



# FLOW INDICATOR TOTALISER



## FLOW INDICATOR TOTALISER

"NIPPO FLOW" series is designed with help of State-of-art micro controllers. The instruments can measure Flow accurately, it accepts signals, from FLOW TRANSMITTERS and calculates flow rate and also integrates the same. The 5 digit indicator displays the instantaneous flow rate and 10 digit counter displays TOTAL FLOW.

- Linear or Square Root Operation Possible
- RS 232/RS 485 Interface with MODBUS
- At Affordable Prices.
- 5/4 digits for Flow Rate
- Precise Measurement
- 10/8 digits for Flow Totaliser
- 10 Years Memory.

## Specifications

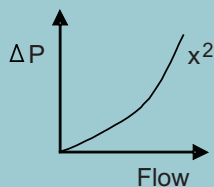
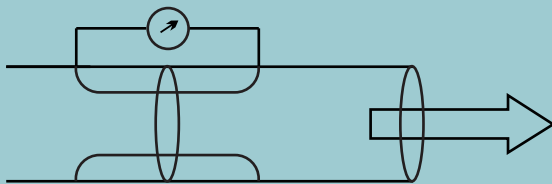
<b>Inputs</b>	4-20 mA or Volt Pulses.
<b>Range</b>	Flow Totaliser - 10 digits. Flow Rate - 0-99999 Units (Lit/Min or Kg/Hr or Tons/Hr or M <sup>3</sup> /Hr)
<b>Accuracy</b>	Cent Percent
<b>Display</b>	10 digits for Flow Totaliser and 5 digits for Flow Rate 16 characters • 2 Lines Alphanumeric LCD in UNIFLOW model. and 8 digits • 7 segment for Flow Totaliser and 5 digits • 7 segment for Flow Rate in UNIFLOW-L model.
<b>Parameter Setting</b>	By soft touch, Elegant, Sturdy and user friendly membrane key pads.
<b>Memory</b>	10 years NVRAM.
<b>Computer Interface</b>	RS232 or RS 485, MODBUS available.
<b>Supply</b>	90-260 VAC, 50 Hz, SMPS
<b>Ambient Condition</b>	Temp 55°C and Relative Humidity 99%
<b>Retransmission</b>	Available • 4-20 mA for Flow rate. • Pulses for Flow Counts.
<b>Set Points</b>	2 Nos, Possible for Flow rate and Flow Totaliser.
<b>Output</b>	2 Relays, rated 230 V / 6 Amp.
<b>Box</b>	96(H) x 96(W) x 180(D) Din Size box with modular design.



## FLOW TOTALISER WITH FLAMEPROOF ENCLOSURES

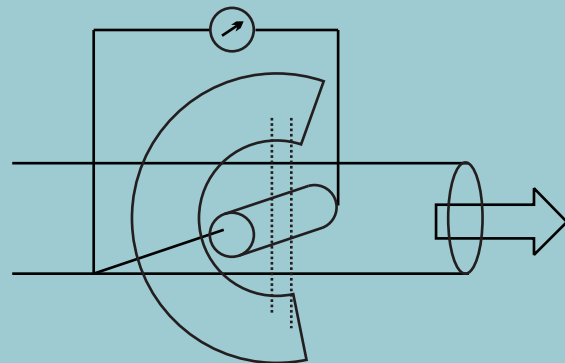
- For Hazardous application.
- Suitable For Installation In Hazardous Location
- For GasGroups IIA and IIB
- IP-66 Protection As per IS13947(Part-1) 93
- Cast AL Alloy Construction
- Heat Resistant, Toughened, Clear Flat Glass
- Elegant Light Grey Powder Coated
- Strurdy Push Buttons for Parameter Setting
- Truly Modular design

### SOME PRINCIPLES OF FLOW MEASUREMENT



$$\text{So Flow} = k\sqrt{\Delta P}$$

Differential Pressure Measurement for Flow rates : Generally this method is used for measuring flow of gas, steam and liquids of low viscosity. An obstruction in the pipeline is generated by an element (orifice plate) creates pressure difference before and after the element. This differential pressure (pressure low) is proportional to square of the flow rate.



Electro- magnetic flow measurement : This method is used in application where liquid is electrically conductive. E.g. water, acids, alkalis, milk, beer, pulp slurry etc. Faraday's law of induction is the principle used. Electromagnetic Force (E.M.F) is induced when conductive material passes through a magnetic field. The flowing medium is conductor and induced voltage is proportional to flow velocity.



**Nippon Technologies**

MFGS. AND DESIGNERS :  
Instruments, SCADA & Automation Systems, Sensors

106, Shivsagar Indl. Estate, Opp. Kotkar Indl. Estate,  
Kotkar Road, Goregaon (E), Mumbai - 400 063. India.  
Tel : 6574 1527 / 2872 7294 • Fax : 2876 5709  
E-mail : nippontech@vsnl.com

### SALES OFFICES

**Surat** : Road No. 6, Udhna, Surat, Gujarat.  
Tel : (0261) 2278422 / 6544180  
Fax : (0261) 2279423  
E-mail: dipan@nipponinstruments.com

**Dubai** : ACME Electromechanical Works LLC,  
Tel : (009714) 2583122 / 2583144  
Fax : (009714) 2583166

**Pune** : (9520)24376245  
**Bardoli** : 09824111394  
**Kolkata** : 09831057357 / 9831152530  
**Hyderabad** : (040)27173714 / 24  
**Goa** : (0832)2312710 / 6702 / 7399  
**Bangalore** : 09341875222

**Durg** : (0788)2211212 / 3105117 / 9827111400  
**Delhi** : (011)26903568 / 26340095 / 96 / 97  
**Gwalior** : (0751)2231951 Fax : 0751-2344889  
**Chennai** : 9382744155 Telefax.: 044-22292383  
**Jamshedpur** : (0657)2420672 Fax : 0657-2433977  
**Visakhapatnam** : (0891)2702415 / 9441944947