

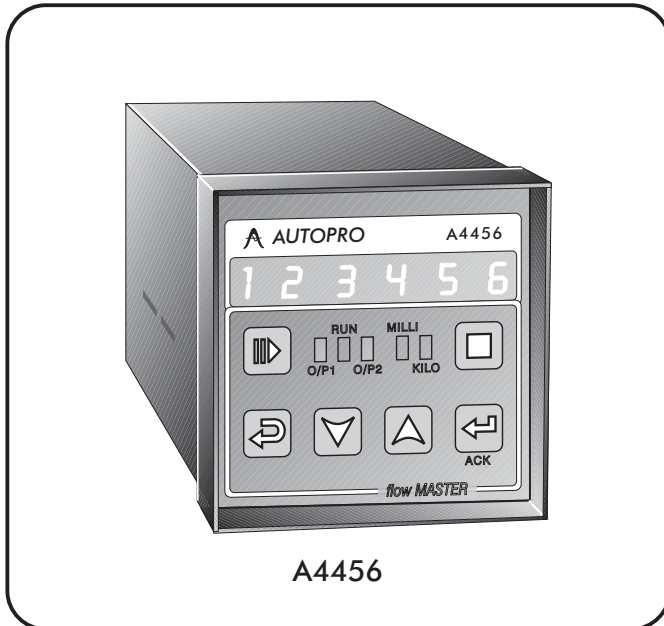


AUTOPRO

MICROCONTROLLER BASED FLOW INDICATORS & CONTROLLERS

PULSE INPUT 2 SETPOINT BATCH CONTROLLER

MODEL A4456



A4456

DESCRIPTION

The Model A4456 Pulse Input Batch Controller is a flow rate indicator, totaliser and 2 set point batch controller. The input pulse rate is multiplied by a floating point flow constant, filtered by auto or manually set filter constants and indicated on a 4 digit display to show the pulse flow rate in user selected volume and time units.

This flow is integrated by the microcontroller to get the total flow (batch) since the controller was last reset. This total is compared with the batch set point 1 and 2 and control outputs are generated with a normally-on or normally-off action when the batch equals or exceeds the batch set points. The output is used to control the batch volume by putting on or shutting off the pump or valves.

The integrated total (batch) is displayed on the 6 digit display with floating or fixed decimal point resolution. The auxiliary output can be used either as an additional set point or configured to drive an external (remote) batch totaliser. The batch total can also be reset automatically (Autoreset). All parameters are protected from unauthorised changes by password protection and keypad lockout. The non volatile memory is used store all parameters.

SALIENT FEATURES

- 2 SET POINT BATCH CONTROLLER
- FLOW RATE INDICATION & TOTALISATION
- WIDE RANGE INPUT FREQUENCY
- VERY LOW FREQUENCY INPUT (0.01 Hz)
- AUTO / MANUAL DIGITAL SIGNAL FILTER
- FLOATING POINT RATE CONSTANT
- 12 DIGIT TOTALISATION ACCURACY
- NON VOLATILE MEMORY & TOTALS
- FACIA RESET DISABLE FUNCTION
- PASSWORD PROTECTION
- LATCHED AND PULSED OUTPUTS
- EXTERNAL COUNTER OUTPUT OPTION

APPLICATIONS

The A4456 Batch controller accepts inputs from flow sensors like Turbine Wheel, Paddle Wheel flow sensors and Positive Displacement Meters (PDMs). The unit can be used to indicate the pulse flow rate and integrate the flow to get the batch total. The two set point outputs are used to control the batch.

The batch controller can be used for controlling the filling operation of sachets, pouches, vials, drums etc. with very precise amounts of liquid from storage sources. The Autoreset function allows automatic operation of filling with fast and slow filling control by the main and auxiliary valves. The high dynamic range of measurement coupled with the very low pulse rate allows the unit to operate at rates as low as 0.6 rpm. The autofilter gives stable reading even when the flow rate fluctuates due to the valve opening or closing.

