

Works with

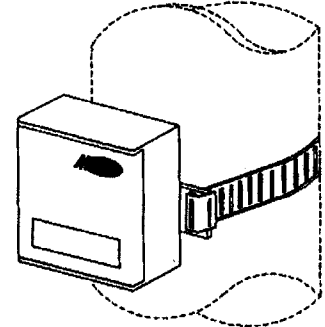
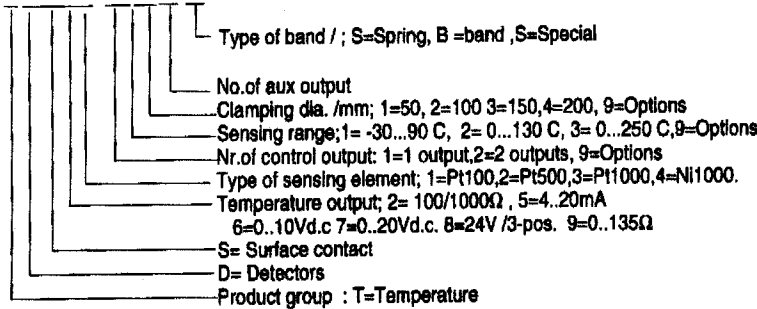
- * ATI
- * Barber coleman
- * Honeywell
- * Johnson
- * Landisgyr Staefa
- * Satchwell
- * Sauter
- * T&A
- * TEG
- * Others

Temp. detector, Surface

Pt 1000 Ω sensor, range; 0...130 C
 with resistance standard signal output

TDS23.122

TDS23.1230 B Standard type



Description

Electronic temperature detector is used to control of temperature in a pipe or in a vessel of any medium in a conditioning system, this detected value can also be used as a reference signal to building automation system.

Application

In heating, ventilating, air conditioning and other industrial installations for control and receiving reference signals in a pipe or in vessel.

Compact design of the detector is ideal for maintenance or replacement without any special tools. This signal gives also very accurate information in a flow circuit of any medium to the DDC data acquisition unit requiring comparatively short distance cabling system connected to computerized data acquisition system by communication like Building Automation System.

Ordering Specification

When ordering, please give full designation and type reference of unit;

Ex: **TDS23.1230A** Temperature detector for Surface
 1000 output
 1 output, 0...130 C
 None power supply
 with 150mm clamping band

Standard stock type
TDS23.1230AB

Technical Data

Permissible amb. temp.	Standard type
Operation	-25...65 $^{\circ}$ C
Transport & storage	-15...50 $^{\circ}$ C
Operating range	-25...65 $^{\circ}$ C
Permissible amb. humid.	Class D to DIN 40040
Protection standard of housing	IP42
Cable entry glands	pg 11
Weight	0.1kg

Temperature sensor

Measuring range	0...+150 $^{\circ}$ C
Application range	0...+130 $^{\circ}$ C
Measuring accuracy at 20 C	\pm 0.1% FS
Output signal	1000 Ω at 20 C

Permissible amb. humidity	0...95% rH
Permissible cable length	
Copper 0.6mm dia	35m
Copper 1.0mm dia	120m
Copper 1.5mm dia	320m

Summary of Types

Type / Model	Temp Range	Pipe Dia. up to
TDS23.1230B	0...130 C	150mm
TDS23.1130B	-35...90 C	150mm

Function

The detector senses temperature of the surface of pipe or tank wall by the positive thermal coefficient element, Pt1000 which gives linear changes of signal according to temperature of the surface. The change of resistance is being transferred directly to the terminals. This signal is good for comparatively short distance applications like connection to the DDC unit on site.

The best in performance

In the thin pure copper film wrap over the sensing element and the leads connected to the plastics case for protection from short circuit. The detector is ideal for high pressure pipe line and retrofitting job which may be difficult in installing new pocket in to the pipe lines or tanks.

Optional units available

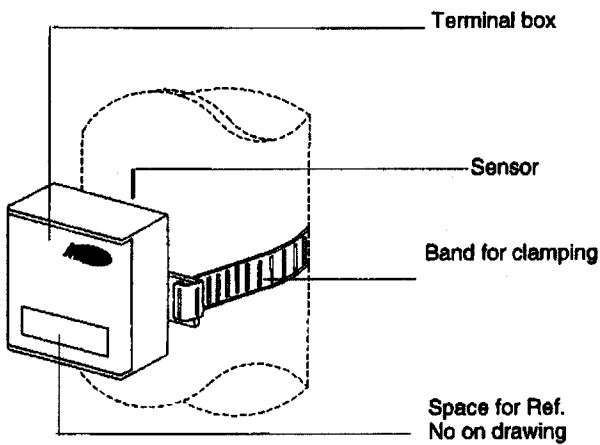
- An additional output signals are available in add on module;

Design Features

External box is very compact and made of engineering plastics since it has only terminal and to prevent unwanted damage of electronics by the workers while installation at the job site. The sensing element is encased in a high impact engineering plastic tube. Mounting the detector and dismantling is very simple and easy since there is no need to disconnect the wiring and shut down the power supply for checking the units. there is no need of special tools nor adjustments.

