# F 111 Datasheet

Your success counts

# Dual input Flow rate / Totalizer

## with two pulse signal outputs


***Application examples:*** *Salty Off-Shore conditions*

*Extreme cold weather at polar regions*

*Hot and sandy deserts*

**The F-Series is your first and safest choice for field mount indicators in safe and hazardous area applications. Especially in harsh weather conditions like rain, snow, salty atmospheres and temperatures between -40°C up to +80°C (-40°F up to 176°F).**

## Advantages

- Robust IP67 (NEMA Type4X) field enclosure. It is so rugged, you can even stand on it!
- Intrinsically Safe available - ATEX and IECEx approval for gas and dust applications.
- Programming can be done by your own crew, with the sensible menu-driven structure, saving cost and irritation. Know one, know them all!
- Very diverse mounting possibilities: walls, pipes, panels or directly onto outdoor sensors!

## Features

- Displays for each flow the flow rate, total and accumulated total.
- Large 17mm (0.67") digit selection for flow rate or total.
- LED backlight option.
- Selectable on-screen engineering units; volumetric or mass.
- Ability to process all types of signals: Sine wave (coil), NAMUR, NPN/PNP pulse, Reed-switch, Active pulse signals.
- Two scaled pulse outputs according to accumulated total of flow A and flow B.
- Full Modbus communication RS232/485/TTL.
- Power requirements: Loop or battery powered, 8 - 30V DC, 8 - 24V AC/DC or 115 - 230V AC.
- Sensor supply: 3 / 8.2 / 12 / 24V DC.
- Auto backup of settings and running totals.
- Explosion/flame proof available.

## Introduction

The F111 incorporates two fully separated flow rate / totalizers 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 further enhances the capabilities of this model, which includes 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 flow rate and/or totals. For each flow, on-screen engineering units are easily configured from a comprehensive menu. 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 password protected. Each setting is clearly indicated with an alphanumerical description, which avoides 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.

## 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).


Bright LED backlight.
Displayed function
Trend indication
Clear 17mm (0.67") numeric digits
Displayed function
3 rugged buttons and user-friendly menu-structure: "**Know one, know them all!"**

Intrinsically Safe available:**ATEX and IECEx.**
Measurement units
Status indication
Clear 8mm (0.31") alphanumeric digits
Robust IP67 (Type4X) field enclosure. **So rugged, a truck can even stand on it!**
Resistant to harsh weather conditions like snow,rain and -40°C to +70°C (-40°F to +158°F)

## 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 width is user defined from 0.001 second up to 9.999 seconds. The maximum output frequency is 500Hz. The output signal can be a passive NPN, active PNP or an isolated electro-mechanical relay.

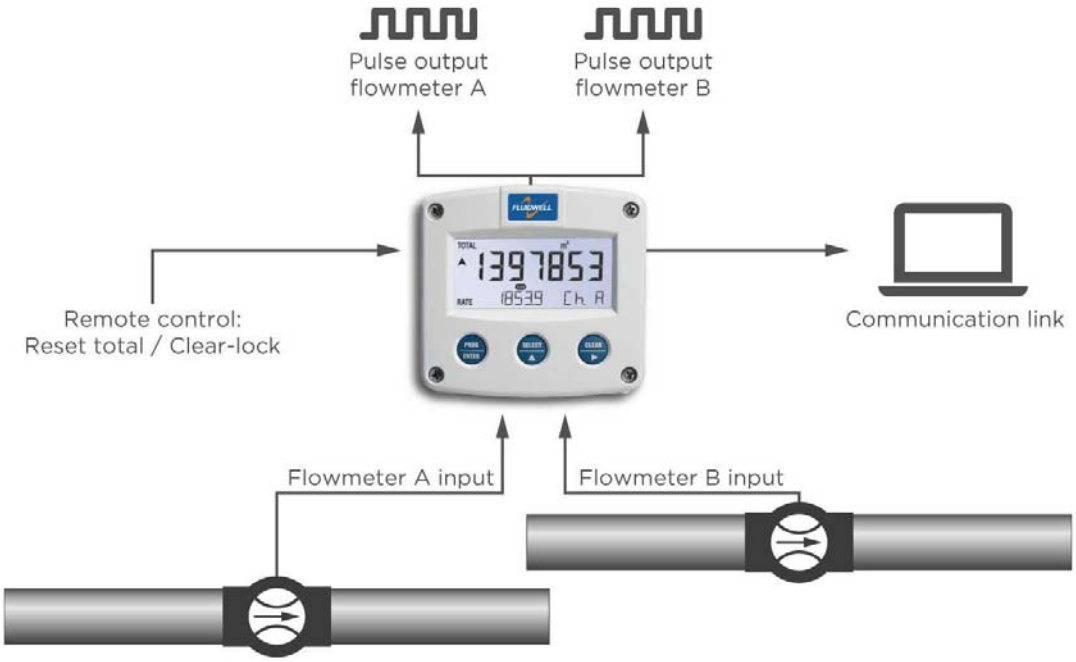
## Hazardous areas

This model is ATEX and IECEx certified as Intrinsically Safe for gas and dust applications, with an allowed ambient temperature of -40°C to +70°C (-40°F to +158°F). A flame proof Ex d enclosure with ATEX certification is also available.

All info at a glance
Easy to install
Easy to program
Know one know them all!
Reliable
User-friendly

## Overview application F111

The F-Series is your first and safest choice for field mount indicators in safe and hazardous area applications. Especially in harsh weather conditions like rain, snow, salty atmospheres and temperatures between -40°C up to +80°C (-40°F up to 176°F). For those applications where instead of two just one indicator is desired. Alternative basic models: two F014's or the D-Series DIN panel mount flow rate indicators.




## Signal input

The F111 accepts most pulse signals for volumetric 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.

