RH)
± 2% RH (<10%> 95% RH)
Accuracy of temperature measurement at 0 ° C and 23 ° C
(only EWHS 310): 0.5 ° C
(For different temperatures, the sensor accuracy is the most Pt100B 0.2 ° C)
Air filter: polyethylene
Protection against polarity reversal: a diode.
Temperature compensation:
- **EWHS 300:** with NTC
- **EWHS 310:** with Pt100B

• **Max air speed.** 20m / s