

Flow Indicator Totaliser (Model 1008S)



Masibus' Model 1008S is a panel mounted high precision small foot print rate totalizer with separate rate and total displays. When connected with a 4/20mA flow transmitter, 1008S will display the rate of flow in engineering unit and total flow in the same or a different engineering unit. If the loop is disconnected or auxiliary power fail, the displayed total and all programming parameters are stored in non-volatile memory, and are automatically recovered when the loop/auxiliary power is restored.

A selectable square root extractor function enables the output from a differential flow transmitter to be displayed in linear units. When fitted with optional alarms, Model 1008S will detect high and low flow rates and can perform simple flow batching operations.

The unit has a 5-digit flow rate and a 8-digit batch total/ inventory-total display. If the integrated total exceeds 8 digits, the display rolls to zero and the number of such roll overs are recorded. The unit is also suitable to be used with flow transmitters having frequency output like turbine, PD, magnetic pick-up type of flow elements.

Model 1008S FIT is equipped with additional features like transmitter power supply to excite field transmitter, isolated retransmission output for recorder and serial communication on RS 485 over MODBUS RTU protocol for PC based data acquisition and reporting system.

This model is packaged in 96mm x 96mm x 110mm plastic enclosure and can also be packaged in weather proof IP 55 or flame proof enclosures in wall mounted.

Features

- *Input selectable from current, voltage & frequency*
- *Square root extractor*
- *Separate rate and total displays*
- *8-digit totalizer with password protected resetting*
- *Programmable conversion factor*
- *Options :*
 - *Digital Input*
 - *Alarm & Batch relay output*
 - *Retransmission output (Isolated)*
 - *RS 485 serial communication*
 - *Weather proof/ flame proof enclosure*

1008S

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TECHNICAL SPECIFICATIONS 1008S

General

Power supply	90 - 255 VAC +/- 10% @ 50Hz
Power consumption	<10 VA
Operating temperature	0 to 55 °C
Operating humidity	< 95%RH (non condensing)
Warm-up time	10 min
Isolation level	1500V DC

Process value

CMRR	> 100dB
NMRR	> 50dB
Measurement accuracy	± 0.25% of F.S ± 1Digit - For I/P signal ± (0.45% of reading + 1Digit) – for Integrated / Batch total
No. of signals	1(one)
Input specification	4-20 mA/ 1-5 V DC, 0-20 mA/ 0-5 V DC. Frequency 0-10KHz Low level 0 to 1V, High level 5 to 15V

Input impedance	250 Ohms for current I/P 20K Ohms for Voltage Input
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Polarity protection	Provided
Temperature drift	<0.001% FS/ °C
Digital Input	4 Nos. (optional)
Instrument display	ZERO Value upon Input signal open or short connection
Digital Calibration	Front Keypad

Set value

Setting method	Instrument keypad
Reset	Front Key (password protected)
Time Base for Totalizer	Programmable (Day / Hr / Min / Sec)
K Factor Function	Yes (optional)
Square root extraction	Yes
Memory/Data storage	NVRAM / EEPROM. Data will not be lost when power off, can hold for 10 years

Display

Type & color	Numeric 7 Segment RED LED
Process Value	0.56" 5 Digit
Total/Int. Value	0.4" 8 Digit

TECHNICAL SPECIFICATIONS 1008S

Alarm Relays/Comm. (status display)	6 discrete LEDs
Rate Indication Range	Range programmable 0-20000
Totalizing Range	0-99999999
Decimal point	Adjustable
User interface	4 keys in front sealed membrane
Scan Time	250 mS

Output

Flow Alarms	2 Relays rated 2A @ 230V AC
Batch Alarms	2 Relays rated 2A @ 230V AC
Contact Type	C-NO-NC Single change over
Retransmission	Isolated 4-20 mA DC @ 500 Ohms output (optional)
Retransmission accuracy	(0.25% of FS+1 count)
Transmitter Power Supply	24VDC ±5% @ 50mA

Serial Communication (RS 485)

Baud rate	9600 / 19200 bps, programmable
Protocol	MODBUS
Connection	Terminal (screwed)
Transmission distance	< 1200m
Communication	Slave mode
Data pattern	N,8,1
Error correction method	16 bit CRC
Address range	1-99

Physical

Mounting type	Panel
Bezel size	96mm(W) X 96mm(H)
Cut-out dimension	92mm(W) X 92mm(H)
Depth with terminals	110 mm
Weight	Less than 1.5 Kg
IP Class	Enclosure - IP20
Enclosure type	General purpose ABS plastic.
Protection (Optional)	IP55 or Ex-Proof - Group IIA/IIB
Electrical connection	2.5mm ² / Screwed
Std. accessories	Mounting clamps

ORDERING CODE

Model	Input Type	Digital Input	APS	Communication	Mounting	Auxiliary o/p		
1008S	X	X	XX	X	XX	X	X	X
	C 4-20mA	N None	A1 90-255 VAC	N None	P0 Panel	Flow relay	Batch relay	Retx
	D 0-20mA	Y Yes	A3 24 VDC	2 RS485	W1 Wall-IP55	N	N	N
	E 1-5VDC				FP Wall-FLP	N	N	Y
	F 0-5VDC					Y	Y	N
	G 0-10VDC					Y	Y	Y
	N 0-10 KHz (Lo level)							
	P 0-10 KHz (Hi level)							
	S Special (Consult Factory)							
	T Digital I/p							

X - Specify from table | Y - Yes | N - No