1006H

Flow Indicator Counter Totalizer

Masibus' Model 1006H is compact panels mount Flow Rate Totalizer having 6-digit single display group for flow rate and batch total. Measured parameters are displayed with high accuracy and floating decimal point position. If the loop is disconnected or auxiliary power fail, the displayed Batch Total, Integrated total and all programming parameters are stored in non-volatile memory, and are automatically recovered when the loop/ auxiliary power is restored.

Model-1006H has optional two relays to configure simple batching operations with High/Low, Pre warn or End of process set points. Alarm/relay and data communication status are indicated on separate LEDs.

Model 1006H FIT is equipped with additional features like transmitter power supply to excite field transmitter, Isolated retransmission output for recorder and It has optional serial communication on RS485 over MODBUS RTU protocol for interfacing with SCADA/PLC, PC based data acquisition and reporting system.

The programming, calibration and operation of the instrument are done by four simple keys. The instrument is provided with five-point calibration. The unit can be calibrated in installed condition itself by front panel keys at predefined points

Operation of the instrument is menu driven. It has password protection facility for protecting programmed data. Integrated total, batch total and roll count are cleared by special password. A selectable square root extractor function enables the output from a differential flow transmitter to be displayed in linear units.

Features

- Single input: Current, voltage, pulse input or Digital input
- Square root extractor
- 6 Digit Flow rate / Integrated Total with rollover count
- Programmable K factor for Freq Input
- 6-digit totalizer with password protected resetting
- Programmable time base Day/Hr/Min/Sec
- Options:
  - Digital Input
  - 2 Configurable relays for Flow/Batch
  - Retransmission output (Isolated)
  - RS 485 serial communication (Isolated)

Application

- Monitoring and controlling continuous and batch flow processes like:
  - Fluid production
  - Printing
  - Packaging
  - Length Measurement
  - Food packaging
- Compatible for Turbine, PD & Magnetic pickup flow elements

Technical Specifications:

Input

No. of Channel	1
Input type	0/4-20mA, 0/1-5V DC, Pulse Input*
Resolution ADC	16 bit
Sampling Speed / Time	100 ms
Input impedance	250 Ohms internal for Current Input
	320K Ohms for Voltage Input
CMRR	> 100dB
NMRR	> 40dB
Frequency I/P	0-10KHz
Measurement accuracy	± 0.25% of full scale ± 1 Count
Polarity protection	Not provided
Temp co	100 ppm
Allowable signal source resistance	DC input voltage: 1KΩ or less. Effect from allowable signal source Resistance: 0.031 % / 100Ω or less
Allowable Input voltage	DC voltage: ±20V DC

Max. Pulse level<=24V, Min. pulse level > 1.0V

Digital Input (optional)

No. of Channel	1
Input type	Non-voltage contact input or transistor open collector input
Input contact capacity	24VDC,10mA or more (for non – voltage contact input)
Input function	Start Batch /Stop Batch

Display & Keys

Process value display/ Integrated total display	0.56" 6 Digit, 7 Segment RED LED
Parameter Display	Same 6 digit red 7 segment display flow rate/Integrated total
Status display	Red LEDs (for alarm & Batch)
Input range (Rate)	Range programmable 0-30000
Integrated / Batch Total Range	0-999999
Decimal point	Adjustable/upto 3 digits
Resolution	16 bit
Keypad	4 keys - Stop, Start, Enter & Set/Index

Special Feature

Batch / Integrated Total Reset	Front Key (password protected)
Time Base for Totalizer	Programmable (Sec/Min/Hr/Day)
K Factor Function	Yes (With Frequency I/P)
Square root extraction	Applicable
Memory/Data storage	NVRAM / EEPROM. Data will not be lost when power off

Output
Relay (Optional)

No of Relays	2 (Flow alarm relays/ Batch relays)
Contact Type & Rating	C-NO Single change over, 250VAC@5A

Retransmission (Optional)

Retransmission	Isolated 4-20 mA DC Max. 500 Ohms
Retransmission accuracy	0.25% of FS

Serial Communication (RS485) (Optional)

Baud rate	9600 / 19200 bps
Protocol	MODBUS RTU Serial
Data frame	N,8,1

Transmitter Power Supply	24VDC ±5% @ 50 mA

Power Supply

Power Supply	110-230V AC (standard) 24 VDC (optional)
Power Consumption	8 VA Max

Isolation (Withstanding voltage)

- Between primary terminals* and secondary terminals**: At least 1500 V AC for 1 minute
- Between primary terminals* and grounding terminal: At least 500 V DC, for 1 minute
- Between grounding terminal and secondary terminals**: At least 500 V AC for 1 minute
- Between secondary terminals**: At least 500 V AC for 1 minute

* Primary terminals indicate power terminals and relay output terminals.
** Secondary terminals indicate Analog input/output signal terminals, contact input terminal
Insulation resistance: 50MΩ or more at 500 V DC between power terminals and grounding terminal.

Physical

Mounting type	Panel
Bezel size	96mm(W) X 48mm(H) X 110mm(D)
Cut-out dimension	92mm(W) X 44mm(H)
Weight	300 gms
IP Class	IP20
Enclosure type	Polycarbonate plastic
Electrical connection	0.5mm² / Screwed
Std. accessories	Mounting clamps – 2 nos.

Environmental

Operating Temperature	0 to 55 °C
Storage Temperature	0 to 70 °C
Operating/Relative humidity	30 - 90%RH (non condensing)
Warm-up time	10 min Max.

ORDERING CODE

1006H	Input Type#		Digital Input		Aux Power Supply		Communication		Relay		Retransmission O/P		Mounting	
	X		X		XX		X		X		X		XX	
	C	4-20mA	N	None	A1	110-230V AC	N	None	N	None	N	None	P0	Panel
	D	0-20mA	Y	Yes	A3	24 VDC	2	RS485	2	2 Relays	Y	Yes		
	E	1-5VDC												
	F	0-5VDC												
	G	0-10VDC												
	N	0-10 KHz												
	S	Special*												

X – Specify from table
Input type is factory set