

Immersion Temperature Sensor

Resistor Type: HPT-114P



Product Type

Resistor type temperature sensor.
Range of operation -20...70 °C / <100 % r. h.

Application

Obtaining liquid or air temperature in heating, ventilation and air conditioning plants. (Threaded installation)

Order number description

Order number	Sensor type	Operating limits	Response time (No liquid Move)	Probe Length
HPT-114P	Pt 100	-20...70 °C	~ 3 min	10 cm. 15 cm.
	Pt 1000	-20...70 °C		
	NTC 10k	-20...70 °C		

Function

The sensor monitors the liquid/air temperature via its sensing element. The resistance of the sensing element changes as a function of the media temperature. The resistance value is used for further handling by a suitable controller.

Mechanical design

The unit has been designed for standard thread mounting specially for pipe installation.

The units consist of a base and cover. The base carries the connection terminals and installation thread. Thread and sensing element are made of stainless steel 304. The body material is flame-retardant polymer.

Cable entry is via a PG-9 gland. Be careful of tightening cable gland sufficiently in order to assure housing IP55 protection.

Disposal



These devices are considered electronics devices for disposal in terms of European Directive 2012/19/EU and may not be disposed of as domestic waste.

Dispose of the device via the channels provided for this purpose. Comply with all local and currently applicable laws and regulations. Plastic and metal sections are better to recycle separately.

Engineering notes

The permissible cable lengths are dependent on the type of controller with which the sensor is used. They are specified in the Data Sheet of the relevant controller.

In general, for Pt1000 and NTC10K sensors longer cables could be used.

Screened cable is necessary for noisy environments. Cable screen shall be connected to earth from controller side and consider gland size while assembling sensor.

Mounting notes

Sensor tube inside liquid pipe or air duct shall be exposed to flow and not in dead or circular media. Hereby prevent around pipe or duct bends installation.

The unit must not be exposed to direct solar radiation.

The permissible ambient conditions should be observed.

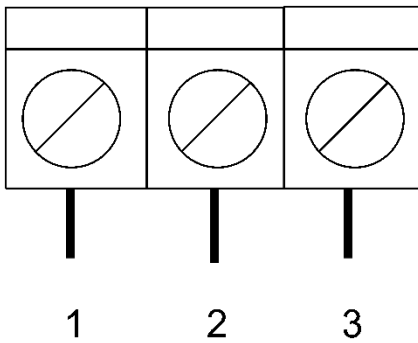
Be sure of proper sealing after installation.

Technical Data

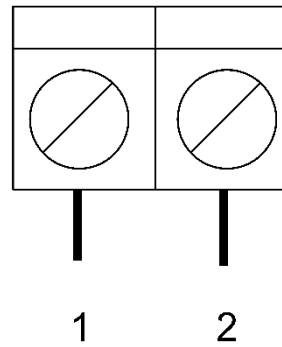
Functional Data	Range of use Type of measurement & output	Refer to "Page 1" Temperature Pt100, Pt1000, NTC10K
Degree of protection	Safety class Degree of protection for housing	Not defined IP55
Electrical connections	Screw terminals Perm. Cable lengths	Max. 3x1.5mm ² Refer to "Engineering notes"
Environmental Conditions	Operation condition	Temperature: -20...70°C Humidity: 0...<100% r.h.

Internal diagram

Pt100 / Pt1000



NTC10K



Pins 1 & 2 are connected to sensors same pin. User shall wire terminals 2 & 3 in case of 2-wire connection.

Dimensions (mm)