- Entirely Maintenance free PTC type sensing element.

Structure



Application Advice

For further information on the complete detector unit also refer to the Data Sheet of the various type of detectors, P34000... P34999.

Observe the permissible temperatures. For details refer to <Application > and <Technical Data>

Data Sheet 34001 contains basic system data on POLYTEK. All hints and explanations given in this sheet must be observed.

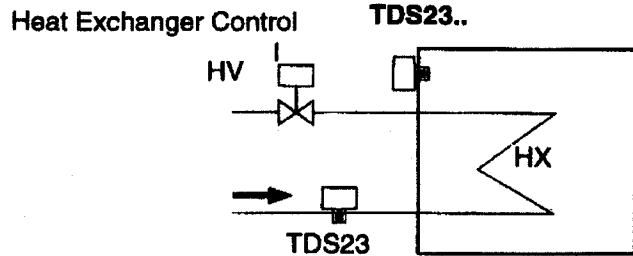
Mounting and Installation Advice

Mounting positions:

When the detector has to be mounted on supply pipe the location of the detector must be kept between 3 to 8 meters from the heat exchanger unit.

For accurate control of the temperature follow recommendation as;

- with Plate package; between 3 to 8 meters
- with Shell & Tube ; between 1 to 5 meters



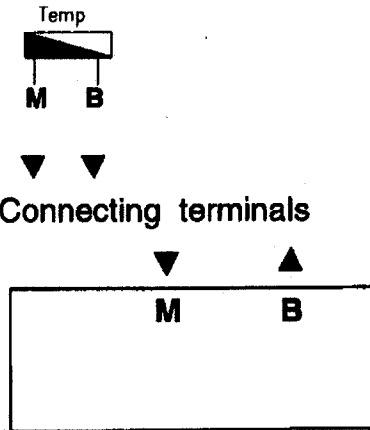
The detector mounting instructions are included in the delivery box together with products.

Commissioning Advice

When commissioning the installation, check the wiring and temporarily filter tube.

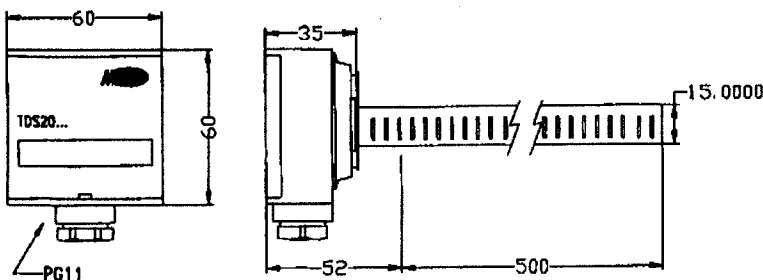
Wiring Diagram

Internal Diagram



Dimensions

TDS23.1230



Dimensions in mm

We reserve the right to make changes and improvements in our products which may affect the accuracy of the information contained in this leaflet.

