

HIC-Sensor

C-sensor to HygroDat 100-EC
NEW generation industrial electronic-sensor



General information

The new electronic humidity and temperature sensor has been developed specifically for the Novasina HygroDat 100-EC transmitter. The measurement element is a pioneer in the miniaturized, capacitive silicon technology. The signals are processed directly inside the sensor and transmitted by cable. This allows variable cable lengths up to 30m between sensor and transmitter. The measurement element itself is 10 times smaller than ordinary capacitive cells and is therefore very dynamic.

Thanks to the optimisation in dimensions (shaft diameter 13mm) and material (polycarbonate) the sensor reacts very quickly on changing environmental parameters. The measured values are transmitted up to 10 times a second to the transmitter unit.

The newest DCC-1 measuring cell generation can be plugged and is pre-calibrated on +/- 3.5% RH. If necessary it can be exchanged very easily and

quickly. An ingenious filter system protects the sensor against particles and chemical gases.

For an easy installation a wall-mounting clip is delivered with each sensor. Duct flanges as well as wall supports are available as accessory. The sensor can be ordered with a specific cable length as requested by the customer. If there is a need for cable extension later on, an electro installation box, which can also be ordered as option, and a standard 5 wire cable with shield can be used by the electrician on site.

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

- Accurate combined digital relative humidity and temp. measurement
- Highest temperature accuracy
- Robust, modern design for HVAC and industrial processes (high reaction speed)
- Exchangeable pre-adjusted DCC-1 measuring cell
- Various exchangeable filter caps depending on the application
- IP 65 protection with standard filter cap
- Simple mounting with wall and duct flanges
- Sensor cable can be individually adapted on site (maximum length = 30m)
- Sensor shaft length extendable
- Additional electronic for sensor connection to the HygroDat 100 transmitter including RS-232 interface



Electronic sensor HIC :			<i>Article No.</i>
C-sensor / 1,5...30m cable	HIC-1x		111 9578
Capacitive hum. measuring cell	DCC-1		111 9590

Mounting aid :			<i>Article No.</i>
Duct mounting flange	1 pc		111 5343
Wall mounting flange	2 pcs		110 7360
Pipe extension 100mm			111 4632
Installation cable 5-wire w.shield	1,5...30 m		111 9585

°C -20 -4 °F

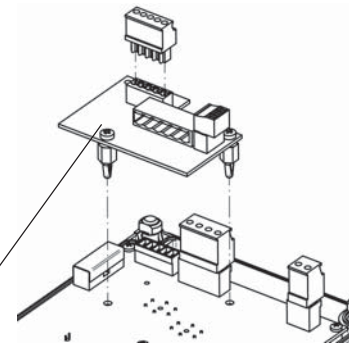
Specification HIC 1x sensor

Type	HIC-1x C-sensor (standard cable length 1,5m)	
Article No.	111 9578	(please indicate special cable lengths)
Measurement range : Humidity	0%...100 % RH (condensing!)	
Measurement range : Temperature	-40 ... +80°C	
Basic accuracy : Temperature	+/- 0.2K (0 ... 50°C)	
Basic accuracy : Humidity	+/- 2.0% RH (5 point calibration with SC-Checks 10...95% RH / 0...50°C)	
Basic resolution : (RH / T)	0.1% RH / 0.1K	
Typical repeatability : (RH / T)	< 0.2% RH / < 0.1K	
Operating temp. : Sensor probe	-40 ... +80° C	
Power supply	5.0V DC (Power supply by HygroDat 100 transmitter)	
Power consumption	Typ. 150 *10 ⁻⁶ W (max. 2.75* 10 ⁻³ W)	
Output measured values	Bitstream for RH, analogue NTC for T	
Storage temperature : Sensor probe	0 ... 60° C (not condensing)	
Storage temperature : DCC-1 cell	0 ... 60° C (not condensing)	
Electronic connection (with shield !!)	5-wire installation cable up to max. 30m (Length can be adapted on site)	
Electromagnetic compatibility	EN 50081-2 / EN61000-3-2/-3 / EN 50082-1/-2	
IP-protection : Sensor probe	IP 65 (only with "Cellgard" filter caps)	

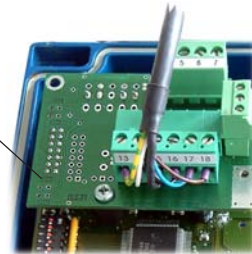


Accessories:

		Article-No.
Plastic extension to HIC sensor		111 4632
Digital capacitive RH/T measuring cell	DCC-1	111 9590
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



C-sensor electronic interface print



Electrolytic sensors

HIA 1x HIC 1x

-20...+80°C

- Mounting accessories
- Special filter systems
- Outdoor protection shield
- Spare parts
- Electrolytic meas. cell CC-1

HygroDat 100

novasina

Housing : - Aluminium
- Polycarbonate

Power supply : - 24V AC /DC
- 90...230V AC
(50 / 60 Hz)

Capacitive sensors

HIC 1x HICS 1x HICH 1x

-20...+80°C -40...+120°C

- Mounting accessories
- Special filter systems
- Outdoor protection shield
- Spare parts
- Capacitive measuring cell DCC-1

NOVASINA

Multiple use humidity standards SC-Checks
for calibration and adjustment of all humidity sensors



Dimensions of the HIC-1x sensor :

