

## F111 LCD Totaliser & Flow Rate Indicator with 2 No. Pulse Output



### Features

- Displays for each flow the flowrate, total and accumulated total.
- Large 17mm (0.67") digit selection for flowrate or total.
- Selectable on-screen engineering units; volumetric or mass.
- Ability to process all types of flowmeter signals.
- Auto backup of settings and running totals.
- Operational temperature -30°C up to +80°C (-22°F up to 178°F).
- Very compact design for panel mount, wall mount or field mount applications.
- Rugged aluminum field mount enclosure IP67/NEMA4X.
- Intrinsically Safe  
⊕ II 1 GD EEx ia IIB/IIC T4 T100°C.
- Explosion/flame proof ⊕ II 2 GD EEx d IIB T5.
- For each flow one pulse signal output.
- Full Modbus communication RS232/485/TTL.
- Loop or battery powered, 8 - 24V AC/DC or 115 - 230V AC power supply.
- Sensor supply 3.2 - 8.2 - 12 - 24V DC.

### Signal output

- Two scaled pulse outputs according to accumulated total of flow A and flow B.

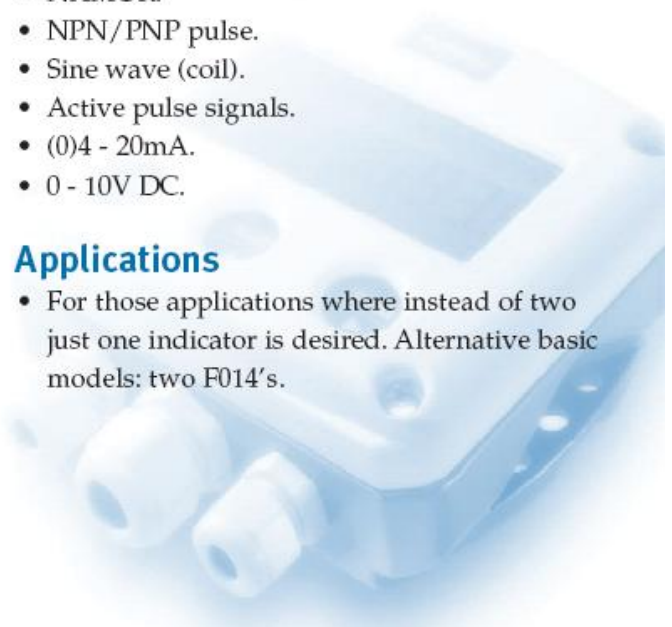
### Signal input

#### Flow

- Reed-switch.
- NAMUR.
- NPN/PNP pulse.
- Sine wave (coil).
- Active pulse signals.
- (0)4 - 20mA.
- 0 - 10V DC.

### Applications

- For those applications where instead of two just one indicator is desired. Alternative basic models: two F014's.



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### General information

#### Introduction

The F111 incorporates two fully separated flowrate / totalisers in one enclosure, including a pulse signal output for each flow. There is no relationship between the flows, even different pulse signal input types can be used. A wide selection of options is available to further enhance this models capabilities, including Intrinsic Safety and full Modbus communication.

#### Display

The display has large 17mm (0.67") and 8mm (0.31") digits which can be set to show flowrate and/or totals. For each flow, on-screen engineering units are easily configured from a comprehensive selection. Both accumulated totals can register up to 11 digits and are backed-up in EEPROM memory every minute. The F111 can be set to show the selected information manually or with an automatic toggle function.

#### Configuration

All configuration settings are accessed via a simple operator menu which can be pass-code protected. Each setting is clearly indicated with an alphanumerical description, therefore avoiding confusing abbreviations and baffling codes. Once familiar with one F-series product, you will be able to program all models in the series without a manual. All settings are safely stored in EEPROM memory in the event of sudden power failure.

#### Pulse output

The unit has two scaleable pulse outputs, one for flow A and the other for flow B. The outputs reflect the count on the accumulated display. The pulse length is user defined from 0.008 second up to 2 seconds. The maximum output frequency is 64Hz. The output signal can be a passive NPN, active PNP or an isolated electro-mechanical relay.

#### Signal input

The F111 will accept most pulse and analog input signals for flow or mass flow measurement. The input signal type can be selected by the user in the configuration menu without having to adjust any sensitive

mechanical dip-switches or jumpers. The analog input versions are even available as 4 - 20mA input loop powered displays. For the pulse type input, different signal types can be used.

#### Communication

All process data and settings can be read and modified manually or through the Modbus communication link (RS232 / RS485). Full Modbus functionality remains available for the Intrinsically Safe version (TTL).

#### Hazardous areas

For hazardous area applications, this model has been ATEX certified Intrinsically Safe  $\text{Ex II 1 GD EEx ia IIB / IIC T4 T100}^\circ\text{C}$  with an allowed operational temperature of  $-30^\circ\text{C}$  to  $+70^\circ\text{C}$  ( $-22^\circ\text{F}$  to  $+158^\circ\text{F}$ ). A flame proof enclosure is also available with the rating  $\text{Ex II 2 GD EEx d IIB T5}$ .

#### Enclosures

Various types of enclosures can be selected, all ATEX approved. As standard the F111 is supplied in an ABS panel mount enclosure, which can be converted to an IP67 / NEMA 4X ABS field mount enclosure by the addition of a back case. Most popular is our rugged aluminum field mount enclosure with IP67 / NEMA 4X rating. Both European or U.S. cable gland entry threads are available.

### Overview application F111

