

RATIO MONITOR / TOTALIZER

WITH HIGH / LOW ALARMS AND
ANALOG OUTPUT



DATASHEET F114 – RATIO MONITOR / TOTALIZER

Advantages

- Robust IP67 (NEMA4X) 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

- Calculates ratio between flow A and B.
- Displays ratio, flow rate A and B and total A and B (resettable).
- 4 alarm values can be entered: low-low, low, high and high-high ratio alarm.
- Large 17mm (0.67") digits.
- Explosion/flame proof $\text{Ex} \text{II} 2 \text{GD EEx d IIB T5}$.
- 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

- (0)4 - 20mA / 0 - 10V DC according to the calculated ratio, flow rate A or flow rate B.
- Up to 3 free configurable alarm outputs.

Signal input

Flow

- Ability to process all types of flow meter signals: Reed-switch, NAMUR, NPN/PNP pulse, Sine wave (coil), Active pulse signals, (0)4 - 20mA, 0 - 10V DC.

Applications

- The F-Series is your first and safest choice for field mount indicators. 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 safe and hazardous area applications!
- Two component applications like glueing, blending or mixing where continuous ratio monitoring and/or totalising is important. For DIN panel mount indicators, check our D-Series.

General information

Introduction

The flowcomputer Model F114 has been developed to calculate the actual ratio between two separate flows. Typical applications are found where locally a two component product is mixed, for example in construction works, roof or wall isolation, glueing and coating. The F114 offers the facility to set two low ratio and two high ratio alarm values. Special precautions are taken to allow start-up problems and incorrect ratio readings for a certain period of time. Based on the location of the flow meters, a selection can be made out of six different formulas. A wide selection of options further enhances the capabilities of this model.

Display

The display has large 17mm (0.67") and 8mm (0.31") digits which show the ratio, alarm values, flow rate A, total A and flow rate B, total B.

On-screen engineering units are easily configured from a comprehensive menu. The ratio can be displayed as 1:___ or as a percentage.

Configuration

All configuration settings are accessed via a simple operator menu which can be password protected. Each setting is clearly indicated with an alpha-numerical description, which avoids 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.

Analog output signal

The calculated ratio, flow rate A or B can be re-transmitted with the (o)4 - 20mA or 0 - 10V DC output signal. The output signal is updated eight times per second. The output value is user defined in relation to the ratio or flow rate, e.g. 4mA equals to 1 : 50 and 20mA equals to 1 : 1. The output signal can be passive, active or isolated where the passive output type will loop power the F114.

Alarm output

Up to three outputs are available to transmit the ratio alarm condition. All free configurable, in such a way that you can have e.g. one low-low alarm output, one low alarm output and one high alarm output. The output signals can be a passive NPN, active PNP or

an isolated electro-mechanical relay. Two outputs are available in Intrinsically Safe applications.

Signal input

The F114 accepts most pulse and analog input signals for volumetric flow or mass flow measurement. The input signal types can be selected by the user in the configuration menu without having to adjust any sensitive mechanical dip-switches or jumpers.

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).

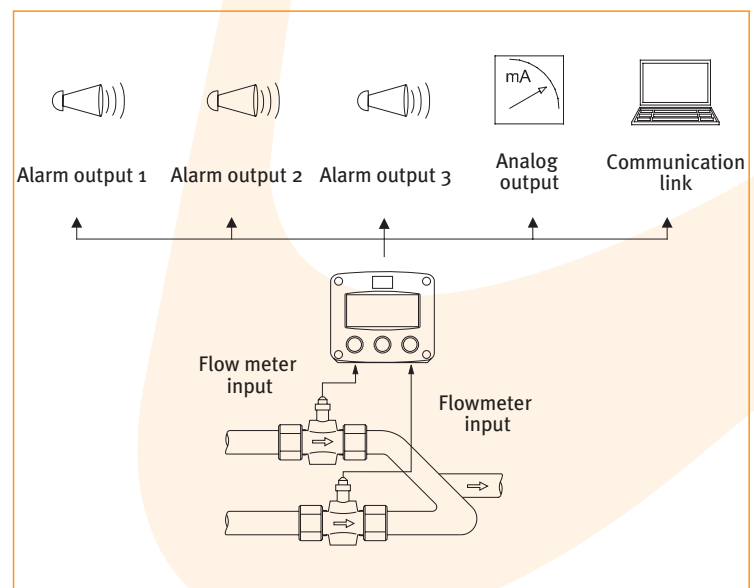
Hazardous areas

This model has been ATEX and IECEx certified 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 enclosure with ATEX certification offers the rating $\text{Ex II 2 GD EEx d IIB T5}$.

Enclosures

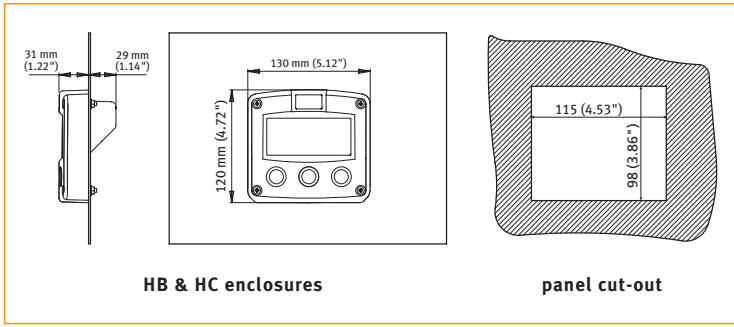
Various types of enclosures can be selected, all ATEX and IECEx approved. As standard the F114 is supplied in an GRP panel mount enclosure, which can be converted to an GRP field mount enclosure. Most popular is our rugged aluminum field mount enclosure with IP67 / NEMA 4X rating. Both European or U.S. cable gland entry threads are available.

