

SENSOR

**HS-91(P)**

USER MANUAL





Contronics Engineering B.V., Ambachtsweg 8, 5492 NJ Sint-Oedenrode, The Netherlands, hereby declares that the product HS-91(P), produced and delivered by Contronics Engineering B.V., are in accordance with the following CE directives:

EMC-Directive	:	2014/30/EU
Directive for low-voltage electrical installation	:	2014/35/EU
RoHS-Directive	:	2011/65/EU

## 1. INTRODUCTION

The HS-91 is a relative air humidity and temperature sensor with high accuracy, even in the case of higher relative humidity (RH) values.

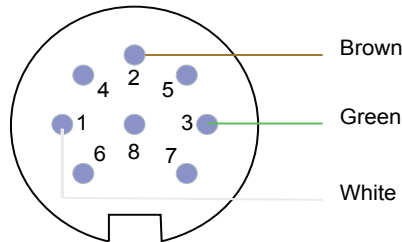
The electronics are moulded into a solid stainless steel housing, and the device can therefore be used virtually everywhere. A built-in heating system prevents condensation on the sensor element when the dew point is reached.

A chip programmed by Contronics compensates for temperature fluctuations.

The sensor is already calibrated on delivery. Follow-up calibration is unnecessary due to the excellent stability.

### HS-91P

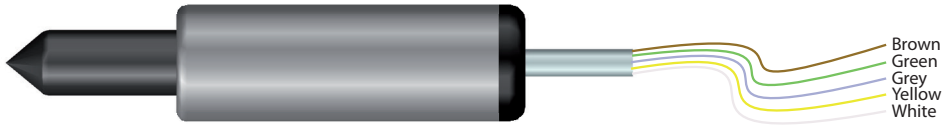
The HS-91 can also be delivered with a DIN plug for direct connection to a Contronics humidifier. (Order number: HS-91P).



DIN-plug male  
Solderside  
Yellow and grey not connected

*DIN-plug connections*

## 2. CONNECTIONS



HS-91

Colour	Description	Colour	Description
Brown	+12 V	Yellow	temperature
Green	0V	White	0-1V RH
Grey	0-10 V RH		

## 3. TECHNICAL SPECIFICATIONS

Relative humidity:	
Output	0-1 volt: 0-100% RH linear or 0-10 volt: 0-100% RH linear
Temperature:	
Output	0-4 volt linear      0 V = -50 °C 0,5 V = 0 °C 1,0 V = 50 °C
Supply voltage	12 – 15 V direct current
Work current	15 mA

RH performance specifications:		T performance specifications:	
Resolution	0.5% RH min. 0.3% RH typical	Resolution	0.04 °C min. 0.01 °C typical
Absolute accuracy	10-90 % < 2 % RH	Absolute accuracy	0,5 °C at 25 °C
	0 -10% 2-4% RH	Range	-40 °C min. +70 °C max.
	90-100% 2-4% RH	Reaction time	5 sec.
Range	0 -100%		
Reaction time	4 sec.		
Long-term stability	< 1% RH/year		

**DISCLAIMER**

Contronics works continuously on the further development of its products. We therefore reserve the right to modify the design, model and technology of the product at any time. No claims can therefore be made based on the data, pictures and description in this user manual.

**Additional, up-to-date information is available on [www.contronics.nl](http://www.contronics.nl)**