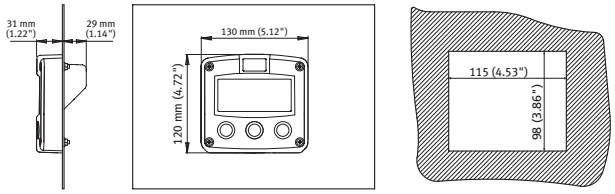
| Type of signal | Resistance | Low Pass filter (LP) | Max. frequency | Max. frequency Low Pass filter (LP) | Min. amplitude P-P | Remark |
|---|---|---|---|---|---|---|
| NPN | 100kΩ pull-up | 100kΩ pull-up | 6kHz Threshold 1.2V | 1.2kHz | | Open collector |
| REED | 1MΩ pull-up | 1MΩ pull-up | 1.2kHz Threshold 1.2V | 120Hz | | |
| PNP | 100KΩ pull-down | 100KΩ pull-down | 6kHz Threshold 1.2V | 1.2kHz | | |
| NAMUR | 820Ω pull-down | - | 4kHz | - | | External power required |
| COIL LO | - | - | | - | $80mV_{pp}$ | Default sensitivity |
| COIL-HI | - | - | - | - | $20mV_{pp}$ | Sensitive for interference! |
| COIL-HI (Type ZF) | | | | | $10mV_{pp}$ | |
| ACTIVE 8.2V DC | 3K9Ω | | 10kHz Threshold 4V | | | External power required |
| ACTIVE 12V DC | 4KΩ | | 10kHz Threshold 6V | | | External power required |
| ACTIVE 24V DC | 3KΩ | | 10kHz Threshold 12V | | | External power required |

## Enclosures

Various types of enclosures can be selected, all ATEX and IECEx approved. The F111 is supplied in an GRP panel mount enclosure as standard, which can be converted to an IP67 / NEMA Type4X GRP field mount enclosure by the addition of a back case. Most popular is our rugged aluminum field mount enclosure with IP67 / NEMA Type4X rating. Both EU or U.S. cable gland entry threads are available.

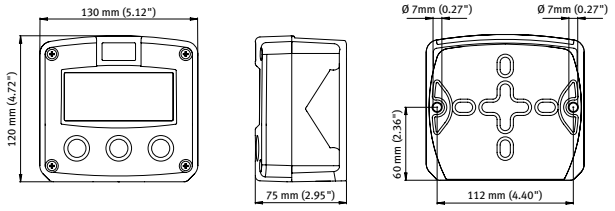
## Dimensions enclosures

*Aluminum & GRP panel mount enclosure*

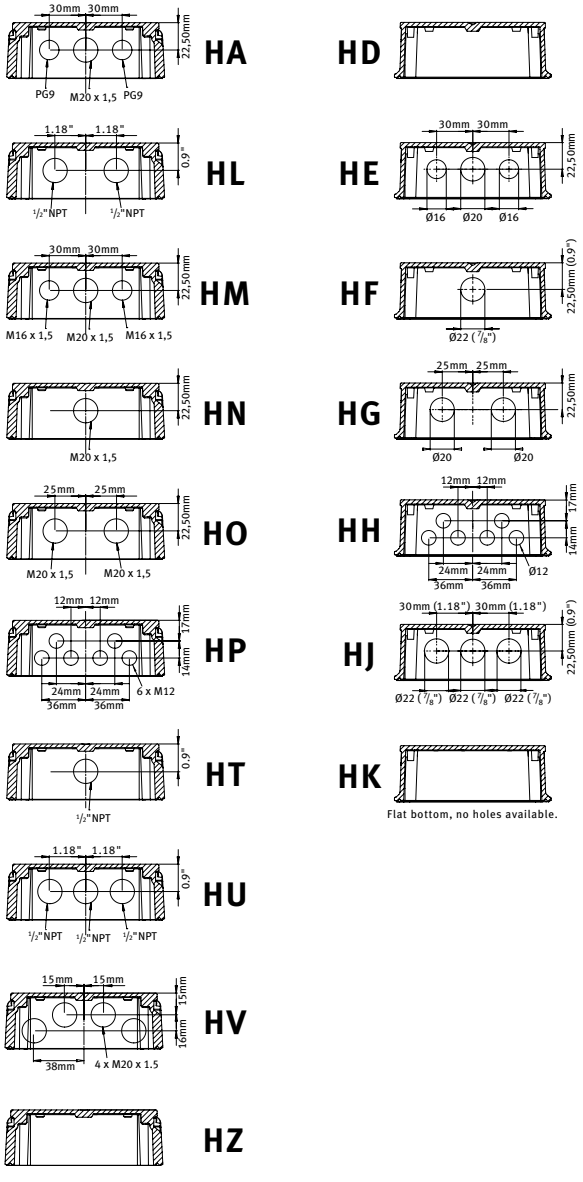



HB & HC enclosures | panel cut-out

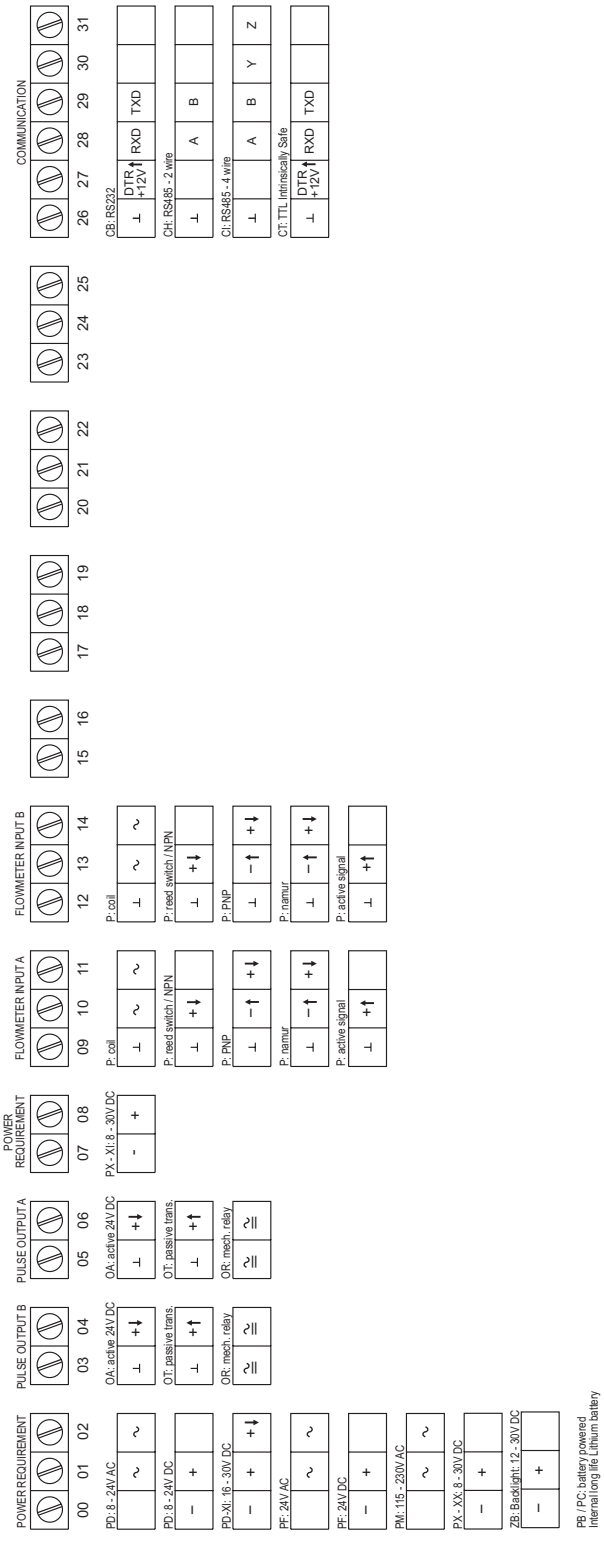
*Aluminum & GRP field / wall mount enclosures*