Overview application F114



Dimensions enclosures

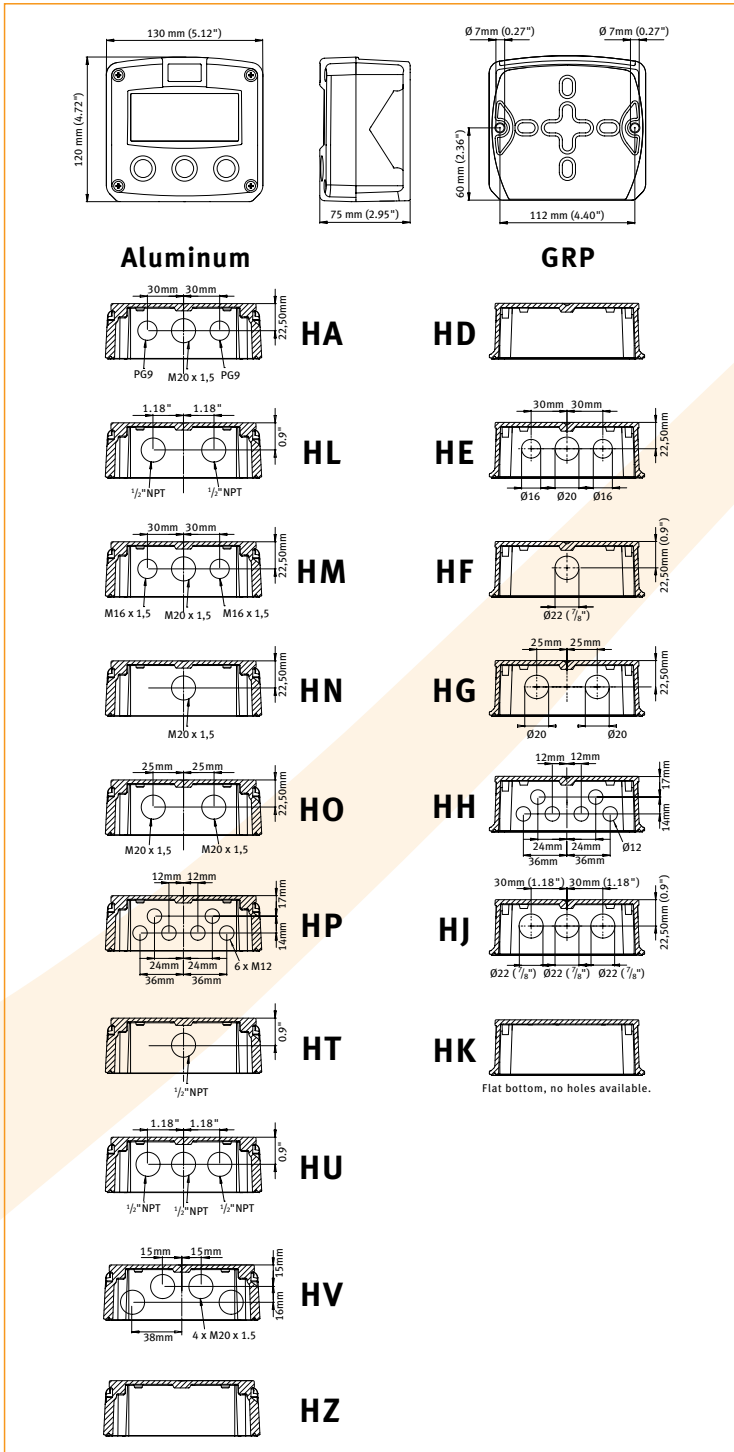
Aluminum & GRP panel mount enclosure



HB & HC enclosures

panel cut-out

Aluminum & GRP field / wall mount enclosures



Terminal connections

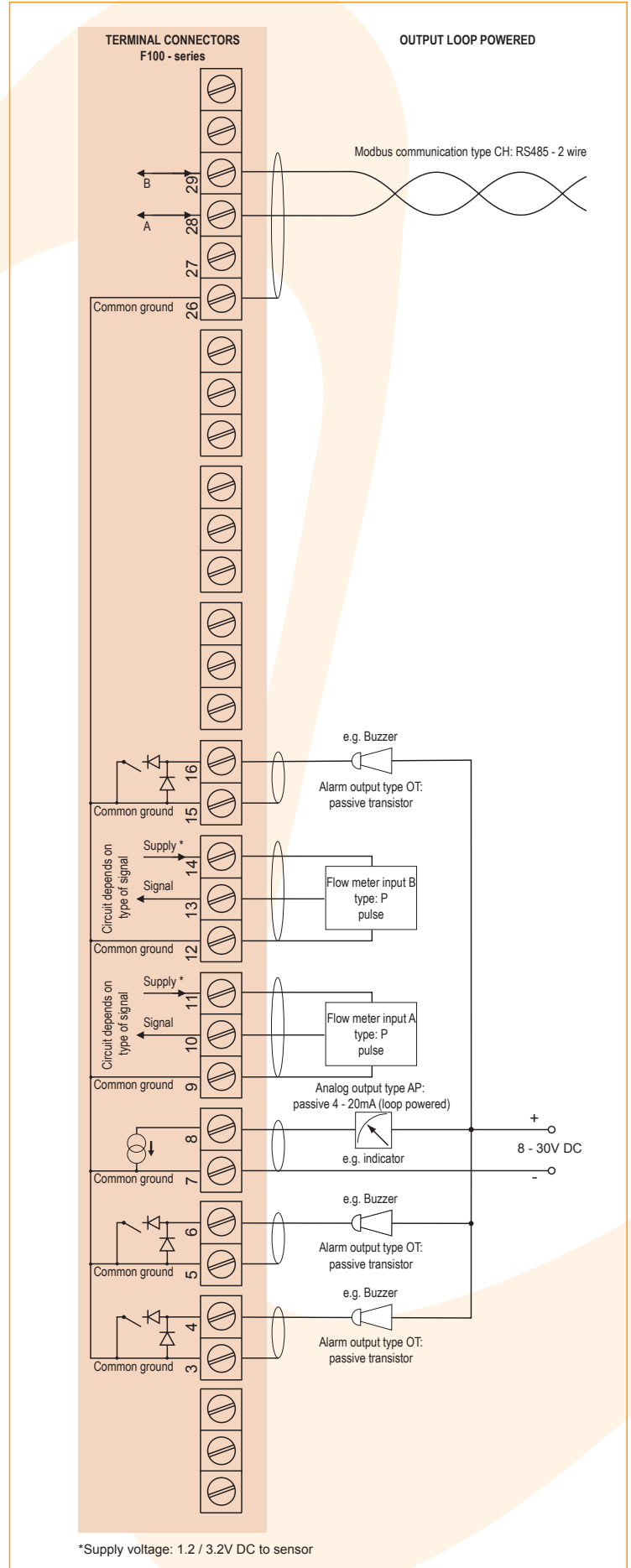
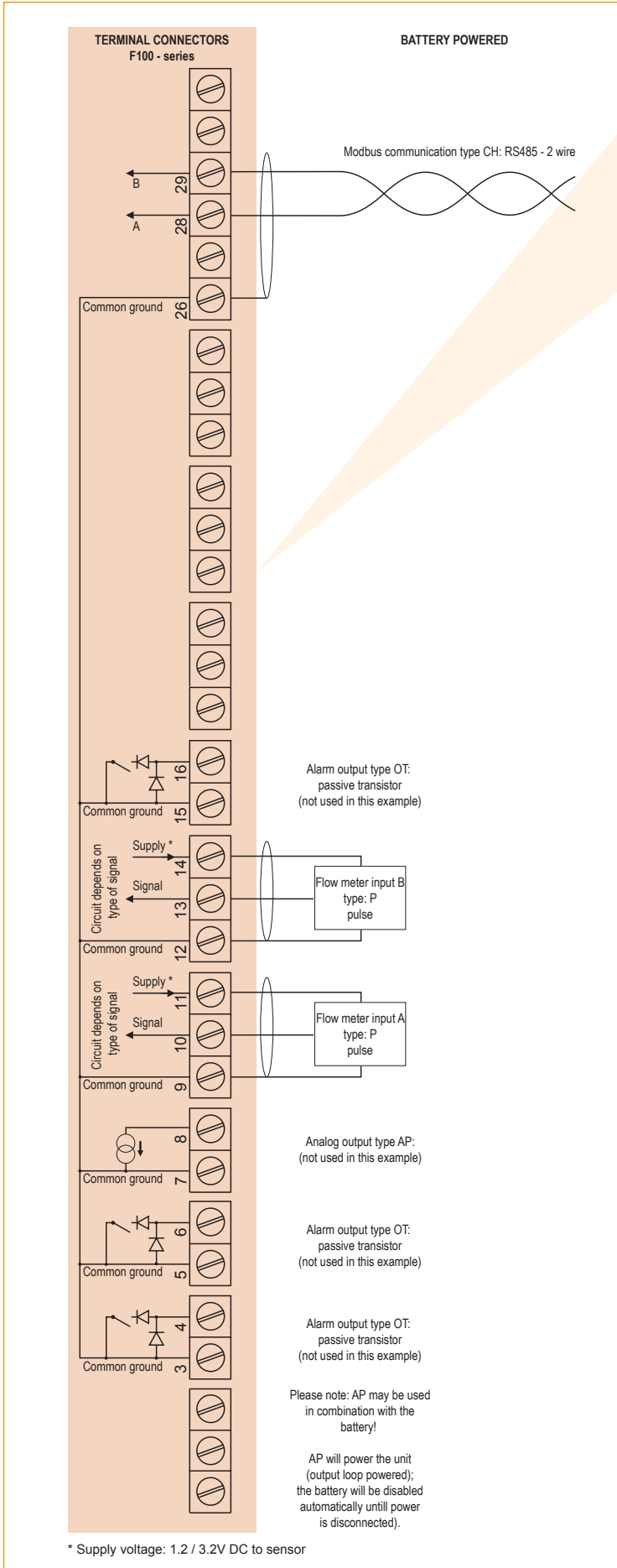
| Terminal | Signal | Notes |
|----------|--------------|-------|
| 1 | COMUNICATION | |
| 2 | COMUNICATION | |
| 3 | COMUNICATION | |
| 4 | COMUNICATION | |
| 5 | COMUNICATION | |
| 6 | COMUNICATION | |
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| 99 | COMUNICATION | |
| 100 | COMUNICATION | |

