



HIA-Sensor

Electronic sensor probe to HygroDat 100 - EC
for general applications

General information

The Novasina electronic sensor has been developed for HygroDat 100 measuring systems and is available in two versions. The HIA for standard and the HIS for heavier applications in industrial processes.

Thanks to the optimisation in dimensions (shaft diameter 13mm), polycarbonate material and the electrolytic cell, the sensor reaction time on changing environmental parameters is extremely fast. The measured values are transmitted up to 10 times a second to the transmitter unit.

A analogue electronic unit, which has also been developed by Novasina is integrated in the sensor probe. This electronic does a first signal processing and compensation. Together with the very accurate CC-1 electrolytic measuring cell, the key element of the whole system, and different protection filter caps, this sensor achieves outstanding

humidity measurement results in any industrial process.

The electrolytic sensor technology allows remote measurements up to 100m of distance between sensor probe and transmitter connected by a standard 5-wire installation cable without shield.

The system installation is very simple and cost saving. Furthermore the system impresses with its high electrostatic discharge resistance, which is another advantage.

Each HygroDat 100 system is calibrated at 5 humidity points. The calibration can be performed at any time during the operation using the well-proved Novasina SC Checks. This can be done easily on site without sending back the whole system to the factory.

A simple, cost saving calibration and adjustment method!

Main Features

- Highly precise and fast humidity- and temperature measurement
- Electrolytic humidity measuring cell technology, interchangeable
Type: CC-1
- Probe housing made of polycarbonate with IP 65 protection
- 13,0 mm sensor diameter that fits in small holes
- Various filter caps for different applications
- Analogue electronic interface for signal converting in the sensor
- Up to 100 m remote mounting of the sensor using a standard 5-wire installation cable without shield
- Airtight duct mounting kit and wall mounting kit for quick sensor fixation
- High resistance against electro magnetic discharges thanks to the high integrated ASIC technology
- Sensor cable can be adapted in length individually on site
- Probe housing pipe extendable modularly



Electronic sensor HIA :

	Article No.
Electronic sensor / 1,5 m cable	HIA-11 1117245
Electronic sensor / 10 m cable	HIA-12 1117247
Electronic sensor / 20 m cable	HIA-13 1116934
Electronic sensor / up to 100m c.	HIA-1x 1116935

Mounting aid :

	Article No.
Duct mounting flange	1 pcs 1115343
Wall mounting flange	2 pcs 1107360
Extension pipe for electronic sensor 100mm	1114632
Installation cable	xx m 111xxxx



Specifications

Type	HIA electronic sensor system	
Article No.	1117245 / 1117247 / 1116934 / 1116935	
Measurement range : Humidity	6%...100 % RH (protected against saturation)	
Measurement range : Temperature	-20 ... +80°C	
Basic accuracy : Temperature	+/- 0.1K (0...70°C)	
Basic accuracy : Humidity	+/- 0.5% RH (10...95% RH / 0....50°C)	
Basic resolution : (RH / T)	0.1% RH /	0.1K
Typical repeatability : (RH / T)	< 0.2% RH / < 0.1K	
Operation temp. : Sensor probe	-20 ... +80° C	
Power supply	---	
Power consumption	Typ. 19 mW (worst case 35.5 mW)	
Analogue output signal	Integrated singal processing and compensation	
Storage temperature : Sensor probe	0 ... 60° C (not condensing)	
Storage temperature : CC-1 cell	0 ... 60° C (not condensing)	
Electric connection system	5-wire instillation cable up to 100m not shielded !	
Electromagnetic compatibility	EN 50081-2 / EN61000-3-2/-3 / EN 50082-1/-2	
IP-protection : Sensor probe	IP 65	



Accessories:

		Article No.
Extension pipe to HIA sensor		1114632
Electrolytic ciurcuit board cell	CC-1	1113828
Protection cap with "Cellgard"	CF-1	110 7355
Protection cap with metal web	MF-1	111 1018
Protection cap with active carbon	AF-1	111 3675
Protection cap made of stainless steel	CP-1	111 4745
Protection cap steel with "Cellgard"	STCF-1	111 7505
Protection cap made of sinter material	SF-1	111 7330
Wall mounting clip	2 pcs	111 7360
Duct mounting kit for electronic sensor	1 pc	111 5343
Weather protection shield for outdoor	1 pc	111 6812
Special flange to weather shield	1 pc	111 6813



Dimensions of the HIA sensor :