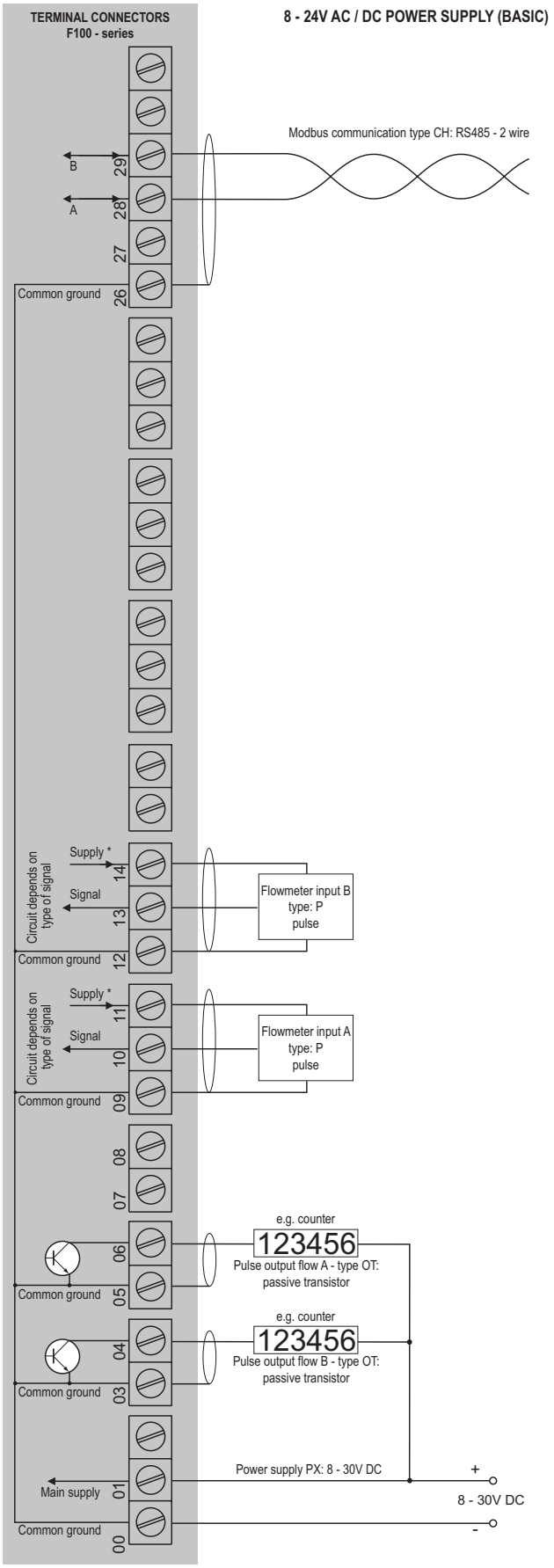

**Aluminum** | **GRP**




## Terminal connections

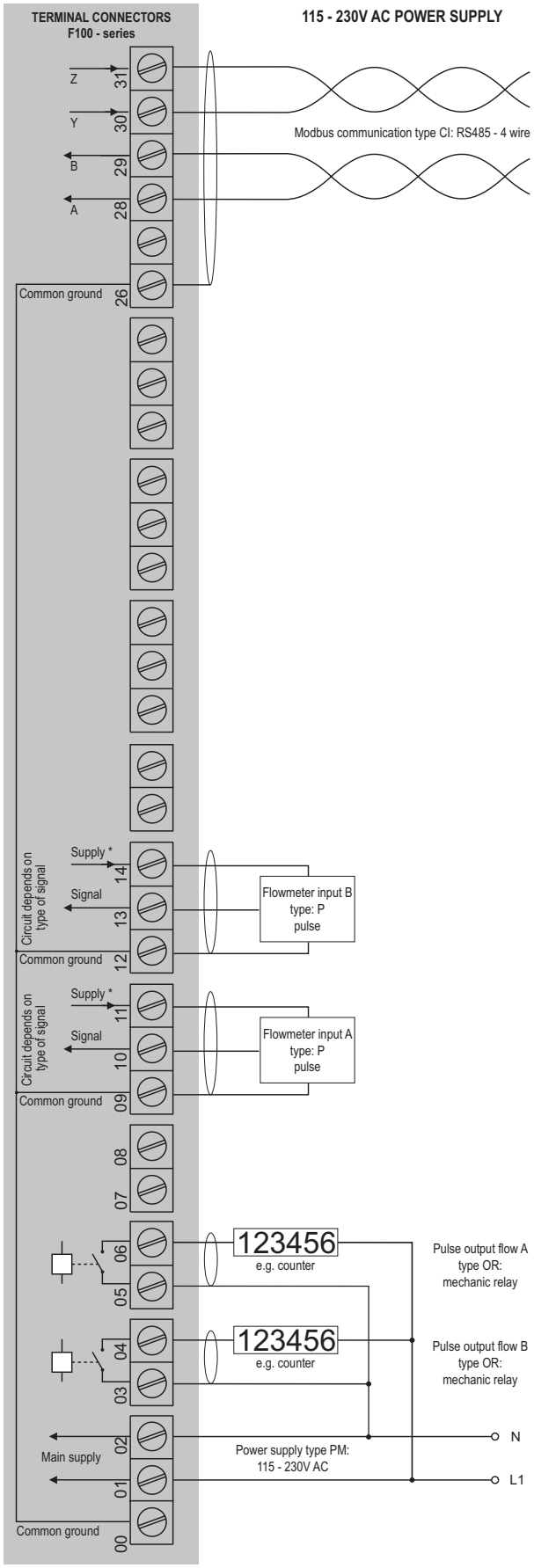


*Configuration example F111-P-CH-OT-PX-XX-ZX*




* For pulse type inputs: $V_{ref}$: 1.2V/3.0V available.- NO power output, available $I_{supply}$: <1mA.
Note: using these ref. voltages at max. load, will reduce battery life significantly.

*Configuration example F110-P-CI-OR-PM-XX-ZX*




*Supply voltage: 3.2 / 8.2 / 12 / 24V DC to sensor

## Hazardous area applications

The F111-XI has been certified according to ATEX and IECEx by DEKRA for use in Intrinsically Safe applications with an ambient temperature of -40°C to +70°C (-40°F to +158°F).

- The ATEX markings for gas and dust applications are:
  - Gas: **II 1 G Ex ia IIB/IIC T4 Ga**
  - Dust: **II 1 D Ex ia IIIC T100 °C Da.**
- The IECEx markings for gas and dust applications are:
  - Gas: **Ex ia IIC/IIB T4 Ga**
  - Dust: **Ex ia IIIC T100 °C Da.**

Besides the two I.S. power supplies for the pulse outputs, it is allowed to connect up to three I.S. power supplies in IIB/IIIC applications or one in IIC applications. Consult the certificate for the maximum input and output values of the circuits. Full functionality of the F111 remains available, including pulse output and Modbus communication (type CT). Power supply type PD-XI offers a 8.2V sensor supply e.g. for one Namur sensor. An ATEX approved flame proof Ex d enclosure is available as well. Please contact your supplier for further details.

