



Pneumatic Transmitters Series 200

Series 200 pneumatic transmitters are blind instruments designed for directly measuring a temperature, a pressure or a level which is converted into a linear 3 to 15 psi or 0.2 to 1 bar pneumatic signal.

The signal is then transmitted to a receiver for remote indication, recording and/or an automatic control.

These instruments find wide application in pneumatic transmitting systems for centralized measurement and control of processes.

An inbuilt powerful amplifying relay allows a long distance transmission with a reduced air consumption.

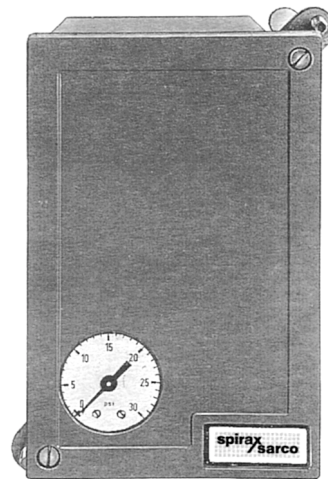
The transmitted signal is directly proportional to the measured value with remarkable accuracy, repeatability and sensitivity.

The measuring element is a spiral stainless steel Bourdon type for pressure, a bellows for low pressure and a **gas filled** system with bulb and capillary for temperature; level is detected by a diaphragm measuring element.

The instrument is provided with a pressure gauge for the air output signal indication.

Instrument case of reduced size is dust and sprayproof and fitted with accessories for wall or flush panel mounting; optionally instrument may be supplied with accessories for 2" pipe support mounting.

Case internal pressurization is possible on request. Compressed air for instrument supply must be filtered, oil free and completely dry; a pressure of 20 psig (1.4 bar) is required.



MEASURING SYSTEMS

Temperature

Nitrogen filled thermometer system for temperature ranging from -100°C to 600°C ; bulb and capillary are in AISI 316 L stainless steel; cylindrical bulb for liquids, available also in sanitary execution for food industry, pharmaceutical processes, ecc., or spiral bulb for air and gas. The standard capillary lengths are 2 or 5 m; the maximum length may be 10 m.

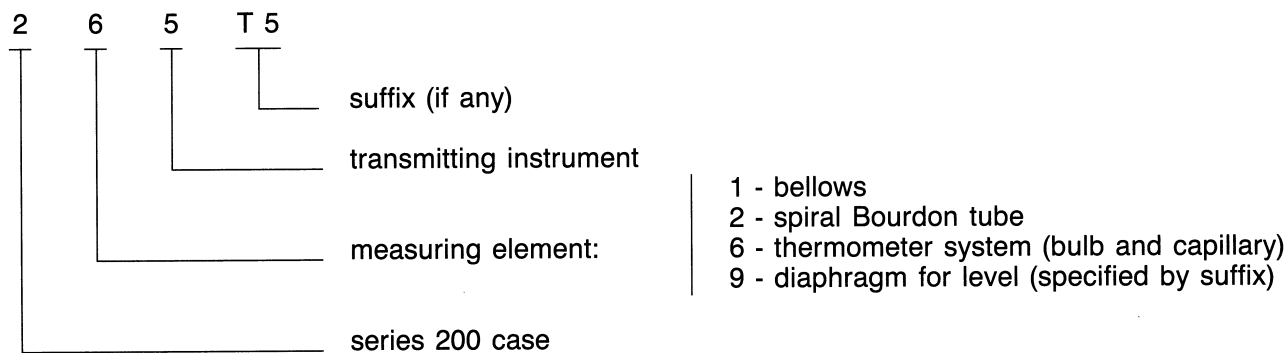
Pressure

AISI 316 L stainless steel **Bourdon** tube element for pressure up to 200 bar. A diaphragm separator with capillary is available for application with very viscous or corrosive fluids. Tombak or AISI 316 L **bellows** element for low pressure measurement.

