



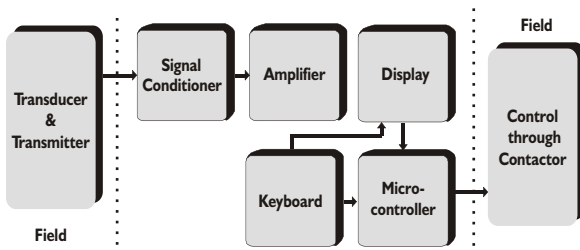
INTRODUCTION

Flow Indicators / Controllers play an important part in any process industry. Quick and accurate measurement / control of flow improves the final product quality, reliability and reduce rejection. Flow indication and totalisation is therefore one of the prime considerations in any process industry. The FIT 70 series is microcontroller based programmable flow indicator/totalizer designed for fast and accurate measurement/control. The instrument is designed using highly reliable electronic components. The process parameter is displayed in digits, which gives better resolution compared to analog indicator. The FIT 70 series accepts 4 - 20 mA as input. The instrument is immune to mechanical vibrations. Even the mounting position will not affect the measurement accuracy. The alpha numeric LCD display allows better messaging and can also



display unit of measurement. Use of highly reliable electronic components with lowest temperature coefficient ensure long and trouble free service. The instrument is tested for its performance under various climatic conditions. Wide ranges of measurements are available depending on the sensor used.

PRINCIPLE OF OPERATION



The FIT 70 series is based on the principle of a high input impedance amplifier feeding a microcontroller followed by a relay and an inbuilt ADC. The signal from the transducer is fed to a signal conditioning amplifier, output of which is given to the 13 bit analog to digital convertor which is inbuilt the microcontroller. This microcontroller then switches the relay ON or OFF depending upon the process value with respect to the setpoint. Linearisation of the transducer signal is done by software. The microcontroller also drives the LCD display, indicating the actual flow.

APPLICATION

The FIT 70 series flow indicators can be used in monitoring and controlling continuous as well as batch flow processes in almost any industry.

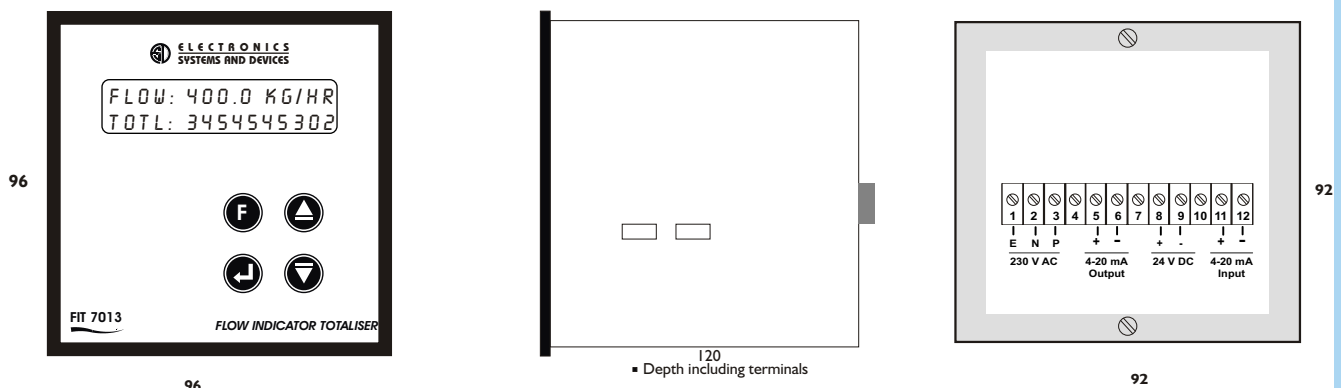
FEATURES

- ✓ Linear or Square root extractor type input
- ✓ 10 digit totaliser
- ✓ Setpoint on flow or totaliser
- ✓ LCD display with yellow back LED
- ✓ Proven trouble-free field performance
- ✓ Highly compact
- ✓ Dust and vermin proof enclosure with epoxy powder coating
- ✓ Fast response time
- ✓ Highly accurate
- ✓ Maximum MTBF and minimum MTTR
- ✓ Feather touch push button
- ✓ Wide supply variation and environmental band
- ✓ Real time stamping

SPECIFICATIONS

Model	: FIT 7013	Power consumption	: 6 VA
Range	: Programmable from 0 to 9999	Supply for Transmitter	: 24 V DC +/- 1V, @30mA
Decimal Position	: Selectable	Front facia	: ABS plastic suitable for IP 55 having size 96 x 96 mm
Input	: 4 - 20 mA / 0 - 5 V DC	Panel cutout	: 92 x 92 mm
Input type	: Linear / Square root selectable	Mounting	: Flush panel
Indication	: 16 x 2 Alfa numeric LCD display	Enclosure	: Mild steel CRCA sheet with powder Coating
Character size	: 3 (W) x 4.4 (H) mm	Termination	: Screwed type suitable for 2.5mm ² wire
Indication accuracy	: +/- 0.1 % of fullscale +/- 1 digit	Weight	: 500 grams approximately
Totalizer display	: 10 digit	Optional :	
Flow Unit	: Selectable bet'n gram,litre, kilog, Galon, cubic feet, cubic mtr, ton	A)Retransmission O/p	: Isolated 4- 20 mA for retransmission
Time base	: Selectable bet'n secs, mins and hour	Resolution	: 10 bit (0.016 mA step change)
Power supply	: 230 V AC, +/- 10 % , 50 Hz	Load resistance	: Maximum 500 ohms
Relative Humidity	: Less than 90 % Non Condensing	B)Serial Interface	: Isolated RS 485(2wire) / RS 485
Ambient Temperature	: 0 to 55 °C	Protocol	: Modbus RTU
Accuracy deviation due to			
a) Temperature change	: +/- 0.002 % / °C, ref at 25 °C		
b) Supply Variation	: +/- 0.001 % / V		
Recalibration (if reqd)	: By software using keypad		
Programming	: Using 4 keys membrane keypad. Default password is 134		

INSTALLATION



ORDERING INFORMATION

FIT 70 X1	X2	X3	X4	X5	X6	Ordering eg. FIT 7013-1113
No. Of Inputs 1 - One	Panel Cutout 3 - 92 x 92	Input 1 - 4 to 20 mA 2 - 0 to 5V DC 3 - Please specify	Relay Output 0- None 1 - 1 C/O 5 Amp 2 - Please specify	Power Supply 1 - 230 V AC 2 - 110 V AC 3 - 24 V DC 4 - Please specify	Optional O/p 0 - None 1 - RS 232 2 - RS 485 3 - 4-20mA O/p 4 - Serial Printer 5 - Please specify	No. of inputs - One (1) Panel cutout - 92 x 92 mm (3) Input - 4- 20 mA (1) Relay output - 1 C/O 5 Amp (1) Power Supply - 230 V AC (1) Optional O/p - 4-20 mA O/p (3)

ALSO SELECT
ESD ...

BACKEND

- ✓ Pt - 100
- ✓ Thermocouples
- ✓ Thermowells
- ✓ Compensating Cables

SAME RANGE

- ✓ Flow Totaliser with Data Logging
- ✓ Profile Controllers

FRONT END

- ✓ Alarm Annunciators
- ✓ Automation Panels



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