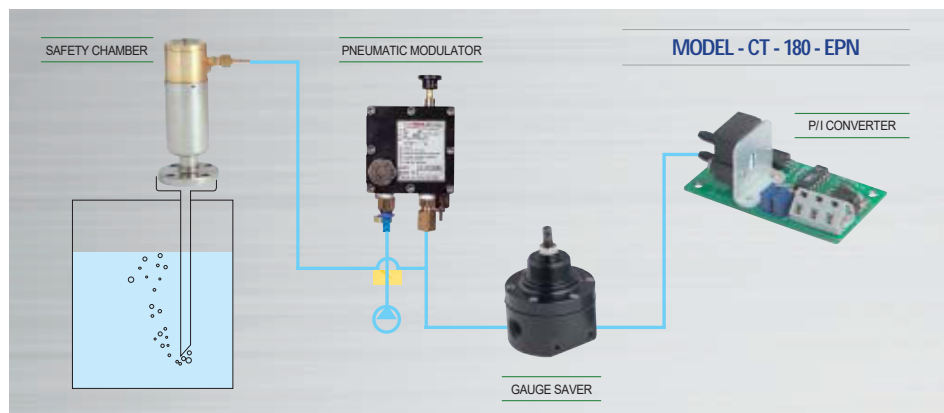
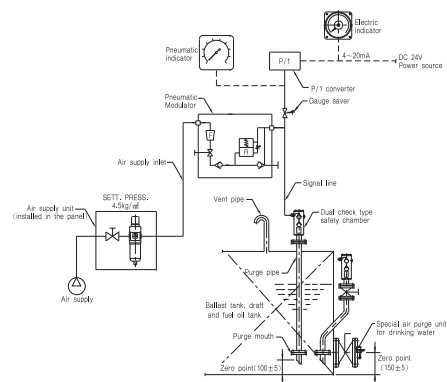


# Tank Remote Sounding System

## \*AIR PURGE TYPE REMOTE LEVEL GAUGING SYSTEM(ELECTRO PNEUMATIC TYPE)



### PRINCIPLE DIAGRAM



The flow is produced by means of an automatic air flow modulator, type which includes:

- An air supply filter
- An air flow regulator ensuring a constant pre-set flow at the end of the bubble pipe in the tank irrespective of the supply pressure.
- A safety valve protecting the indicator and pressure transmitter against over pressure.
- The air supply valve is used for isolation from other channel without any influence.
- The blowing valve is used for sending the full air pressure through the signal line for cleaning purposes.

### OPERATING PRINCIPLE

The operating principle is based upon the measurement of the hydrostatic pressure by providing a constant low flow of air or neutral gas into a probe which opens at the tank bottom. The output pneumatic signal of the modulator is fed into P/I converter and is changed to electric signal(4-20mA) in 2 wire by P/I converter. The electric output signal(4-20mA) can be connected to C.R.T display cargo system, Digital indicator, analogue type indicators, etc. or a combination of these systems.

### FEATURES

- Liquid level of measuring depth pressure is indicated for direct reading, and then the high precision is achieved.
- The construction is simple and the handling, and maintenance is easy.
- 4-20mA output signal/Two wires.

### APPLICATIONS

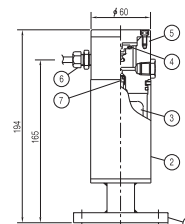
- Ballast tank remote reading
- Draft remote reading
- Fuel oil tank remote reading
- All liquids even viscous ones (molasses, bitumen etc...)

### STANDARD SPECIFICATIONS

- System type : One line type air purge system
- Flow rating : 10-80NI/h
- Working Temp. : -30°C-70°C
- Supply air setting pressure : 4.5kg/cm<sup>2</sup>
- 400m Max. distance of signal line and indicator
- Signal line size : OD 8 or OD 10
- Range : 1 to 40 meter
- Output : 4-20mA 2wire system
- Power supply : 16 to 32V DC
- Accuracy : ±0.5% of F.R  
±0.2% of F.R(optional)

### COMPONENTS OF SYSTEM

#### DUAL CHECK TYPE SAFETY CHAMBER(AIR PURGE HEAD)



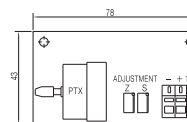
NO	Description	Material	Q'ty
1	Flange	SUS 304	1
2	Floaf chamber	SUS 304	1
3	Floaf	SUS 316	1
4	Upper disc	NAVAL BRASS	1
5	Chamber	NAVAL BRASS	1
6	Connector	BS	1
7	Lower disc	NAVAL BRASS	1

- Avoids entry of liquid inside the device in case of air supply failure.
- Connection size : JIS 5K 25A, or 5K 20A.
- Working pressure : Max. 10 kg/cm<sup>2</sup>.
- Connection size of local test device : PT 1/4"
- Material : Naval brass.
- Including local test device for check of actual level.

#### TRANSMITTER PANEL

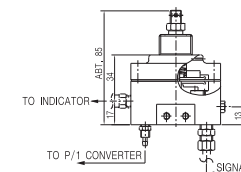


#### P/I CONVERTER



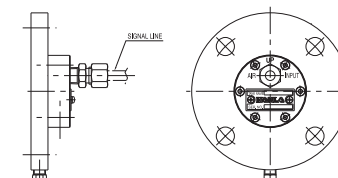
- The transmitter is linked to an integral air regulator and consists of :
  - a sensyn piezoresistand type sensor
  - an electronic unit which converts the signal from the sensor into a standard 2 wire, 4-20mA signal
- Power supply From 18 to 36VDC
- Output signal : standard 4-20mA(2 wires)
- Accuracy : ±0.2%, OF F.S
- Enclosure : EEx ia IIC T6

#### GAUGE SAVER

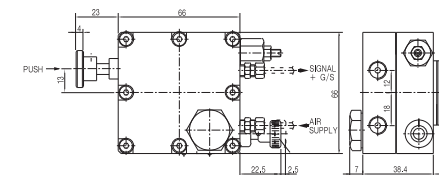


- Body material : AL6061
- Differential : Below 0.01 kg/cm<sup>2</sup>
- Including the range adjuster

#### SPECIAL PURGE UNIT



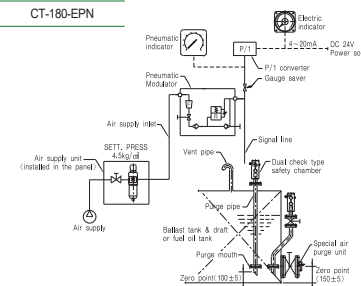
#### PNEUMATIC MODULATOR



- Air pressure : 4.5kg/cm<sup>2</sup>
- Flow rating : 10-80NI/h
- Blowing pressure : 4.5 kg/cm<sup>2</sup>
- Connexion : Air supply-PT 1/8"  
Signal line-PT 1/8"
- Including the flow rate adjuster and main air non-return check valve

### SYSTEM EXAMPLE

#### CT-180-EPN



#### GENERAL WIRING DIAGRAM