*Certificate of conformity KEMA 03ATEX1074 X*

*• IECEx DEK 11.0042X*

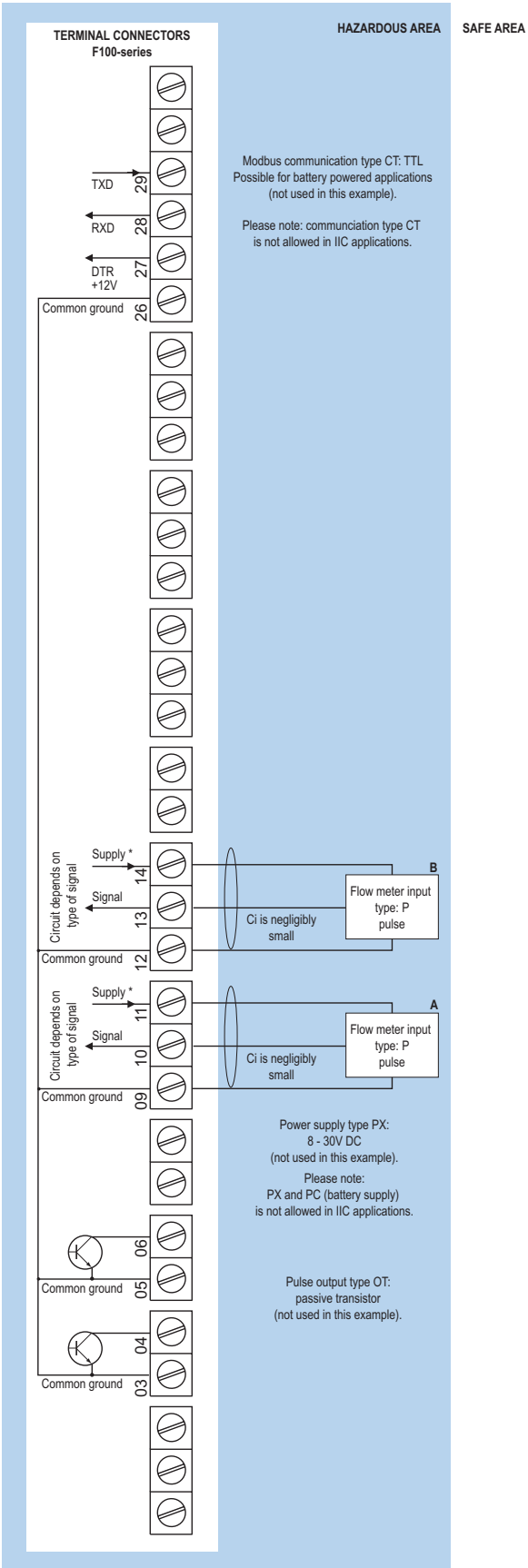

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

CERTIFICATE
EC-Type Examination

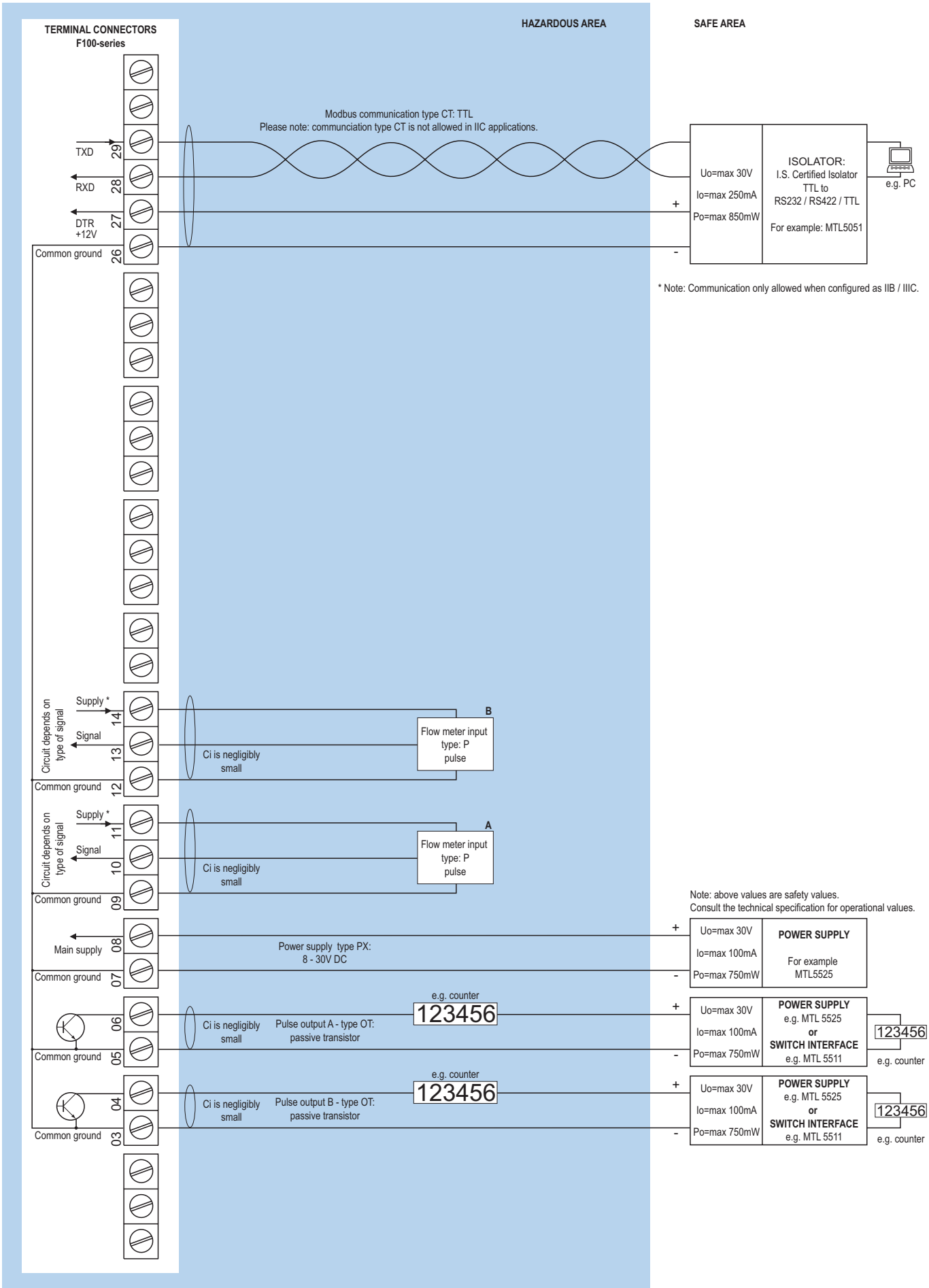
*Configuration example IIB / IIIC and IIC*