Display example - 90 x 40mm (3.5" x 1.6")



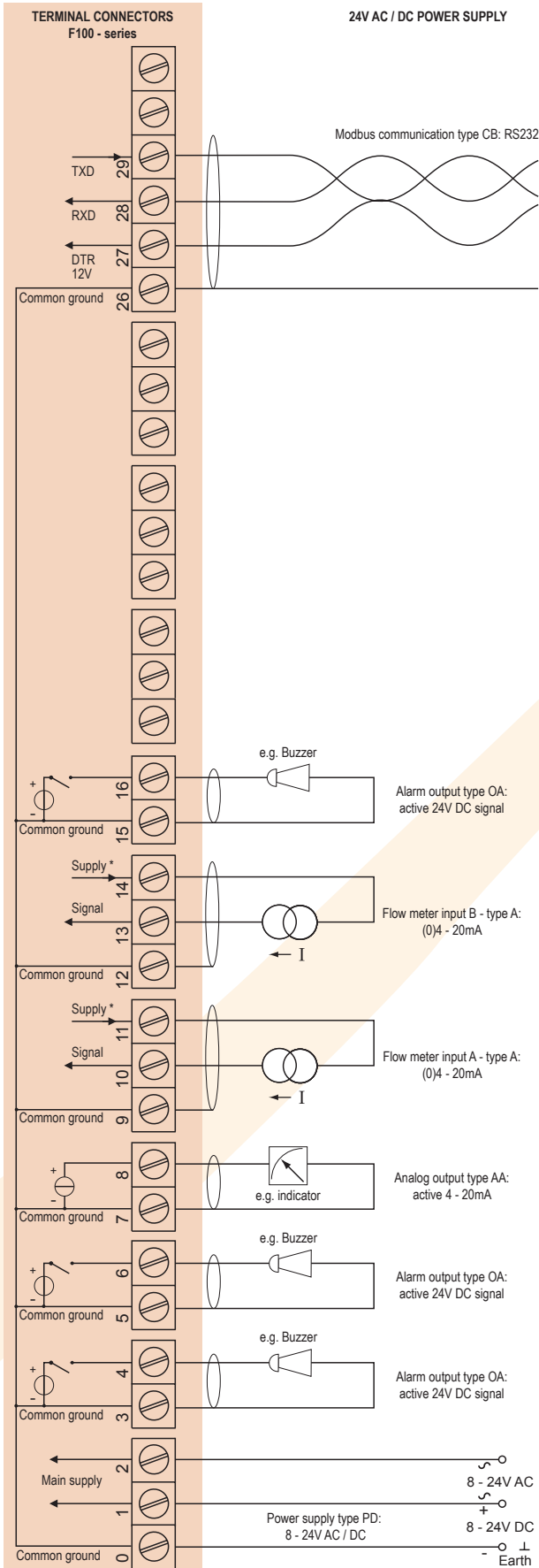
Typical wiring diagram F114-P-(AP)-CH-(OT)-PB