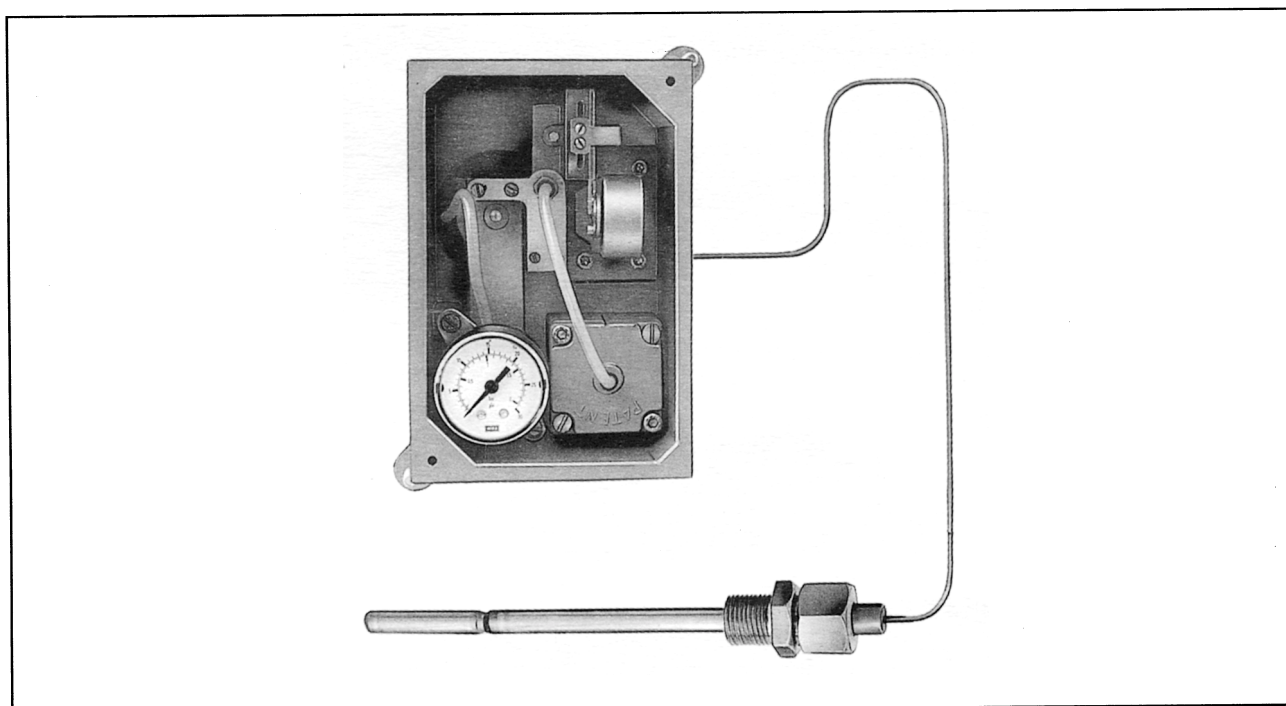
Level

AISI 316 stainless steel diaphragm; execution suitable for food industry. Installation on open tank.

The model number, which identifies the general characteristics of the instrument, is composed by a number of three digits often followed by an alphanumeric suffix. The meaning of digits and letters is explained with an example:



The suffix is used in order to complete or give complementary informations about the characteristics of the instrument, for example: T5 is used when thermometric element has a cylindrical bulb and is nitrogen filled while T5 Sy means that the nitrogen filled thermometer system is fitted with a sensing bulb in sanitary execution and T6 means that the systems is nitrogen filled and equipped with a spiral bulb for air and gas; L means that the instrument is fitted with a diaphragm sensing element for level.



GENERAL SPECIFICATIONS

Type of instrument	Blind pneumatic transmitter with direct measuring of variable
Measuring limits	<ul style="list-style-type: none"> • pressure: from 0 to 200 bar with Bourdon tube from 0 to 5.000 mm W.G. with bellows element • level: from 0 to 10.000 mm W.G. • temperature: from -100°C to 600°C
Accuracy	1% of range span
Sensitivity	0.2% of range span
Repeatability	0.5% of range span
Linearity	0.5% of range span
Mode of transmission	direct and proportional action: output signal increases on increasing measured variable
Output signal	3 to 15 psi or 0.2 to 1 bar
Air supply	compressed air at 20 psi \pm 1.5 psi (1.4 bar \pm 0.1 bar)
Air consumption	0.2 Nm ³ /h (average)
Air connections	1/4" NPT female for air supply and output signal
Process connections	<ul style="list-style-type: none"> • pressure: 1/4" NPT female for Bourdon tube measuring element 1/8" NPT female for bellows measuring element • level: screwed DN 50 DIN 405 with stainless steel union flanged DN 50 UNI 2278-2229 PN 10 • temperature: for bulb types, dimensions and connections to process see bulletin 7B.390-E
Ambient temperature limits	maximum 65°C minimum -15°C
Case	die cast aluminium with blue RAL 5010 enamel finish, spray and dust proof style with standard protection degree IP 54; connection for internal pressurization (optional)
Mounting	<ul style="list-style-type: none"> • wall or flush panel mounting by means of standard fittings • on 2" pipe support with clamps (optional)
Weight	approx. 2 kg
Overall dimensions	see drawing on the next page

STANDARD RANGES OF MEASUREMENT

FOR PRESSURE

With stainless steel Bourdon tube Ranges in bar	- 1 - 0 - 1 - 1 - 1 - 4	0 - 1 0 - 2 0 - 3	0 - 5 0 - 7 0 - 10	0 - 15 0 - 20 0 - 30	0 - 50 0 - 100 0 - 200
With tombak or stainless steel bellows Ranges in mm W.G.	0 - 1000		0 - 3000		0 - 5000
Permissible overpressure	25% of measuring range span				

