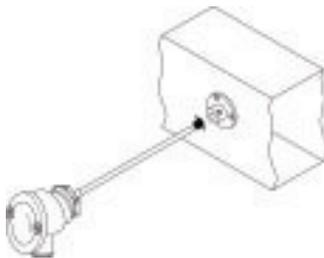




Accuracy		
PT100	class B DIN EN60751	±0,3K@0°C
PT100	class B 1/3 DIN EN60751	±0,1K@0°C
PT1000	class B DIN EN60751	±0,3K@0°C
PT1000	class B1/3 DIN EN60751	±0,1K@0°C
NI1000	class B DIN EN43760	±0,4K@0°C
NI1000	class B 1/2 DIN EN43760	±0,2K@0°C



## Technical Data

<b>Measuring range</b>	-35...+180°C(option up to 260°C)
<b>Test current</b>	approx 1mA
<b>Isolation</b>	>100Mohm vid 20C(500Vdc)
<b>Connection</b>	2-wire screened cable (3 or 4-wire option) terminals 0,14 to 1,5mm <sup>2</sup>
<b>Ambient range.hum</b>	max 95%rH non-condensing
<b>Housing</b>	IP65
<b>Enclosure material</b>	Aluminium
<b>Ambient range temp.</b>	-20/+100°C
<b>Probe materiel</b>	Stainless steel
<b>Probe diameter</b>	6mm

## Features

- High quality sensing element
- 3- or 4-wire as option
- Other sensing element on request
- Protection Class IP65
- Adjustment of penetration depth
- Different length of probes

## Application

The duct temperature sensor IDF is used to sense temperature in HVAC systems:

Typical examples being:

- Return or supply air temperature control.
- Supply air high or low limit

## Function

The sensing elements change their resistance value with respect to temperature:

PT100, PT1000, NI1000 - increasing resistance by increasing temperature.

## Design Features

The sensing element is fitted into a 200mm long stainless steel probe

A flange plate is included for adjustment of penetration depth.

Cable conduit is M20x1,5

## Ordering Codes

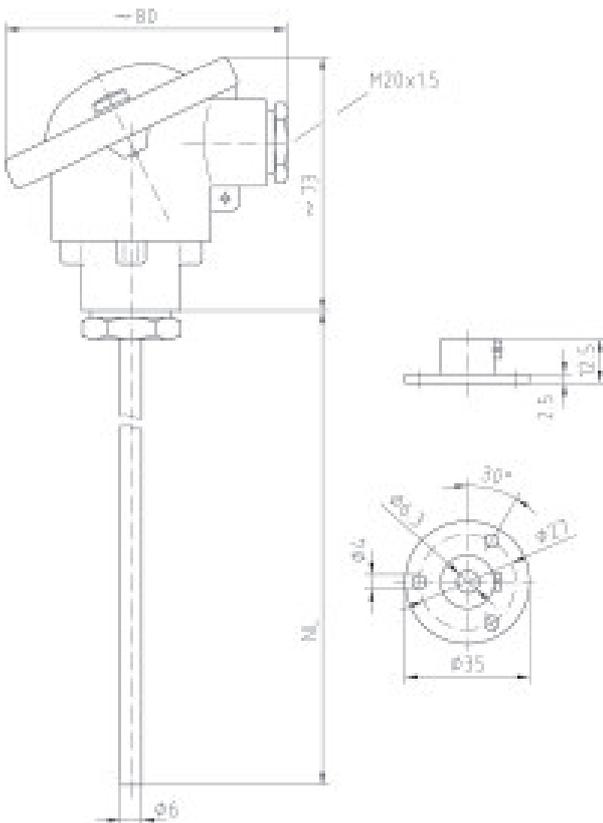
<b>IDF PT100/200</b>	Inu, IVT, Satt, Siox, ABB, Honeywell
<b>IDF PT1000/200</b>	Unitron, Johnson, IVT, BAS Exomatic, Honeywell, Serck, Diana, KTC, Regin, Bastec, YIT
<b>IDF NI 1000</b>	Sauter
<b>IDFLGNI</b>	Siemens Landis & Staefa QAA 23, QAD 21
<b>Options</b>	3- or 4-wire  +/- 0,1K, 0,03K or 0,2K accuracy of sensing element  Probes in mm :50,100, 150, 250, 300 or 400

### Mounting and Installation

The following installation advice should be observed:

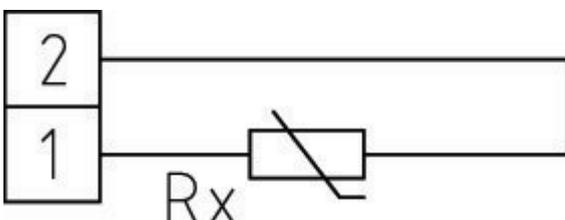
- supply air temperature sensing; the sensor should be a minimum distance of 1,5m from heater battery.
- return air temperature sensing; the sensor upstream of the extract fan so as to be representative of the room temperature
- supply air low limit sensing; the sensor should be as close to discharge as possible
- avoid duct locations where stratification may occur
- the sensor should be located away from any obstructions that could interfere with removal for servicing or replacement

### Dimensions



NL = 50, 100, 150, 200, 250, 300 or 400mm (probes)

### 2-wire connection



### Installation and Connection Details

All connections to DDC controllers, data recorders etc. should be made using screened cable.

Normally, the screen should be earthed at one end only (usually the controller end) to avoid earth hum loops which can create noise.

Low voltage signal and supply cables should be routed separately from high voltage or mains cabling.

Separate conduit or cable trays should be used.

Where possible, the controller's earth should be connected to a FUNCTIONAL EARTH, rather than the mains safety earth.

This will provide better immunity to high frequency noise.

Most modern buildings have a separate earth for this purpose

### 3 and 4 wire connection

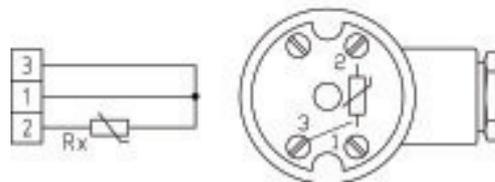
The principle of both 3 and 4 wire connection is to provide a constant current flow through the element and measure the volt drop as close to the element as possible.

The addition of the third wire eliminates the error from one of the two original installation wires.

#### 3-wire connection

The addition of the third wire eliminates the error from one of the two original installation wires.

(Bei gepolten Sensoren gilt 1= Pluspol), bzw 1 und 6= Pluspol  
1 x Dreileiterschaltung



#### 4-wire connection

4 wire connection eliminates the error from both of the original installation wires

(Bei gepolten Sensoren gilt 1= Pluspol), bzw 1 und 6= Pluspol,  
1 x Vierleiterschaltung