Typical wiring diagram F114-P-AP-CH-OT-PX

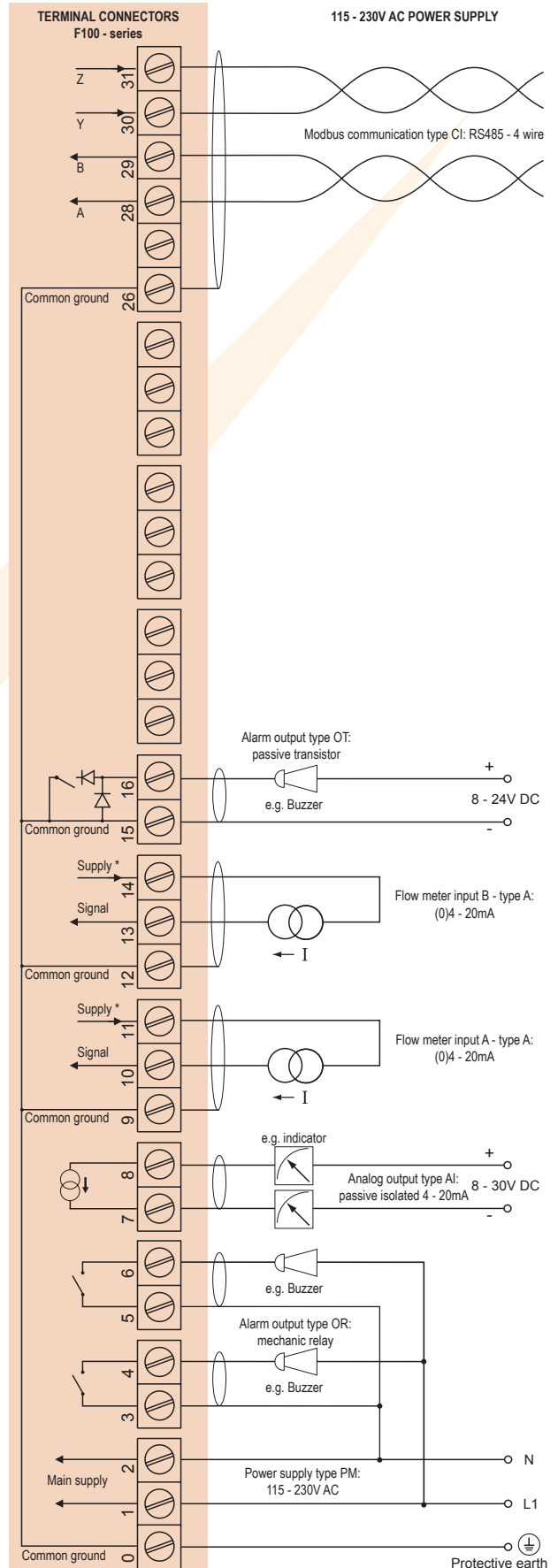


Typical wiring diagram F114-A-AA-CB-OA-PD

Typical wiring diagram F114-A-AI-CI-OR-PM



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



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

Hazardous area applications

The F114-XI has been certified according 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:

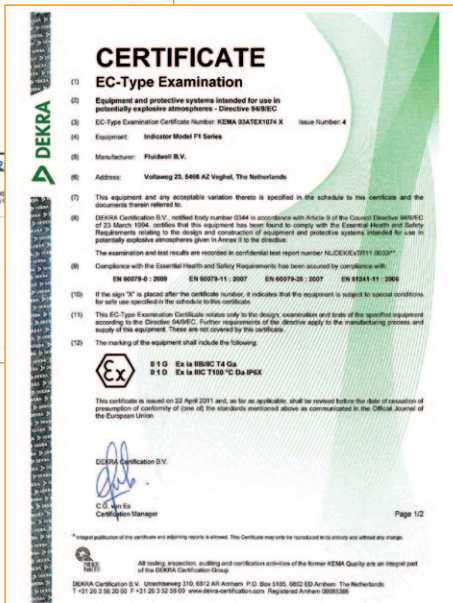
II 1 G Ex ia IIB/IIC T4 Ga
II 1 D Ex ia IIIC T100 °C Da IP6X.

- The IECEx markings for gas and dust applications are: **Ex ia IIC/IIB T4 Ga** and **Ex ia IIIC T100 °C Da IP6X.**

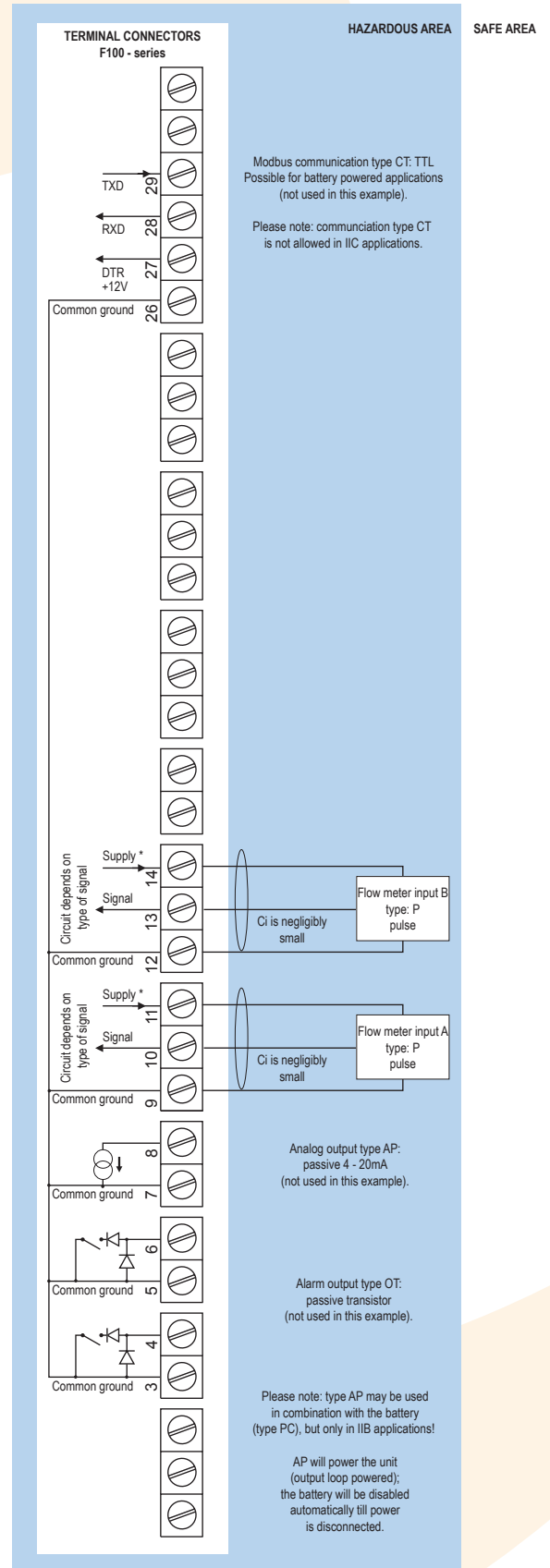
Besides the two I.S. power supplies for the alarm outputs, it is allowed to connect up to four I.S. power supplies in IIB/IIIC applications or one in IIC applications. Consult the certificate for the maximum input and output values of the circuits. Full functionality of the F114 remains available, including 4 - 20mA output, alarm outputs and Modbus communication (type CT). Power supply type PD-XI offers a 8.2V sensor supply e.g. for two Namur sensors. A flame proof enclosure with rating ATEX **II 2 GD EEx d IIB T5** is available as well. Please contact your supplier for further details.