FOR LEVEL

With diaphragm measuring element Ranges in mm W.G.	0 - 2000	0 - 5000	0 - 10.000
Permissible overpressure	25% of measuring range span		

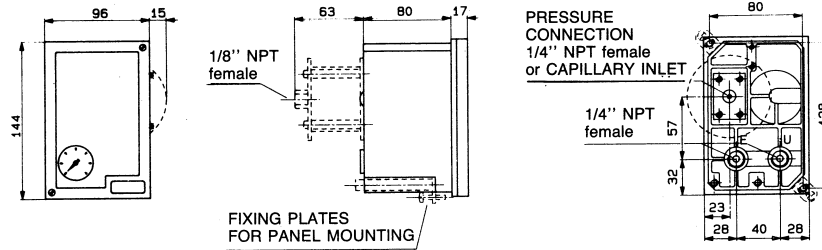
FOR TEMPERATURE

Measuring span	30°C*	50°C	100°C	150°C	200°C	250°C	300°C
Ranges in centigrade degrees	0 - 30	- 25 - 25 - 10 - 40 0 - 50	0 - 100 10 - 110 50 - 150	0 - 150 50 - 200	0 - 200 50 - 250	0 - 250 50 - 300	0 - 300 50 - 350
Permissible overtemperature	25% of measuring range span						

* Available with kerosene filled thermometer system only.

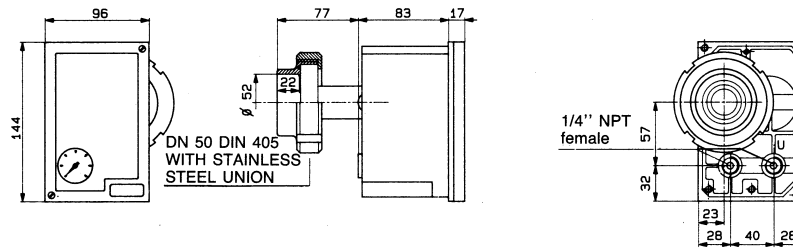
DIMENSIONS (mm)

DIMENSIONS AND CONNECTIONS



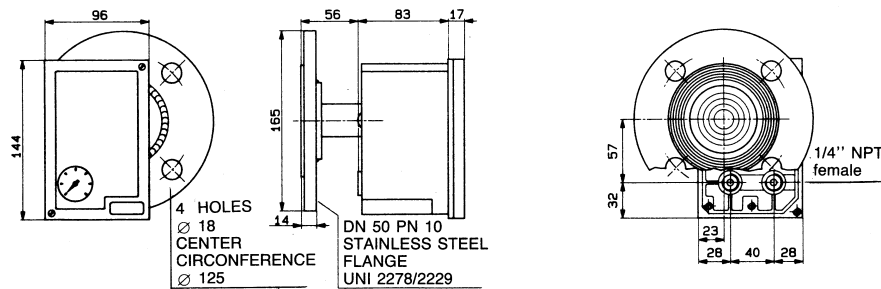
Model 225 and 265 instruments; the dashed part is related to model 215 instruments equipped with bellows measuring system.

E = Air supply connection (air inlet)
U = Signal connection (air outlet)



Model 295 L instrument with screwed process connection

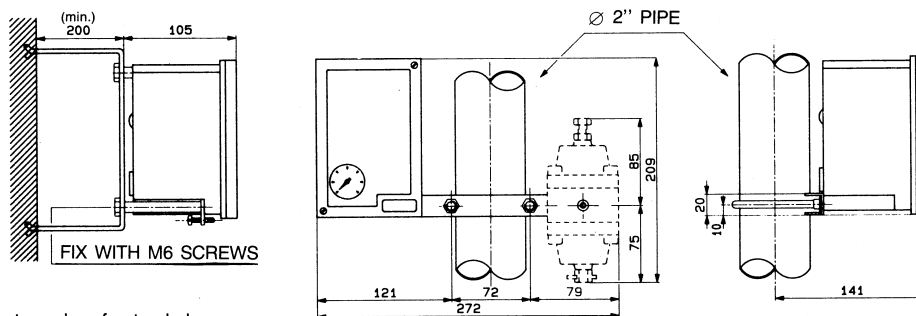
E = Air supply connection (air inlet)
U = Signal connection (air outlet)



Model 295 L instrument with flanged process connection

E = Air supply connection (air inlet)
U = Signal connection (air outlet)

WALL OR PIPE STAND MOUNTING



The mounting support can be of extended type allowing also the air regulator clamping.

PANEL MOUNTING

