

# i 40 Ex 2-21 IECEx

Weight indicator for industrial processes in explosive atmosphere

**PRECIA  
MOLEN™**  
WORLDWIDE WEIGHING



- ▶ The i 40 Ex 2-21 IECEx industrial indicator is particularly adapted for *process weighing* with easy integration in any industrial process which includes weight measurement.
- ▶ It can be installed directly in potentially explosive atmosphere for risks related to the presence of dusts (zone 21 and 22) and/or gas (zone 2).
- ▶ The numerous wiring possibilities allow a direct connection of the i 40 Ex 2-21 IECEx indicator to most PLCs and industrial PCs on the market.

## Display

- FSC Technology (Field Sequential Color)
- 7 color configurable backlighting
- Weight display over 7 characters (25 mm high)
- 10 character text zone (8 mm high)
- Weight units: g, kg, t and lb
- Metrological and field bus activity indicators
- Wide viewing angle and sharp contrast
- Bilingual messages French/English

## Keyboard

- Touch pad
- 3 metrological keys: zero, tare and gross weight reminder
- 3 menu access keys
- 4 arrow keys

## Metrological approval

Compliant with the European Directive on Non-Automatic Weighing Instruments (NAWI).

- Class III NAWI
- Simple range 1 x 3 000 or 1 x 6 000
- Double range 2 x 3 000 or 2 x 6 000

## CE Conformity

- Compliant with European Directive on Electro-magnetic compatibility.

## Certification

- Compliant with the ATEX European Directive relative to protection devices and systems designed for use in explosive atmospheres and with IECEx standards.
- Marking according to EN 60079-0:2012
  - II3G Ex nA IIC T4/T6\* Gc
  - II2D Ex tb IIIC T85°C Db

\* T4 with an optional board

## Environmental features

- Power Supply ..... 9 à 30 V DC\*\*
- Maximum consumption :
  - Typical ..... 1,4 W
  - With 4-20 mA / 0-10 V option ..... 1,8 W
  - With field bus option ..... 2,7 W
- Connection on spring loaded terminals
- Use temperature ..... - 20 °C / + 55 °C\*\*\*  
(10 to 85 % max. of relative humidity without condensation)
- Storage temperature ..... - 20 °C / + 55 °C
- Waterproofness ..... IP66
- Shock resistance ..... IK07

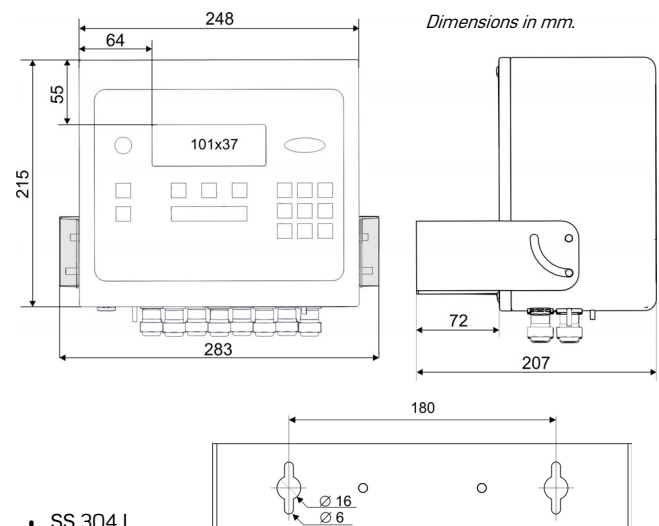
\*\* if 4-20 mA option: minimum 22 V.

\*\*\* -10 °C / + 40 °C in legal for trade use.

## Metrological features

- Up to 200 000 divisions in non legal for trade use.
- Minimum tension scale per division ..... 0,5 µV
- Weigh cell power supply ..... 5 V
- Weigh cell minimum impedance ..... 43 Ω
- Weigh cell maximum impedance ..... 1245 Ω
- Connection ..... 4/6 wires
- Up to 100 measurements/second
- Cascadable digital filters on 2 configurable levels

## Physical Features



- SS 304 L
- Weight : 4 kg
- Supplied with universal adjustable mount for tabletop, wall or column installation.

## Functions

### Communication

- 1 RS232/RS485 configurable port.
- Protocols : slave Modbus RTU, slave PM A+ and remote display master PM A+.

### Weight thresholds

#### 4 galvanic isolated digital outputs:

- Tension/current range..... 30 V AC/DC - 100 mA
- Definition of thresholds in gross weight or net weight.
- Output activation if the current weight is >= or <= threshold value.
- Thresholds relative to a positive or negative weight value.

### Remote control

#### 2 galvanic isolated digital inputs:

- Tension range ..... 8-30 V DC
- Max. current..... 15 mA

Used to remotely perform zeroing and taring operations.

### Settings

Metrological and functional settings can be performed via:

- the indicator front panel;
- a PC and a simple Internet browser.

Parameter back-up/restoration on µSD board (optional) or on CD-Rom.

### Help with preventive maintenance

- Counter of observed weight overloads.
- Alert display on 3 levels according to the number of performed weighs.

## Supplied accessories

- Clear protective cover for the front panel, which can be left on during use.

## Options

### Communication via field bus

- PROFIBUS-DP\*
- PROFINET\*
- DeviceNet\*
- Ethernet Modbus-TCP\*
- EtherNet/IP\*
- CANopen
- POWERLINK\*

The CANopen bus enables connecting a d 20 remote display and integrating an i 40 Ex 2-21 IECEx indicator in an I 410 network.

### Analog output\*

- 4-20 mA or 0-10 V analog output
- 1500 V RMS galvanic isolation
- Possible reading of negative weight values on the 0-4 mA range
- Image of instant gross or net weight

\* Exclusive options: either one of the connections to the field buses marked by \*, or an analog output.

### Serial communication

- 1 peripheral-type USB port
- 1 RS 232 port
- Protocols: slave Modbus RTU, slave PM A+ and remote display master PM A+.

### TCP/IP communication

- 1 Ethernet port 10/100 Mb RJ 45
- Protocol: slave PM A+ and remote display master PM A+.

### µSD board

- For parameter back-up/restoring.
- Alibi (DSD) memory for 300 000 records in legal for trade use.

### Junction box

Direct connection to 2 to 4 analog load cells (4 or 6 wires)

### Internal power supply

- Voltage ..... 100-240V AC 50/60Hz
- Power draw ..... 0,35 A

### Power chaining

8 terminals for 24 V power supply chaining (max. current 10 A).  
Maximum cross-section: 2,5 mm<sup>2</sup>



### Your specialist

Illustrations not contractual. Precia-Molen reserves the right to alter the characteristics of the equipment described in this brochure at any time.

**PRECIA-MOLEN Headquarters & Factory**  
 BP 106 - 07000 Privas - France  
 Tel. 33 (0) 475 664 600  
 Fax 33 (0) 475 664 330  
 E-MAIL webmaster@preciamolen.com

RCS: 386 620 165 RCS Aubenas