*F111-P-(CT)-(OT)-PC-(PX)-XI - Battery powered unit*



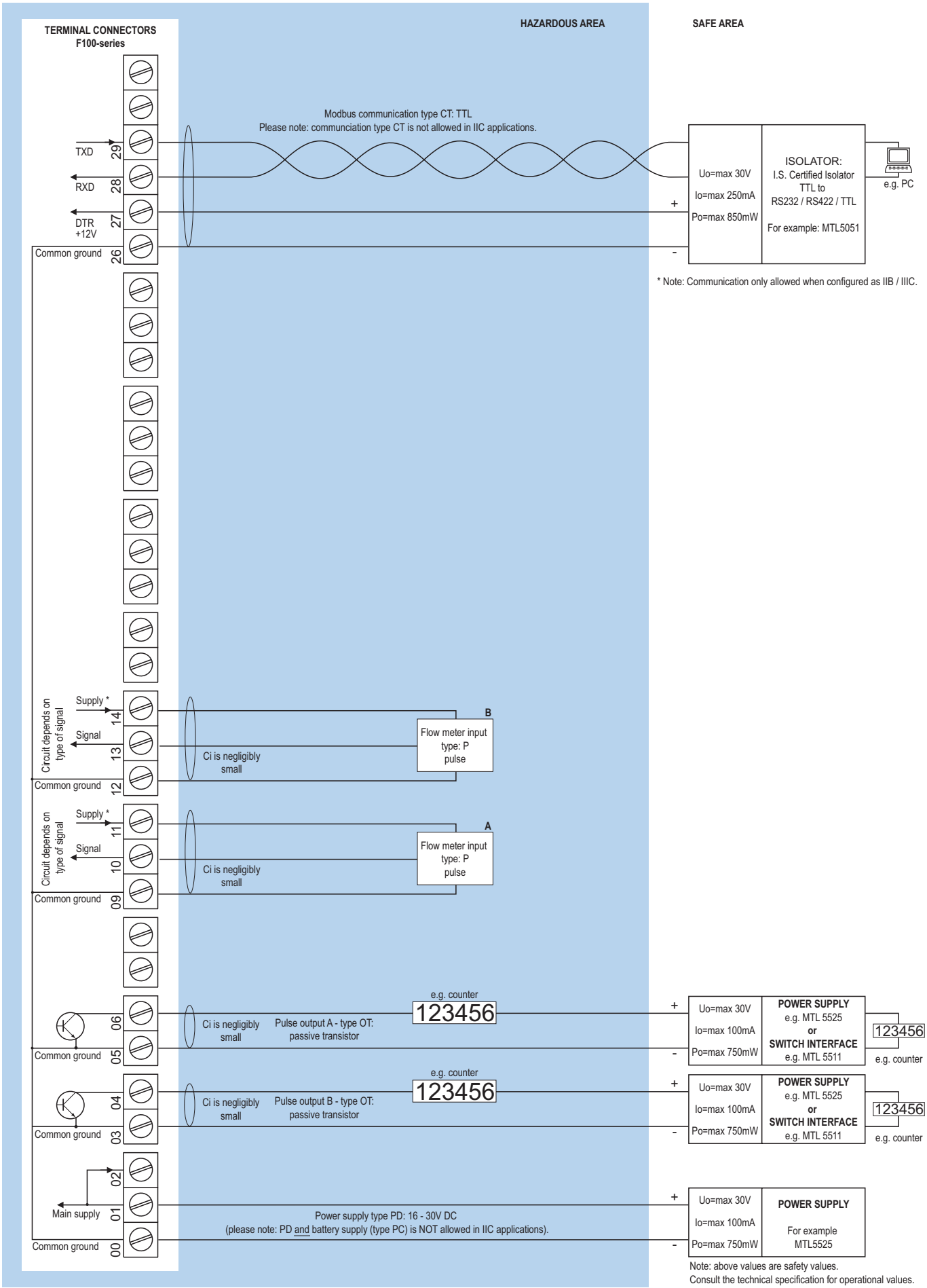

* For pulse type inputs: $V_{ref}$: 1.2V/3.0V available.- NO power output, available $I_{supply}$: <1mA.
Note: using these ref. voltages at max. load, will reduce battery life significantly.

*Configuration example IIB / IIIC and IIC - F111-P-(CT)-PX-OT-XI - Power requirement 8 - 30V DC*




* For pulse type inputs: $V_{ref}$: 1.2V/3.0V available.- NO power output, available $I_{supply}$: <1mA.
Note: using these ref. voltages at max. load, will reduce battery life significantly

*Configuration example IIB / IIIC and IIC - F111-P-(CT)-OT-PD-XI - Power requirement 16 - 30V DC*




* Note power supply type PD: the supply voltage to pulse sensors is maximum 8.7V (Uo=max 8.7V Io=max 25mA Po=max 150mW) and to analog sensors as connected to terminal 1 (internally linked).

## Display

| | |
|---|---|
| **Type** | High intensity reflective numeric and alphanumeric LCD, UV-resistant. |
| **Dimensions** | 90 x 40mm (3.5" x 1.6"). |
| **Digits** | Seven 17mm (0.67") and eleven 8mm (0.31") digits. Various symbols and measuring units. |
| **Refresh rate** | User definable: fast, 1sec , 3sec, 15sec, 30sec, off. |
| **Option ZB** | Transflective LCD with white LED-backlight. Intensitiy can be adjusted in the configuration menu. Good readings in full sunlight and darkness. |
| **Note ZB** | Only available for safe area applications. |

## Ambient temperature

| | |
|---|---|
| **Safe areas** | -40°C to +80°C (-40°F to +176°F). |
| **Intrinsically Safe** | -40°C to +70°C (-40°F to +158°F). |

## Power requirements

| | |
|---|---|
| **Type PB** | Long life Lithium battery - life-time depends upon settings and configuration - up to 5 years. (requires PD, PL or PX) |
| **Type PC** | Intrinsically Safe long life lithium battery life-time depends upon settings and configuration - up to 5 years. (requires XI and PD, PL or PX) |
| **Type PD** | 8 - 24V AC / DC ± 10%. Power consumption max. 5W. Intrinsically Safe: 16 - 30V DC; power consumption max. 1 W. |
| **Type PF** | 24V AC / DC ± 10%. Power consumption max. 15W. |
