i 40 Ex 2-22 ⟨Ex⟩
Weight indicator for industrial processes in explosible atmosphere

- The i 40 Ex 2-22 industrial indicator has been especially designed for *process weighing* i.e. it easily integrates to any industrial process involving weight measurement.
- Compliant with the 94/9/EC directive, it can be directly installed in explosible atmosphere for dust (zone 22) or gas-related (zone 2) risks.
- Numerous connection possibilities offer a direct connection of the i 40 Ex 2-22 indicator to most PLCs and industrial PCs on the market.

Display

- FSC (Field Sequential Colour) segment technology
- 7-colour configurable backlighting
- Weight display on 7 25-mm high characters
- Text zone with 10 8-mm high characters
- Weight unit: g, kg, t and lb
- Metrological and field bus indicator lights
- High vision angle and contrast
- French/English messages

Keyboard

- Touch screen
- 3 metrological keys: zero, taring, gross weight reminder
- 3 menu access keys
- 4 arrow keys

Metrological certification

Test certificate delivered by a notified body according to the 2009/23/EC directive related to Non Automatic Weighing Instruments:

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

Electrical certification

- Electromagnetic Compatibility compliant with the requirements of the 2004/108/EC directive.

ATEX ⟨Ex⟩ certification

- Compliance with the requirements of the 94/9/EC directive related to protection devices and systems designed for use in explosible atmospheres.
- Marking according to EN 60079-0:2012.
  - II3G Ex nA IIC T4/T6* Gc
  - II3D Ex tc IIIC T85ºC Dc

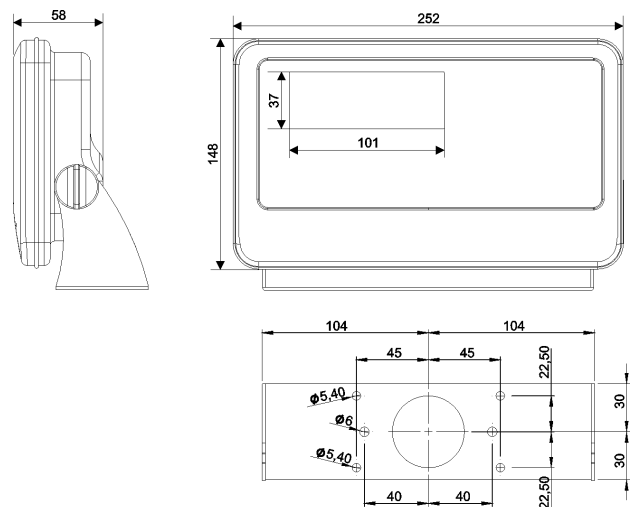** T4 with an optional board*

Environmental features

- Power supply .... 9 to 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
- Connections on spring terminals
- Use temperature .... -20 ºC/ + 55 ºC***
  (at 85 % max. of relative humidity without condensation)
- Storage temperature .... - 20 ºC / + 65 ºC
  (at 85 % max. of relative humidity without condensation)
- Waterproofness IP66

** if 4-20 mA option: minimum 22 V.
*** -10 ºC / + 40 ºC in trade use.

Metrological features

- Up to 200 000 divisions outside 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
- 4/6-wire connection
- Up to 100 measurements/second
- Digital filters cascading on 2 configurable levels

Physical features

Dimensions in mm.

Functions

Communication

- 1 configurable RS232/RS485 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.

Options

Communication via field bus

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

The CANopen bus enables connecting a d 20 remote display and integrating an i 40 Ex 2-22 indicator in an I 400 network.

Analogue output*

- 4-20 mA or 0-10 V analogue output
- 1500 V RMS galvanic insulation
- Possible reading of negative weight values on the 0-4 mA range
- Instant gross or net weight image

* Exclusive options: either one of the field bus connections notified by an * or an analogue output.

Serial communication

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

TCP/IP communication

- 1 10/100 Mb RJ 45 Ethernet port
- Slave PM A+ protocol and master PM A+ (remote display).

µSD board

- To back-up/restore parameters.
- Alibi memory (DSD) of 300 000 records in legal for trade use.

Panel mounting kit

- For the integration of an i 40 Ex 2-22 indicator in a cabinet or console door.
- Cutting dimensions L x l .... 270 mm x 165 mm - max. thickness: 4 mm

Your specialist

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