Certificate of conformity KEMA 03ATEX1074 X

- IECEx DEK 11.0042X

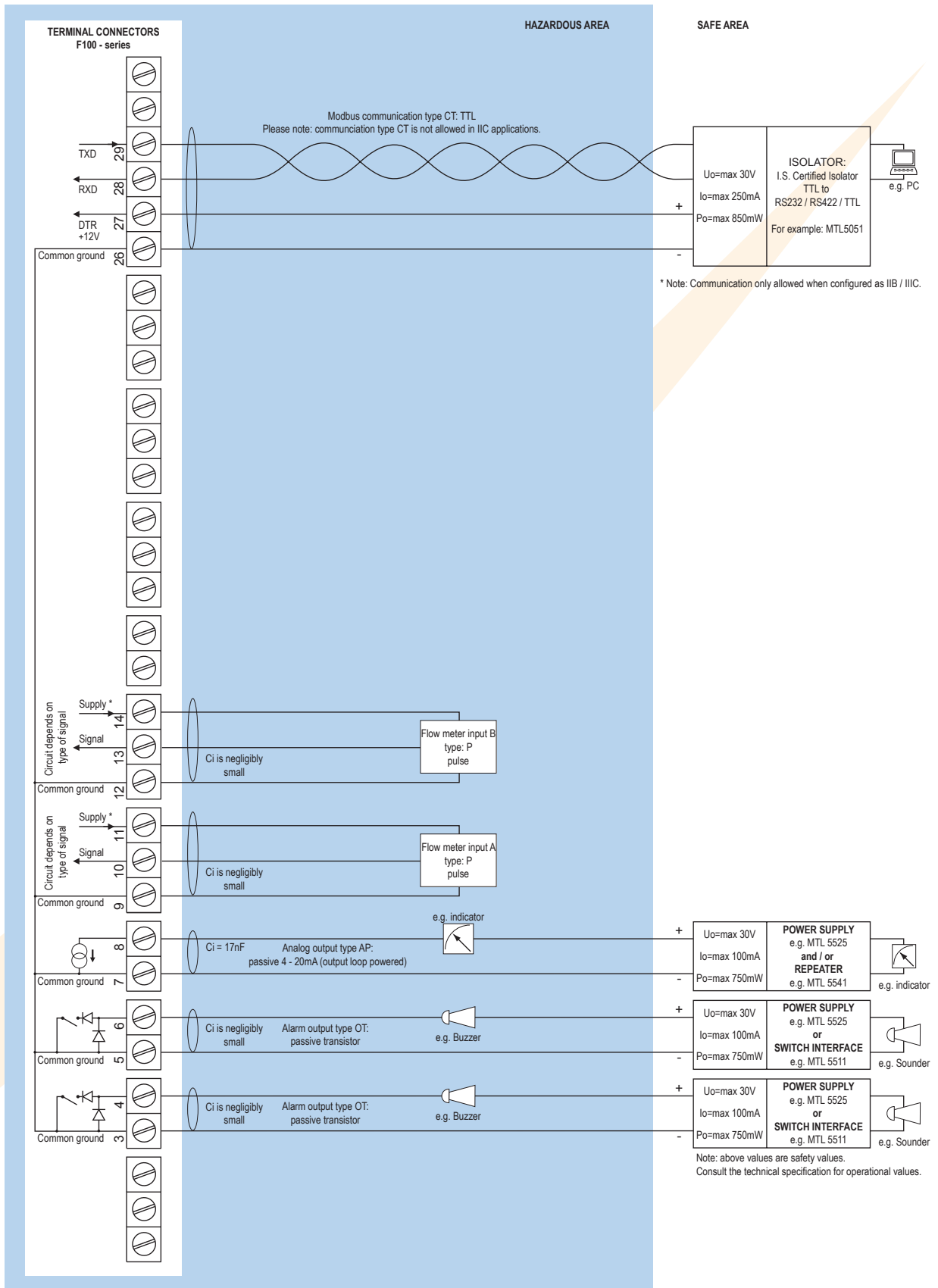


Configuration example IIB / IIIC and IIC F114-P-(AP)-(CT)-(OT)-PC-XI - Battery powered unit



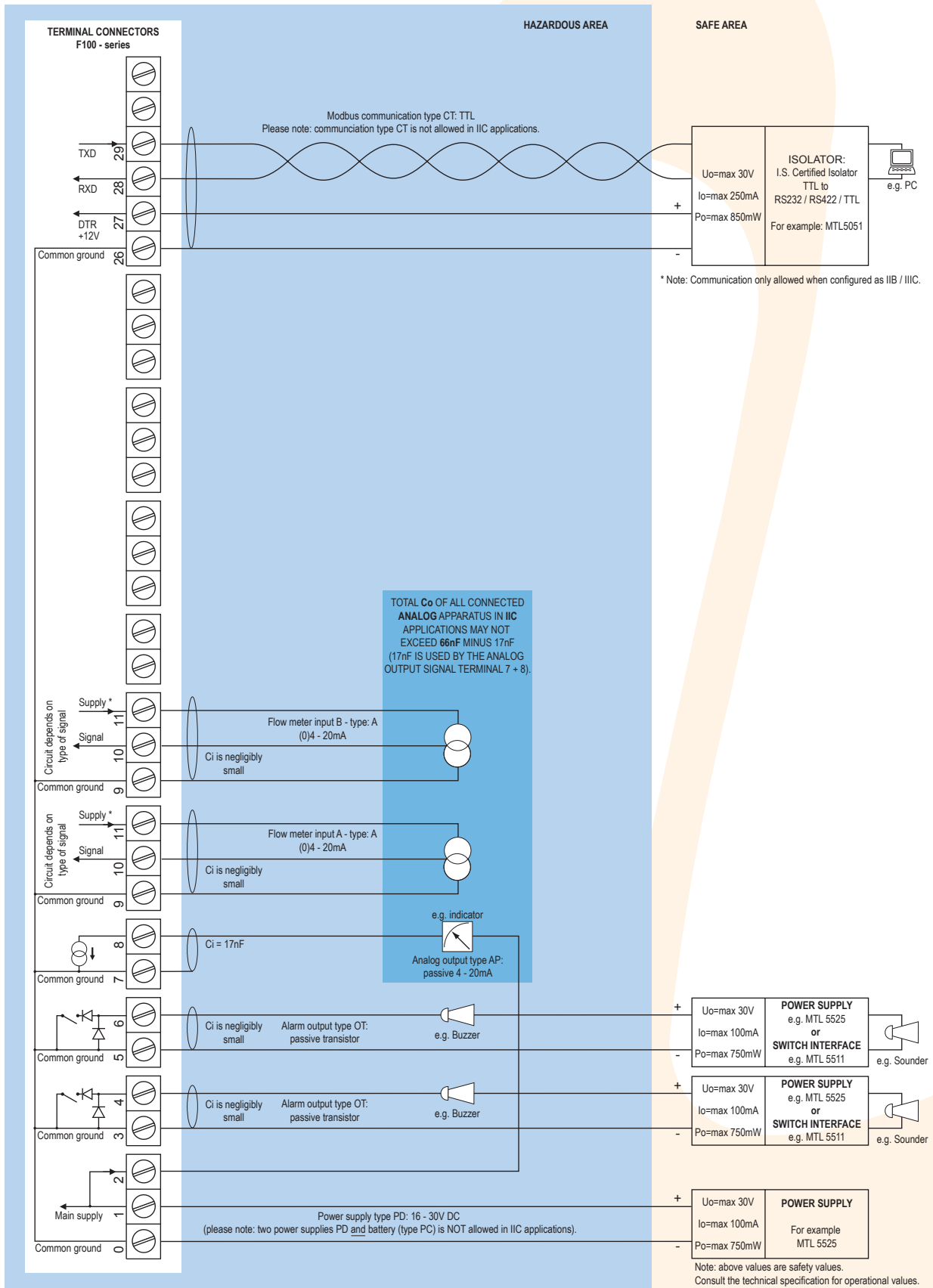
* Note sensor supply voltage: 1.2V DC for coil sensors or 3.2V DC for other pulse sensors.