| **Type PL** | Input loop powered from sensor signal 4 - 20mA (type "A") - requires types AI and OT (not Xi). |
| **Type PM** | 115 - 230V AC ± 10%. Power consumption max. 15W. |
| **Type PX** | 8 - 30V DC. Power consumption max. 0.75W. |
| **Type ZB** | 12 - 30V DC ± 10%. Power consumption max. 1.5W. |
| **Note PB/PF/PM** | Not available Intrinsically Safe. |
| **Note PF/PM** | The total consumption of the sensors and outputs may not exceed 400mA @ 24V. |
| **Note XI** | For Intrinsically Safe applications, consult the safety values in the certificate. |

## Sensor excitation

| | |
|---|---|
| **Type PB/PC/PX** | 3V DC for pulse signals and 1.2V DC for coil pick-up. |
| **Note PB/PC/PX** | This is not a real sensor supply. Only suitable for sensors with a very low power consumption like coils (sine wave) and reed-switches. |
| **Type PD** | 1.2 / 3 / 8.2 / 12 / 24V DC - max. 50mA @ 24V DC. $U_{max}$ sensor is 2V below $U_{supply}$ |
| **Type PD-XI** | 1.2 / 3 / 8.2V DC - max. 7mA @ 8.2V DC and mains power supply voltage (as connected to terminal 1). |
| **Note PD-XI** | In case PD-XI and signal A: the sensor supply voltage is according to the power supply voltage connected to terminal 1. Also terminal 2 offers the same voltage. |
| **Type PF / PM** | 1.2 / 3 / 8.2 / 12 / 24V DC - max. 400mA @ 24V DC. |

## Terminal connections

| | |
|---|---|
| **Type** | Removable plug-in terminal strip. Wire max. 1.5mm² and 2.5mm². |

## Data protection

| | |
|---|---|
| **Type** | EEPROM backup of all settings. Backup of running totals every minute. Data retention at least 10 years. |
| **Password** | Configuration settings can be password protected. |

## Directives & Standards

| | |
|---|---|
| **EMC** | Directive 2014/30/EU, FCC 47 CFR part 15. |
| **Low voltage** | Directive 2014/35/EU |
| **RoHS** | Directive 2011/65/EU |
| **ATEX / IECEx** | Directive 2014/34/EU, IEC 600079-0, IEC 60079-11. IP & NEMA EN 60529 & NEMA 250 |

## Enclosure

| | |
|---|---|
| **Window** | Polycarbonate window. |
| **Sealing** | Silicone. |
| **Control keys** | Three industrial micro-switch keys. UV-resistant silicone keypad. |

