

## DFW I ECEX

Dini Argeo DFWIECEX weight indicator, IECEx and ATEX certified, for Zones 1 and 21, 2 and 22.



The DFWIECEX weight indicator represents the state of the art for weighing in environments with a high risk of explosion. Thanks to the RGB backlit display, to the powerful processor and above all to the main interfaces available, all intrinsically safe, DFWIECEX allows the integration of weighing within production processes, directly in hazardous areas, driving solenoid valves and communicating with PLCs and other devices. IECEx and ATEX certified and approved for legal-for-trade use.

**The best solution  
for advanced industrial  
applications**

## Highlights

- LCD display with RGB backlight
- State-of-the-art, high-speed X-Core CPU ideal for handling fast and accurate weighing, filling or dosing processes
- ASCII/RTU Modbus
- Comprehensive range of industrial interfaces, at your choice:
  - Intrinsically safe digital I/O
  - Intrinsically safe analog output
  - Up to 3 intrinsically safe bi-directional RS485 serial ports
  - Bluetooth

*NOTE: All of the above interfaces are certified for use in hazardous areas*

## Technical Features

- Protection:
  - for Gas: Ex ib [ib Gb] [ia Ga] IIC T4 Gb
  - for dust: Ex tb [ib Db] [ia Da] IIIC T135°C Db
  - ATEX: II2(2)G(1)G
  - ATEX: II2(2)D(1)D
  - Ta 0°C / +50°C
- High contrast RGB backlit display, with 6 digits of 25 mm. Brightness adjustable from keyboard.
- 17-key waterproof keyboard
- AISI304 stainless steel casing, with IP65 and IP68 certified protections.
- Minimum measurement range (internal use): 0.01  $\mu$ V/d
- 4 load cell inputs, with selectable operating mode:
  - Single scale (use of only one input)
  - 4-channel digital junction box (use of multiple load cell inputs)
- Metrological approval: 10,000e or multi range 3x3000e @ 0.3 $\mu$ V/e.
- Connection up to 8 load cells of 350Ohm.
- Possibility of direct connection to load receptor installed in Zone 0 and 20.
- 1 Intrinsically safe RS485 serial port as standard, for two-way communication with PLCs, PCs or devices in explosive zones.
- Power supply of your choice (see options table):
  - Through Dini Argeo power supply, 110-230 Vac or 24 Vac - 24 Vdc
  - Through Dini Argeo external battery, in stainless steel, with autonomy of about 40 h (Connection/disconnection directly in explosive zone and charging in safe area)

*NOTE: Autonomy may be reduced depending on load reception system, connected communication accessories, and backlight configuration.*

- Dimensions: 280x143x185 mm.
- Available cable glands: 2 x PG9 as standard, 1 PG supplied (not mounted) and setup for a further 2 optional PG9s.



## Communication Interfaces - OPTIONS

- OPTIONAL DIGITAL INPUTS/OUTPUTS:
- Intrinsically safe 4-input, 4-output digital card with the following specifications:
  - Inputs
    - $U_i$ : 18 V
    - $R_i$ : 214  $\Omega$
    - R input: 859  $\Omega$
  - Electronic relay outputs
    - $U_i$ : 18 V
    - $P_i$ : 1,75 W
    - In: 70 mA
- Intrinsically safe power supply terminal, for piloting devices in ATEX zone or push-button panel. Output voltage 6V, max current 300mA.

*NOTE: by using the available power supply terminal, it is possible to manage the push button panel code EXPHBN in a direct way, even in a safe area, without protection barriers.*

- OPTIONAL ANALOG OUTPUT:
- Intrinsically safe analog output, programmable at 0...10Vdc, 0...20mA or 4...20mA.

*NOTE: It is possible to transmit the signal directly to the safe area using the intrinsically safe protective barrier, code PFANOUTEX for analog output in 0...20mA (or 4...20mA) configuration.*

The analogue output of DFWIECEXAN is an active analogue output, which is why it must not be powered. The resistance of analogue input shall be:

- If the output signal is in voltage:  $R_{min}=1K$
- If the output signal is in current:  $R_{max}=300ohm$

- RS485 SERIAL PORT
- 2 Optional intrinsically safe RS485 serial ports for communication with repeaters and other devices.
  - ASCII protocol
  - Programmable weight string and read command
  - Modbus RTU

*NOTE: it is possible to transmit data directly to the safe area using the protective barrier code PFB485EX*

## Certification of assembly

- EXDC: ATEX certification of assembly for DFWIECEX





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