Configuration example IIB / IIIC and IIC - F114-P-AP-(CT)-OT-PX-XI - Output loop power



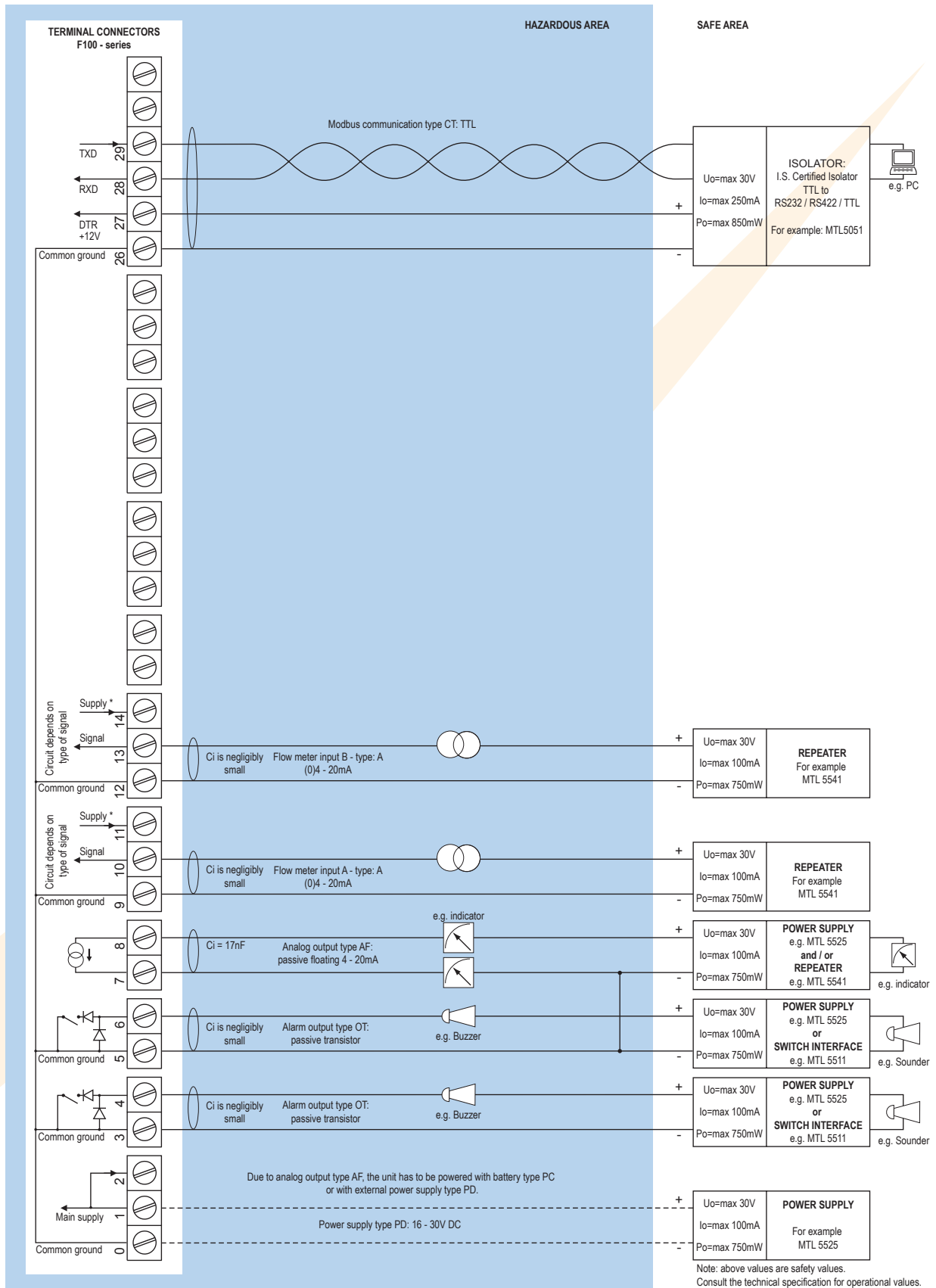
* Note sensor supply voltage: 1.2V DC for coil sensors or 3.2V DC for other pulse sensors.

Configuration example IIB / IIIC and IIC - F114-A-AP-(CT)-OT-PD-XI - Power supply 16 - 30V DC



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

Configuration example IIB / IIIC - F114-A-AF-CT-OT-(PC)-(PD)-XI - Power supply 16 - 30V DC or battery powered



* Note power supply type PD: the supply voltage to pulse sensors is maximum 8.7V ($U_o = \text{max } 8.7\text{V}$ $I_o = \text{max } 25\text{mA}$ $P_o = \text{max } 150\text{mW}$) and to analog sensors as connected to terminal 1 (internally linked).