## Aluminum wall / field mount enclosures

| | |
|---|---|
| **General** | Die-cast aluminum wall/field mount enclosure IP67 / NEMA Type4X with 2-component UV-resistant coating. |
| **Dimensions** | 130 x 120 x 75mm (5.12" x 4.72" x 2.95") - W x H x D. |
| **Weight** | 1100 gr. |
| **Type HA** | Cable entry: 2 x PG9 and 1 x M20. |
| **Type HL** | Cable entry: 2 x ½" NPT. |
| **Type HM** | Cable entry: 2 x M16 and 1 x M20. |
| **Type HN** | Cable entry: 1 x M20. |
| **Type HO** | Cable entry: 2 x M20. |
| **Type HP** | Cable entry: 6 x M12. |
| **Type HT** | Cable entry: 1 x ½" NPT. |
| **Type HU** | Cable entry: 3 x ½" NPT. |
| **Type HV** | Cable entry: 4 x M20. |
| **Type HZ** | Cable entry: no holes. |

## GRP wall / field mount enclosures

| | |
|---|---|
| **General** | GRP wall/field mount enclosure IP67 / NEMA Type4X, UV-resistant and flame retardant. |
| **Dimensions** | 130 x 120 x 75mm (5.12" x 4.72" x 2.95") - W x H x D. |
| **Weight** | 600 gr. |
| **Type HD** | Cable entry: no holes. |
| **Type HE** | Cable entry: 2 x Ø 16mm and 1 x Ø 20mm. |
| **Type HF** | Cable entry: 1 x Ø 22mm (⅞"). |
| **Type HG** | Cable entry: 2 x Ø 20mm. |
| **Type HH** | Cable entry: 6 x Ø 12mm. |
| **Type HJ** | Cable entry: 3 x Ø 22mm (⅞"). |
| **Type HK** | Flat bottom, cable entry: no holes. |

## Panel mount enclosures

| | |
|---|---|
| **Dimensions** | 130 x 120 x 60mm (5.12" x 4.72" x 2.36") - W x H x D. |
| **Panel cut-out** | 115 x 98mm (4.53" x 3.86") L x H. |
| **Type HB** | Die-cast aluminum panel mount enclosure IP65 / NEMA Type4X. |
| **Weight** | 600 gr. |
| **Type HC** | GRP panel mount enclosure IP65 / NEMA Type4X, UV-resistant and flame retardant. |
| **Weight** | 450 gr. |

## Intrinsically Safe (Type XI)

| | |
|---|---|
| **ATEX** | Gas: II 1 G Ex ia IIB/IIC T4 Ga.<br>Dust: II 1 D Ex ia IIIC T100 °C Da. |
| **IECEx** | Gas: Ex ia IIC/IIB T4 Ga.<br>Dust: Ex ia IIIC T100 °C Da. |
| **Ambient Ta** | -40°C to +70°C (-40°F to +158°F). |

## Explosion proof (Type XF)

| | |
|---|---|
| **ATEX** | Gas: II 2 G / Ex d IIB T5 Gb.<br>Dust: II 2 D / Ex t IIIB T100 °C Db. |
| **Type XF** | Dimensions of enclosure: 300 x 250 x 200mm (11.8" x 9.9" x 7.9") L x H x D. |
| **Weight** | Appr. 15kg. |
| **Note XF** | IECEx available on request. |

## Signal inputs - Flowmeter

| | |
|---|---|
| **Type P** | Coil / sine wave (HI: 20mVpp or LO: 80mVpp - sensitivity selectable), NPN/PNP, open collector, reed switch, Namur, active pulse signals 8 - 12 and 24V DC. |
| **Frequency** | Minimum 0Hz - maximum 6kHz for total and flow rate. Maximum frequency depends on signal type and internal low-pass filter. E.g. reed switch with low-pass filter: max. frequency 120Hz. |
| **K-Factor** | 0.000010 - 9,999,999 with variable decimal position. |
| **Low-pass filter** | Available for all pulse signals. |
| **Option ZF** | coil sensitivity 10mVpp. |

## Signal outputs - Digital output

| | |
|---|---|
| **Function** | Pulse output - transmitting accumulated total. |
| **Frequency** | Max. 500Hz. Pulse width user definable between 0.001 second up to 9.999 seconds. |
| **Type OA** | Two active 24V DC transistor outputs (PNP); max. 50mA per output (requires PD, PF, PM or PX). Requires min. 24V power supply. |
| **Type OR** | Two electro-mechanical relay outputs - isolated; max. switch power 230V AC (N.O.) - 0.5A per relay (requires PF or PM). |
| **Type OT** | Two passive transistor outputs (NPN) - not isolated. Max. 50V DC - 300mA per output. |

## Signal outputs - Communication option

| | |
|---|---|
| **Function** | Reading display information, reading / writing all configuration settings. |
| **Protocol** | Modbus ASCII / RTU. |
| **Speed** | 1200 - 2400 - 4800 - 9600 baud. |
| **Addressing** | Maximum 255 addresses. |
| **Type CB** | RS232 |
| **Type CH** | RS485 2-wire |
| **Type CI** | RS485 4-wire |
| **Type CT** | TTL Intrinsically Safe. |

## Operator functions

| | |
|---|---|
| **Displayed info** | • Flow rate and / or total flow A.<br>• Total and accumulated total flow A.<br>• Flow rate and / or total flow B.<br>• Total and accumulated total flow B.<br>• Total can be reset to zero by pressing the CLEAR-key twice. |

## Total

| | |
|---|---|
| **Digits** | 7 digits. |
| **Units** | L, $m^3$, GAL, USGAL, kg, lb, bbl, no unit. |
| **Decimals** | 0 - 1 - 2 or 3. |
| **Note** | Total can be reset to zero. |

## Accumulated total

| | |
|---|---|
| **Digits** | 11 digits. |
| **Units / decimals** | According to selection for total. |
| **Note** | Can not be reset to zero. |

## Flow rate

| | |
|---|---|
| **Digits** | 7 digits. |
| **Units** | mL, L, $m^3$, Gallons, kg, Ton, lb, bl, cf, RND, $ft^3$, scf, $Nm^3$, Nl, igal - no units. |
| **Decimals** | 0 - 1 - 2 or 3. |
| **Time units** | /sec - /min - /hr - /day. |