Hints for correct valve sizing

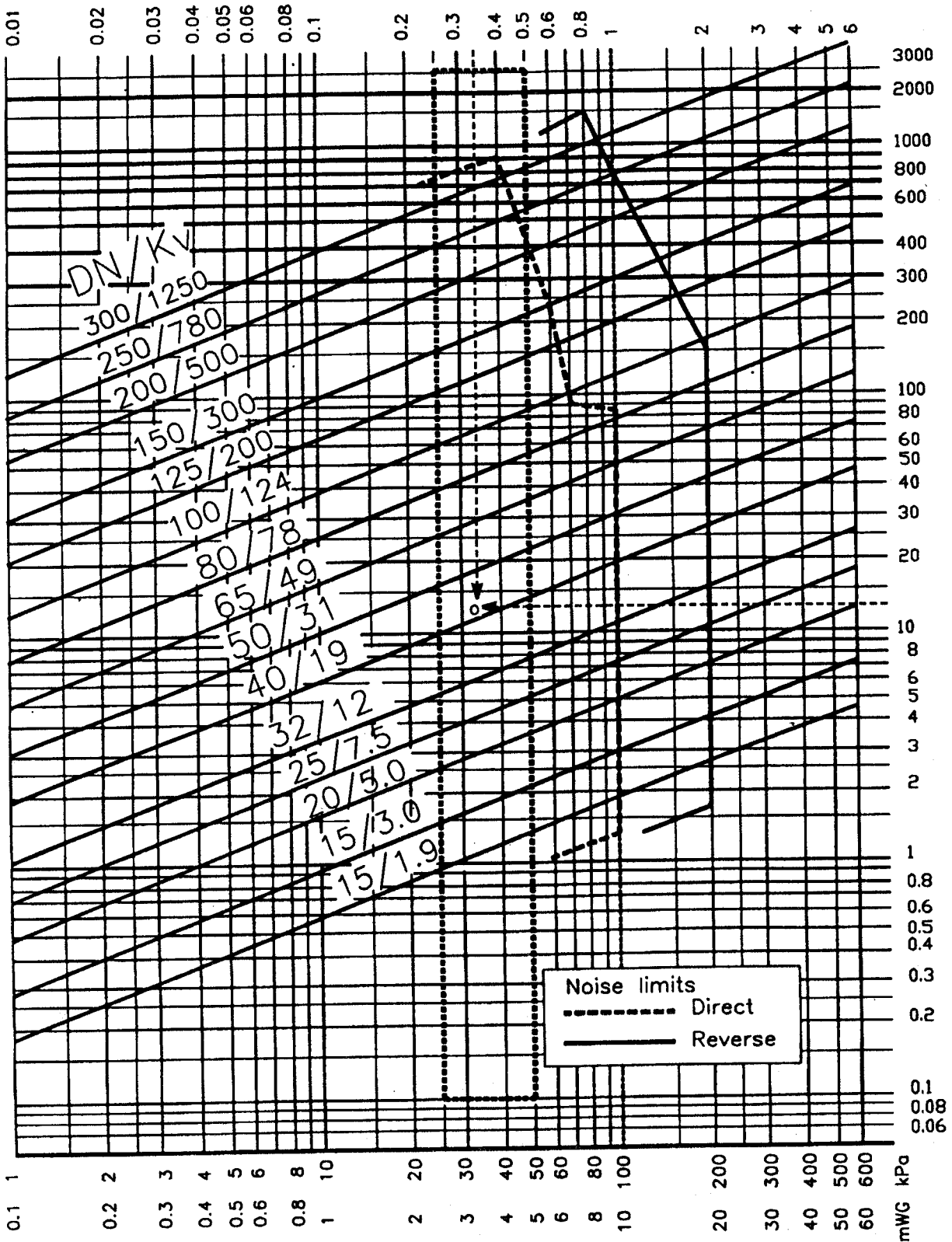
Example: Given data: $\Delta P = 0.35 \text{ Bar}$ and $K_v = 13$
 a. Trace down the vertical line of 0.35 Bar of ΔP to an intersecting point with horizontal line of K_v flow rate of $13 \text{ m}^3/\text{h}$.

b. Select $K_v=19$ of DN40 between the line of $K_v=31$ and the line of $K_v=19$

The answer is TYPE:VTF31.140 ;40mm(1-1/4") of $K_v=19$

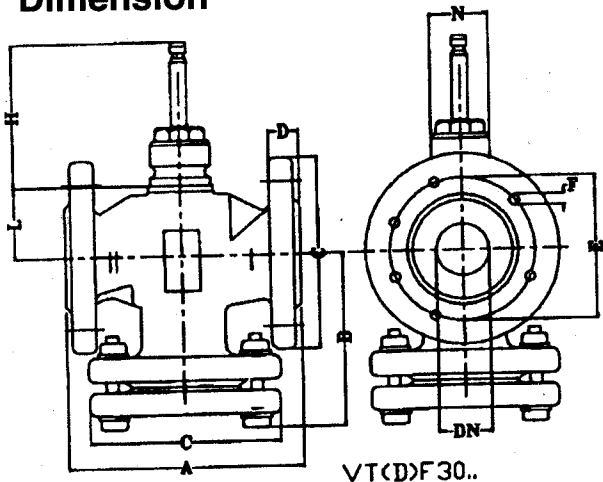
TYPE:VTF30...

Pressure drop ΔP_{V100} in Bar



Recommended selection in $\Delta P_{V100} = 0.3 \text{ Bar}$
 $1 \text{ m}^3/\text{h} = 0.278 \text{ kg/s}$ water at 20°C

Dimension



VT(D)F30..

DN mm	Inch	A	B	C	D	F	H	L	N		S	Wgt kg	Suitable actuators				
									ATI	H/W			ATI	L/G	H/W		
15	1/2"	100	50	100	10	12x 4	96.5	26	44	35	10	4.0	AQX SQX/SKD M904+Q455				
20	3/4"	100	50	100	10	12x 4	96.5	26	44	35	10	4.2					
25	1"	160	80	115	16	14x 4	96.5	34	44	35	10	5.9					
32	1 1/4"	200	100	150	18	18x 4	96.5	39	44	35	10	10.1					
40	1 1/2"	200	100	150	18	18x 4	96.5	39	44	35	10	10.1					
50	2"	230	115	165	20	18x 4	96.5	39	44	35	10	15.5					
65	2 1/2"	290	145	185	20	18x 4	96.5	60	44	35	10	17.3					
80	3"	310	155	200	22	18x 4	96.5	60	44	35	10	22.9					
100	4"	350	175	220	24	18x 8	116.5	91	44	35	14	33		AQX SKC M904+Q455			
125	5"	400	200	250	26	18x 8	116.5	102	44	35	14	48					
150	6"	480	240	285	26	22x 8	116.5	118	44	35	14	68					
200	8"	600	305	345	29	22x12	116.5	124	44	35	16	160					
250	10"	720	370	400	29	22x12	116.5	150	44	35	16	225					

Dimensions in mm