Technical specification

General

| 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 adjustable green LED backlight. 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. |
| Type PC | Intrinsically Safe long life lithium battery - life-time depends upon settings and configuration - up to 5 years. |
| Type PD | 8 - 24V AC / DC ± 10%. Power consumption max. 10 Watt. Intrinsically Safe: 16 - 30V DC; power consumption max. 0.75 Watt. |
| Type PF | 24V AC / DC ± 10%. Power consumption max. 15 Watt. |
| Type PM | 115 - 230V AC ± 10%. Power consumption max. 15 Watt. |
| Type PX | 8 - 30V DC. Power consumption max. 0.5 Watt. |
| Type ZB | 12 - 24V DC ± 10% or internally powered with type PD / PF / PM. Power consumption max. 1 Watt. |
| 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 | For Intrinsically Safe applications, consult the safety values in the certificate. |

Sensor excitation

| | |
|---------------|---|
| Type PB/PC/PX | 3.2V DC for pulse signals and 1.2V DC for coil pick-up. |
| Note | 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 / 3.2 / 8.2 / 12 / 24V DC - max. 50mA @ 24V DC. |
| Type PD-XI | 1.2 / 3.2 / 8.2V DC - max. 7mA @ 8.2V DC and mains power supply voltage (as connected to terminal 1). |
| Note | In case PD-XI and signal A or U: 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 / 3.2 / 8.2 / 12 / 24V DC - max. 400mA @ 24V DC. |

Terminal connections

| | |
|------|--|
| Type | Removable plug-in terminal strip. Wire max. 1.5mm ² and 2.5mm ² . |
|------|--|

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. |

Enclosure

| General | |
|--------------|---|
| 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 4X 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 1/2" 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 1/2" NPT. |
| Type HU | Cable entry: 3 x 1/2" 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 4X, 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 (7/8"). |
| Type HG | Cable entry: 2 x Ø 20mm. |
| Type HH | Cable entry: 6 x Ø 12mm. |
| Type HJ | Cable entry: 3 x Ø 22mm (7/8"). |
| 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 4X. |
| Weight | 600 gr. |
| Type HC | GRP panel mount enclosure IP65 / NEMA 4X, UV-resistant and flame retardant. |
| Weight | 450 gr. |

Hazardous area

Intrinsically Safe (Type XI)

| | |
|---------------------|---|
| ATEX certification |  II 1 G Ex ia IIB/IIC T4 Ga. II 1 D Ex ia IIIC T100 °C Da IP6X. |
| IECEX certification |  Ex ia IIC/IIB T4 Ga. Ex ia IIIC T100 °C Da IP6X. |
| Ambient Ta | -40°C to +70°C (-40°F to +158°F). |

Explosion proof (Type XF)

| | |
|--------------------|---|
| ATEX certification |  II 2 GD EEx d IIB T5. |
| Dimensions | 300 x 250 x 200mm (11.8" x 9.9" x 7.9") L x H x D. |
| Weight | Appr. 15kg. |

Environment

| | |
|-------------------------------|--|
| Electromagnetic compatibility | Compliant ref: EN 61326 (1997), EN 61010-1 (1993). |
|-------------------------------|--|

Signal inputs

Flow meter

| | |
|-----------------|---|
| Type P | Coil / sine wave (minimum 20mVpp or 80mVpp - sensitivity selectable), NPN/PNP, open collector, reed-switch, Namur, active pulse signals 8 - 12 and 24V DC. |
| Frequency | Minimum 0Hz - maximum 7kHz 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. |
| Type A | (0)4 - 20mA. Analog input signal can be scaled to any desired range within 0 - 20mA. |
| Type U | 0 - 10V DC. Analog input signal can be scaled to any desired range within 0 - 10V DC. |
| Accuracy | Resolution: 14 bit. Error < 0.025mA / ± 0.125% FS. Low level cut-off programmable. |
| Span | 0.000010 - 9,999,999 with variable decimal position. |
| Update time | Four times per second. |
| Voltage drop | Type A: 2.5V @ 20mA. |
| Load impedance | Type U: 3kOhm. |
| Relationship | Linear and square root calculation. |
| Note | For signal type A and U: external power to sensor is required; e.g. type PD. |

Signal outputs

Analog output

| | |
|-------------|--|
| Function | Transmitting ratio, flow rate A or flow rate B. |
| Accuracy | 10 bit. Error < 0.05%. Analog output signal can be scaled to any desired range. |
| Update time | Eight times per second. |
| Type AA | Active 4 - 20mA output (requires PD, PF or PM). |
| Type AB | Active 0 - 20mA output (requires PD, PF or PM). |
| Type AF | Passive floating 4 - 20mA output for Intrinsically Safe applications (requires XI + PC or PD). |
| Type AI | Passive galvanically isolated 4 - 20mA output - also available for battery powered models (requires PB, PD, PF or PM). |
| Type AP | Passive 4 - 20mA output - not isolated. Unit will be loop powered. |
| Type AU | Active 0 - 10V DC output (requires PD, PF or PM). |

Alarm output

| | |
|----------|---|
| Function | User defined: low, low-low, high, high-high or all alarms output. |
| Type OA | Three active 24V DC transistor outputs (PNP); max. 50mA per output (requires PD, PF or PM). |
| Type OR | Two electro-mechanical relay outputs isolated (N.O.) - max. switch power 230V AC - 0.5A (requires PF or PM) and one transistor output OT or OA. |
| Type OT | Three passive transistor outputs (NPN) - not isolated. Max. 50V DC - 300mA per output. |
| Note | Intrinsically Safe applications: only two transistor outputs type OT available. |

Communication option

| | |
|------------|--|
| Function | Reading display information, reading / writing all configuration settings. |
| Protocol | Modbus 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. |

Operational

Operator functions

| | |
|---------------------|---|
| Displayed functions | <ul style="list-style-type: none"> • Ratio. • Low-low, Low, High and High-high ratio alarm value. • Flow rate and total A + B (can be hidden). • Totals can be reset to zero by pressing the CLEAR-key twice. • Alarm values can be set (or only displayed). |
|---------------------|---|

Ratio

| | |
|----------|---------------|
| Digits | 5. |
| Units | 1 - xxx or %. |
| Decimals | 3. |

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. |

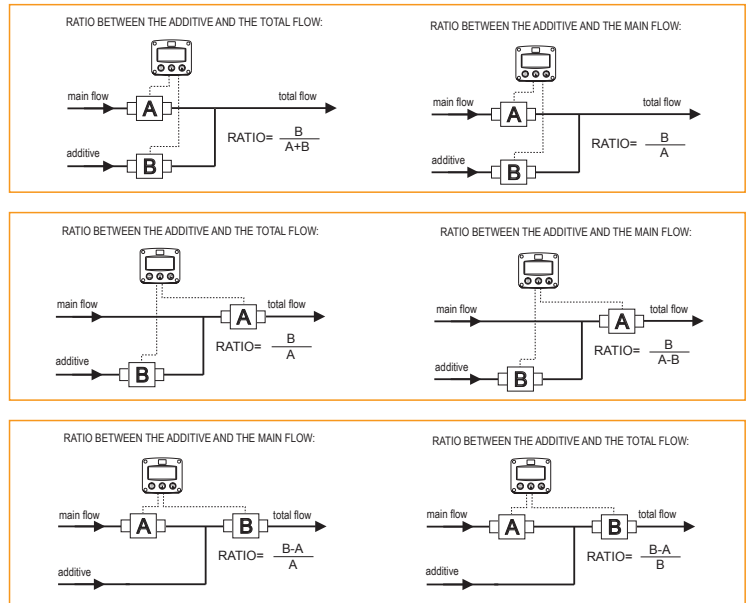
Flow rate

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

Alarm values

| | |
|---------------|--|
| Digits | 7 digits. |
| Units | According to selection for ratio. |
| Decimals | According to selection for ratio. |
| Type of alarm | Low, high, low-low or high-high ratio alarm. Includes alarm delay time and configurable alarm outputs. |

