1006H

Flow Indicator Counter Totalizer

Masibus' Model 1006H is compact panel 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 auxiliary power fail, the displayed Batch Total, Integrated total and all programming parameters are stored in non-volatile memory, and are automatically recovered when 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 Frequency Input
- Programmable low/zero cutoff facility
- 6-digit totalizer with password protected resetting
- Programmable time base Day/Hr/Min/Sec
- Options:
    - 2 Configurable relays for Flow/Batch
    - Retransmission output (Isolated)
    - RS485 serial communication (Isolated)

Applications

- 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

Analog Input (Optional)	
No. of channels	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
Pulse-Frequency I/P	0-10KHz
Measurement accuracy	± 0.25% of full scale ± 1 Count
Temp co	100 ppm
Max Input voltage	DC voltage: +/-20VDC

* Max. Pulse level<=24V, Min. pulse level > 5.0V

Digital Input	
No. of Channel	1
Input type	Non-voltage contact input or transistor open collector input
Input Contact Capacity	24VDC @10mA (for non – voltage contact input)
Input Function	Start Batch /Stop Batch

Display & Keys	
Flow rate / Integrated Total Parameter Display	0.56" 6 Digit, 7 Segment RED LED
Status display	Red LEDs for alarm / Relay, Data communication
Input Range (rate)	Range programmable 0-30000
Integrated / Batch Total Range	0-999999
Decimal point	Adjustable upto 3 digits
Keypad	4 keys - Stop, Start, Enter & Escape

Special Features	
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	Yes
Memory / Data storage	NVRAM/EEPROM. Data will not be lost when power off, can hold for 10 years

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 (Isolated 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	10 VA Max

Isolation (Withstanding voltage)
Between primary terminals* and secondary terminals**: **At least 1500 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.

Physical	
Mounting Type	Panel
Bezel Size (in mm)	48 (H) x 96(W) x 110 (D)
Cut out dimension (in mm)	44 (H) x 92(W)
Weight	300 gms
IP Class	IP20
Enclosure Type	Polycarbonate Plastic
Electrical Connection	2.5mm² / 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

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

X – Specify from table
\# Input type is factory set
▴ Consult factory