The controller can also be used for custody transfer operations, since the measurement is very precise and has very good resolution. The second output when used as pulse output for an external counter with a preset pulse constant can be used as a batch total indicator, even when the mains power supply is absent.

SPECIFICATIONS :

INPUT

Input sources (specify)

1. Voltage pulse 5 - 50 V DC.
2. Inductive proximity switch.
3. Contact closure or opening.

Input signal range *

0.01 Hz - 29.99 Hz

Input isolation

500 V DC @ 1 min

External control inputs

Batch enable & reset

Under range

Below 0.6 rpm input signal

Flow constant

4 digit user programmable

Flow constant range

0.001 to 9999 counts

CONTROL

Control algorithm

On - off batch control

No. of set points

2 independent batch setpoint

Batch setpoint range

0.00,001 to 999,999 unit

Control action

Normally on, normally off

Cyclic operation

Selectable by autoreset function

Batch totalisation pause

By run / hold key on facia

OUTPUT

Output type

Latched & pulsed

Output actuation *

EM relay 6 Amp @ 230 V AC

Output & control isolation

500 V DC @ 1 min

Pulse output time

0.01 S to 99.99 S.

INDICATION

Flow indication

4 digit 10.2 mm LEDs

Batch indication

Direct indication in 6 digits

PV & SV display

6 digit 10.2mm for batch

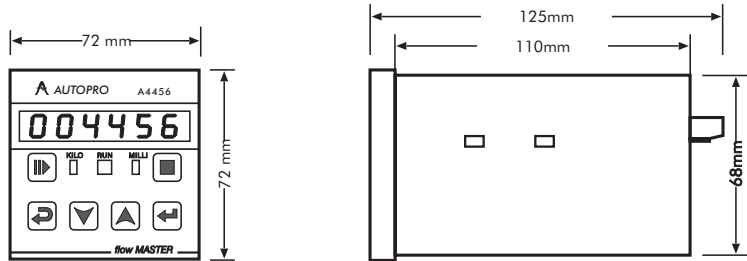
Output indication

Output 1 & output 2 LEDs

Decimal point

"Autoranging" upto 6 digit

DIMENSIONAL DETAILS :



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

SETUP & SECURITY

Setup display

Automatic display

Setup programming

By keypad on facia

Setup memory

Non volatile EEPROM

Programme security

6 digit user-editable password

COMMUNICATION

Baud rate

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

Transmission delay

1 to 9999 seconds

ID number

4 digit user set tag number

AUXILLIARY OUTPUT

Second output

Pulse output.

Pulse constant

From 1 to 9999 counts

Pulse on time

0.01 Sec to 99.99 Sec

Pulse off time

0.01 Sec to 99.99 Sec

Output actuation *

EM relay 6A @ 230V AC std.

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

GENERAL

Key pad

6 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

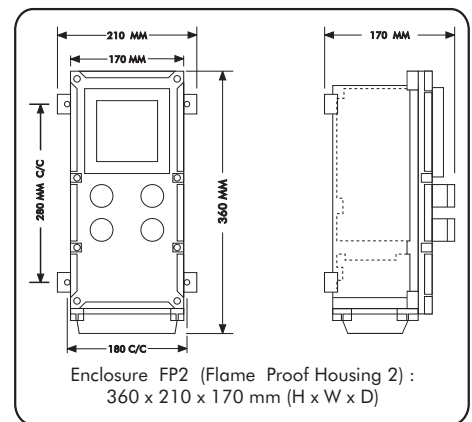
Cutout

68 x 68 mm (H x W)

Enclosure

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

* Other options available



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

AUTOPRO

Factory : 117, Manish Industrial Estate No. 3, Vasai Road (E), Dist.: Thane, MAH, 401 210 .

☎ : +91 - 250 - 239 0006, 239 0269, ☎ / Fax : +91 - 250 - 239 0813.

Email : sales@autoproinstrumentation.com, autopro@vsnl.net Web: www.autoproinstrumentation.com

4456BR4 / 20070130

☆ 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