Ratio



Ordering information

Standard configuration: F114-P-AP-CX-EX-HC-IX-OT-PX-TX-XX-ZX.

| Ordering information: | F114 | - | -A | -C | -EX | -H | -IX | -O | -P | -TX | -X | -Z |
|---|------|---|----|----|-----|----|-----|----|----|-----|----|----|
| Flow meter input signal | | | | | | | | | | | | |
| A | ⊗ | (0)4 - 20mA input. | | | | | | | | | | |
| P | ⊗ | Pulse input: coil, npn, pnp, namur, reed-switch. | | | | | | | | | | |
| U | ⊗ | 0 - 10V DC input. | | | | | | | | | | |
| Analog output signal | | | | | | | | | | | | |
| AA | | Active 4 - 20mA output - requires PD, PF or PM. | | | | | | | | | | |
| AB | | Active 0 - 20mA output - requires PD, PF or PM. | | | | | | | | | | |
| AF | ⊗ | I.S. floating 4 - 20mA output - requires XI + PC or PD. | | | | | | | | | | |
| AI | | Isolated 4 - 20mA output - requires PB, PD, PF, PL or PM. | | | | | | | | | | |
| AP | ⊗ | Passive 4 - 20mA output, loop powered unit. | | | | | | | | | | |
| AU | | Active 0 - 10V DC output - requires PD, PF or PM. | | | | | | | | | | |
| Communication | | | | | | | | | | | | |
| CB | | Communication RS232 - Modbus RTU. | | | | | | | | | | |
| CH | | Communication RS485 - 2wire - Modbus RTU. | | | | | | | | | | |
| CI | | Communication RS485 - 4 wire - Modbus RTU. | | | | | | | | | | |
| CT | ⊗ | Intrinsically Safe TTL - Modbus RTU. | | | | | | | | | | |
| CX | ⊗ | No communication. | | | | | | | | | | |
| Flow equations | | | | | | | | | | | | |
| EX | ⊗ | No flow equations. | | | | | | | | | | |
| Panel mount enclosures - IP65 / NEMA4X | | | | | | | | | | | | |
| HB | ⊗ | Aluminum enclosure. | | | | | | | | | | |
| HC | ⊗ | GRP enclosure. | | | | | | | | | | |
| GRP field / wall mount enclosures - IP67 / NEMA4X | | | | | | | | | | | | |
| HD | ⊗ | Cable entry: no holes. | | | | | | | | | | |
| HE | ⊗ | Cable entry: 2 x Ø 16mm & 1 x Ø 20mm. | | | | | | | | | | |
| HF | ⊗ | Cable entry: 1 x Ø 22mm (7/8"). | | | | | | | | | | |
| HG | ⊗ | Cable entry: 2 x Ø 20mm. | | | | | | | | | | |
| HH | ⊗ | Cable entry: 6 x Ø 12mm. | | | | | | | | | | |
| HJ | ⊗ | Cable entry: 3 x Ø 22mm (7/8"). | | | | | | | | | | |
| HK | ⊗ | Flat bottom, cable entry: no holes. | | | | | | | | | | |
| Aluminum field / wall mount enclosures - IP67 / NEMA4X | | | | | | | | | | | | |
| HA | ⊗ | Cable entry: 2 x PG9 + 1 x M20. | | | | | | | | | | |
| HL | ⊗ | Cable entry: 2 x 1/2" NPT. | | | | | | | | | | |
| HM | ⊗ | Cable entry: 2 x M16 + 1 x M20. | | | | | | | | | | |
| HN | ⊗ | Cable entry: 1 x M20. | | | | | | | | | | |
| HO | ⊗ | Cable entry: 2 x M20. | | | | | | | | | | |
| HP | ⊗ | Cable entry: 6 x M12. | | | | | | | | | | |
| HT | ⊗ | Cable entry: 1 x 1/2" NPT. | | | | | | | | | | |
| HU | ⊗ | Cable entry: 3 x 1/2" NPT. | | | | | | | | | | |
| HV | ⊗ | Cable entry: 4 x M20. | | | | | | | | | | |
| HZ | ⊗ | Cable entry: no holes. | | | | | | | | | | |
| Additional inputs | | | | | | | | | | | | |
| IX | ⊗ | No additional input. | | | | | | | | | | |
| Outputs | | | | | | | | | | | | |
| OA | | Three active transistor outputs - requires PD, PF or PM. | | | | | | | | | | |
| OR | | Two mechanical relay outputs + one OT or OA - requires PF or PM. | | | | | | | | | | |
| OT | ⊗ | Three passive transistor outputs - standard configuration. | | | | | | | | | | |
| Power supply | | | | | | | | | | | | |
| PB | | Lithium battery powered. | | | | | | | | | | |
| PC | ⊗ | Lithium battery powered - Intrinsically Safe. | | | | | | | | | | |
| PD | ⊗ | 8 - 24V AC/DC + sensor supply - with XI: 16 - 30V DC. | | | | | | | | | | |
| PF | | 24V AC/DC + sensor supply. | | | | | | | | | | |
| PM | | 115 - 230V AC + sensor supply. | | | | | | | | | | |
| PX | ⊗ | Basic power supply 8 - 30V DC (no real sensor supply). Unit requires external loop AP. | | | | | | | | | | |
| Temperature input signal | | | | | | | | | | | | |
| TX | ⊗ | No temperature input signal. | | | | | | | | | | |
| Hazardous area | | | | | | | | | | | | |
| XI | ⊗ | Intrinsically Safe, according ATEX and IECEx. | | | | | | | | | | |
| XF | | EExd enclosure - 3 keys. | | | | | | | | | | |
| XX | | Safe area only. | | | | | | | | | | |
| Other options | | | | | | | | | | | | |
| ZB | | Adjustable backlight. | | | | | | | | | | |
| ZF | ⊗ | Coil input 10mVpp. | | | | | | | | | | |
| ZX | ⊗ | No options. | | | | | | | | | | |

The bold marked text contains the standard configuration.

⊗ Available Intrinsically Safe.

Specifications are subject to change without notice.



Quality
ISO 9001

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