## Mounting accessories

| | |
|---|---|
| **ACF02** | Stainless steel wall mounting kit. |
| **ACF05** | Stainless steel pipe mounting kit (worm gear clamps not included). |
| **ACF06** | Two stainless steel worm gear clamps Ø 44 - 56mm. |
| **ACF07** | Two stainless steel worm gear clamps Ø 58 - 75mm. |
| **ACF08** | Two stainless steel worm gear clamps Ø 77 - 95mm. |
| **ACF09** | Two stainless steel worm gear clamps Ø 106 - 138mm. |
| **ACF11** | Swivel with 25° movement from center axis for direct flowmeter mounting: 1" NPT to 1/2" NPT. |

## Cable glands

| | |
|---|---|
| **ACF20** | For HA enclosure, includes O-rings. |
| **ACF25** | For HE enclosure, includes locknuts and O-rings. |
| **ACF26** | For HF enclosure, includes locknuts and O-rings. |
| **ACF27** | For HG enclosure, includes locknuts and O-rings. |
| **ACF28** | For HH enclosure, includes locknuts and O-rings. |
| **ACF29** | For HJ enclosure, includes locknuts and O-rings. |
| **ACF32** | For HM enclosure, includes O-rings. |
| **ACF33** | For HN enclosure, includes O-rings. |
| **ACF34** | For HO enclosure, includes O-rings. |
| **ACF35** | For HP enclosure, includes O-rings. |
| **ACF39** | For HT enclosure, includes O-rings. |
| **ACF40** | For HU enclosure, includes O-rings. |

| | | Description | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Model | **F111** | **Dual input flow rate / totalizer with two pulse signal outputs.** | | | | | | | |
| Input | **P** | **Pulse input, e.g., coil, npn, pnp, namur, reed-switch.** | **-P** | | | | | | |
| Communication | CB | Communication RS 232 - Modbus ASCII / RTU - requires XX. | -CB | | | | | | |
| | CH | Communication RS 485 - 2wire - Modbus ASCII / RTU - requires XX. | -CH | | | | | | |
| | CI | Communication RS 485 - 4wire - Modbus ASCII / RTU - requires XX. | -CI | | | | | | |
| | CT | Intrinsically Safe TTL - Modbus ASCII / RTU - requires XI. | -CT | | | | | | |
| | **CX** | **No communication.** | **-CX** | | | | | | |
| Enclosures | HB | Aluminum panel mount enclosure. | | -HB | | | | | |
| | **HC** | **GRP panel mount enclosure.** | | **-HC** | | | | | |
| | HD | GRP field mount - Cable entry: no holes. | | -HD | | | | | |
| | HE | GRP field mount - Cable entry: 2 x Ø 16mm & 1 x Ø 20mm. | | -HE | | | | | |
| | HF | GRP field mount - Cable entry: 1 x Ø 22mm (⅞"). | | -HF | | | | | |
| | HG | GRP field mount - Cable entry: 2 x Ø 20mm. | | -HG | | | | | |
| | HH | GRP field mount -Cable entry: 6 x Ø 12mm. | | -HH | | | | | |
| | HJ | GRP field mount - Cable entry: 3 x Ø 22mm (7/8"). | | -HJ | | | | | |
| | HK | GRP field mount - Flat bottom, cable entry: no holes. | | -HK | | | | | |
| | HA | Aluminum field mount - Cable entry: 2 x PG9 + 1 x M20. | | -HA | | | | | |
| | HL | Aluminum field mount - Cable entry: 2 x ½"NPT. | | -HL | | | | | |
| | HM | Aluminum field mount - Cable entry: 2 x M16 + 1 x M20. | | -HM | | | | | |
| | HN | Aluminum field mount - Cable entry: 1 x M20. | | -HN | | | | | |
| | HO | Aluminum field mount - Cable entry: 2 x M20. | | -HO | | | | | |
| | HP | Aluminum field mount - Cable entry: 6 x M12. | | -HP | | | | | |
| | HT | Aluminum field mount - Cable entry: 1 x ½"NPT. | | -HT | | | | | |
| | HU | Aluminum field mount - Cable entry: 3 x ½"NPT. | | -HU | | | | | |
| | HV | Aluminum field mount - Cable entry: 4 x M20. | | -HV | | | | | |
| | HZ | Aluminum field mount - Cable entry: no holes. | | -HZ | | | | | |
| Digital output | OA | Two active transistor outputs - requires XX and PD, PF, PM or PX. | | | -OA | | | | |
| | OR | Two mechnical relay outputs - requires XX and PF or PM. | | | -OR | | | | |
| | **OT** | **Two passive transistor outputs.** | | | **-OT** | | | | |
| Power | PD | 8 - 24V AC/DC + sensor supply - with XI: 16 - 30V DC. | | | | -PD | | | |
| | PF | 24V AC/DC + sensor supply - requires XX. | | | | -PF | | | |
| | PM | 115 - 230V AC + sensor supply - requires XX. | | | | -PM | | | |
| | **PX** | **Basic power supply 8 - 30V DC.** | | | | **-PX** | | | |
| Battery | PB | Additional lithium battery powered (optional) - requires XX and PD or PX. | | | | -PB -P_ | | | |
| | PC | Additional lithium battery powered (optional) - Intrinsically safe - requires XI, and PD or PX. | | | | -PC -P_ | | | |
| Hazardous | XI | Intrinsically safe, according ATEX and IECEx. | | | | | -XI | | |
| | XF | Ex d enclosure - 3 keys according ATEX. | | | | | -XF | | |
| | **XX** | **Safe area only.** | | | | | **-XX** | | |
| Options | ZB | Backlight - requires XX. | | | | | | -ZB | |
| | ZF | Coil input 10mVpp. | | | | | | -ZF | |
| | **ZX** | **No options.** | | | | | | **-ZX** | |
| | | F111 | -P | -C_ | -H_ | -O_ | -P_ | -X_ | -Z_ |

The **bold** marked text contains the standard configuration: F111-P-CX-HC-OT-PX-XX-ZX.

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*Important: specifications are subject to change without notice.*
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