



AUTOPRO

MICROCONTROLLER BASED FLOW INDICATORS & CONTROLLERS

ANALOG INPUT RATE INDICATOR

MODEL A4455



A4455

SALIENT FEATURES

- FLOW / PRODUCTION RATE INDICATION
- VARIOUS ANALOG INDUSTRIAL INPUTS
- FIELD PROGRAMMABLE TIME UNITS
- FLOW OR PRESSURE INPUTS
- SQUARE ROOT EXTRACTION OPTION
- FLOATING POINT RATE CONSTANT
- PRESETTABLE DIGITAL SIGNAL FILTER
- LARGE 14.2 MM STABLE DISPLAY
- KEYPAD PARAMETER SETTING
- 24 V TRANSMITTER SUPPLY OPTION
- PASSWORD PROTECTION
- WIDE VARIETY OF ENCLOSURES

DESCRIPTION

The Model A4455 Analog Input Rate Indicator is flow or production rate indicator. The unit accepts various analog inputs from a variety of industrial sources. The analog input signal is suitably conditioned and digitised by an A/D converter. This converts the analog input value to a digital signal. This is then read by a microcontroller.

If the flow signal is from a Differential Pressure Transmitter (DPT) connected to an orifice plate system, the square root is accurately extracted by the microcontroller. This gives it very wide rangeability in flow rate.

This value is multiplied by a floating point flow constant, filtered by an auto or manually set digital filter and indicated on a 4 digit display to show the flow / production rate in user selected volume/mass/length etc. units and time units are selectable from seconds/minutes/hours.

All parameters are protected from unauthorised changes by password protection and keypad lockout. The non-volatile memory is used to store all parameters.

The unit is normally available in panel mounted version. However weather and flame proof versions are also available.. The unit normally operates on 230 V AC mains but can be supplied in 24 VDC versions also.

APPLICATIONS

The A4455 analog input flow rate indicator accepts inputs from either Differential Pressure Transmitters (DPTs) mounted across orifice plates directly from flow transmitters. The square root option can be extracted (optionally) for pressure inputs. The unit can be used to indicate the flow / production rate.

The large dynamic range of measurement allows the unit to operate at low flow rates also. The digital signal filtering gives stable readings even when the (flow) rate fluctuates due to the uneven flow. The display can be configured to display either one, two, three or no digit/s after the decimal point, in cases where unwanted resolution cause an error in reading the rate correctly.

The Indicator can also be used for measurement of linear production rates in continuous process industries like wire drawing, polyester rope manufacturing etc. It can also be used in textile production and processing, since the measurement is very precise. The floating point multiplier enables the unit to measure the production rate in any engineering unit by simply changing the multiplier factor and hence measurements like Kg /Hr, Met /min and Litres /sec are also possible.

SPECIFICATIONS :

INPUT

Input source

1. Flow (linear)
2. Pressure (Square root)

Input signal range *

- 4 - 20 mA current loop

Input & control isolation

- 500 V DC @ 1 minute

Flow rate units

- per Sec/ Min / Hour

Flow constant

- 4 digit user programmable

Flow constant range

- 0.001 to 9999 units

Under range indication

- Below - 25 % input

Over range indication

- Above 125 % input signal

Signal stabilisation

- Digital signal filtering

Process indication

- 4 digit 14.2 mm LEDs

Decimal point

- "Autoranging" upto 4 digit

AUXILLIARY SUPPLY

Output Voltage

- 24 V DC \pm 10 %

Output Current

- 30 mA max

SETUP & SECURITY

Setup display

- Automatic display at startup

Setup programming

- By keypad on facia

Setup memory

- Non volatile EEPROM

Programme security

- 4 digit user editable password

Enclosure options

T72 : 72 x 72 x 110 (HxWxD)mm

Panel mounting

WP1 : 250 x 250 x 160 (HxWxD)mm

Weather Proof Wall mounting

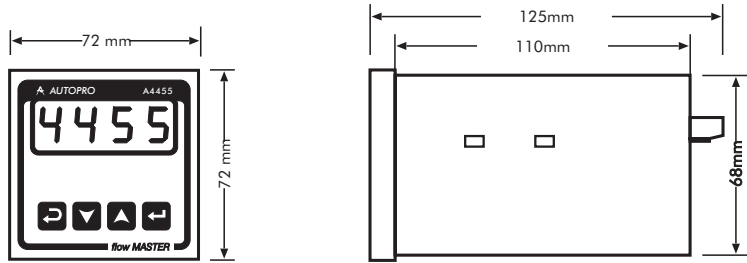
as per IS: 2147 IP55

FP1 : 360 x 210 x 170 (HxWxD)mm

Flame Proof Wall mounting

as per IS: 2148 Gr IIA & IIB

DIMENSIONAL DETAILS :



Enclosure T72 (Panel mounting) Cutout : 68 X 68 mm

INDICATION

PV display

- Direct by 4 digit LEDs

Flow / Production rate indication

- 4 digit 14.2 mm display

Decimal point selection

- Selectable no. of decimals

COMMUNICATION

Communication Standard

- RS 232 C Serial

Baud rate

- 1.2k / 2.4k / 4.8k / 9.6k / 19.2k

Transmission delay

- 1 to 9999 seconds

ID or TAG

- 4 digit user set tag number

GENERAL

Key pad

- 4 Key keypad on facia

Power supply *

- 230 V AC \pm 10 % 50 / 60 Hz

Power consumption

- 4 VA (max.)

Operating temp.

- 05° - 50°C Ambient

Terminals

- Suitable for 1.5mm² wire

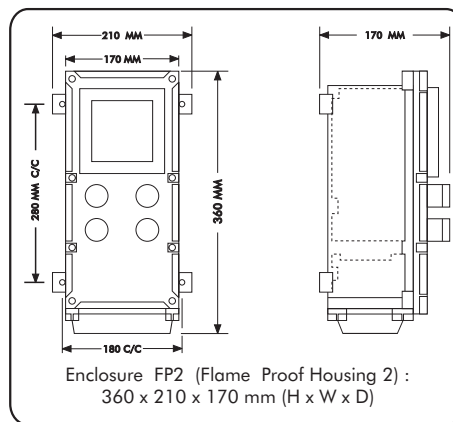
Mounting

- Panel mounting (68 x 68 mm cutout)

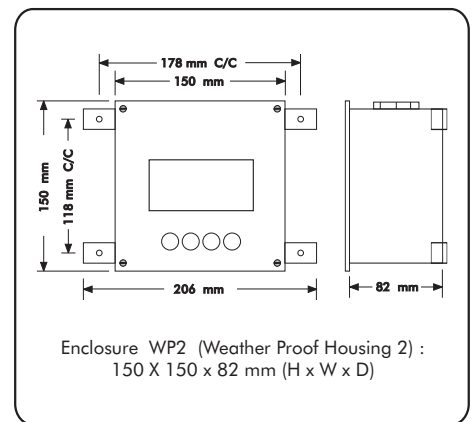
Enclosure

- T72 : 72 (H) x 72 (W) x 110 (D) mm

* Note : other options available



Enclosure FP2 (Flame Proof Housing 2) :
360 x 210 x 170 mm (H x W x D)



Enclosure WP2 (Weather Proof Housing 2) :
150 X 150 x 82 mm (H x W x D)

AUTOPRO

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☆ AUTOPRO IS THE FIRST NAME FOR THE LAST WORD IN INNOVATIVE INSTRUMENTATION ☆

☞ Due to our policy of continuous improvement all specifications are subject to change without notice.

w.e.f. 01-01-2007