Communication protocol

- Instant throughput..........................R32 L   Control
- Average throughput ....R32 L   Zero
- Speed ....R32 L   Partial reset
- Overall total ....R32 L   Overall reset
- Partial total ....R32 L   Batch reset
- Status ....E32 L   Batch printing
- Minimum threshold ....R32 L/E
- Maximum threshold ....R32 L/E
- Material ratio ....E16 L/E (0 or 1)
- Control ....E16 L/E

CONNECTOR FOR OPTIONAL CARD

One option among the following:

- ▼ **PROFIBUS**   Profibus-DP
- ▼ **DeviceNet**   DeviceNet
- ▼ **Modbus-TCP**   Ethernet Modbus-TCP
- ▼ **EtherNet/IP**   EtherNet/IP

- ▼ 4-20 mA or 0-10 V analogue output card
  - Galvanic isolation 1500 V RMS
  - Possible to read negative weight values in the 0-4 mA range

Digital input / output allocation

- ▼ 2 digital inputs
  - Speed pick up.
  - Overall totalizer reset in HML
  - Partial totalizer reset.
  - Batch reset.
  - Material ratio.
  - Zero request.
  - Batch printing.
  - Slippage check.
  - Weigher On.
- ▼ 4 digital outputs.
  - Zero in progress
  - Zero OK.
  - Zero fault.
  - Maximum flow rate
  - Minimum flow rate
  - Flow rate out of range.
  - Remote counter reset timing
  - Overall totalizer pulse
  - Partial totalizer pulse
- ▼ 1 Analogue output
  - Flow rate
  - Speed
  - Weight/ metre

Display unit

- FSC (Field Sequential Colour) segment technology
- Configurable 7 colour backlighting
- Weight display on 7 x 25 mm high characters
- 10 x 8 mm high character text area
- Field bus metrological and activity indicator
- High viewing angle and contrast
- Selectable French or English bilingual messages

Keyboard

- Touch control keys.

Metrological characteristics

- Up to 200,000 divisions except for legal metrology use.
- Sensitivity .... 2 mV/V
- Minimum voltage division per division   0.5 µV
- Load cell power supply .... 5 V
- Minimum load cell impedance .... 43 Ω
- Maximum load cell impedance .... 1245 Ω
- Connection .... 4/6 wires
- Up to 100 measurements / second
- Cascadable digital filtering on 2 configurable levels

Environmental characteristics

- 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 loaded terminals
- Operating temperature** .... -15 ºC/ + 60 ºC (at 80% relative humidity max., non-condensing)
- Storage temperature .... - 20 ºC / + 65 ºC (at 90% relative humidity, non-condensing)

Models available

- ▼ STAINLESS STEEL housing: i 40-SS BS
- ▼ i 40-PM BS panel mounting version
- ▼ i 40-DR BS DIN rail version

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

PRECIA MOLEN™
WORLDWIDE WEIGHING

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i 40 BS
Indicator for continuous weighing

PRECIA MOLEN™
WORLDWIDE WEIGHING

Field of application

The i40 BS weight indicator is designed to measure the flow rates of any bulk product, without capacity limit. It integrates a weight measuring card and a conveyor belt running speed acquisition card.

Different housing versions allow installing the indicator on a table top, a panel mounting or a din rail mounting.

Functionalities

It has a backlit display unit allowing displaying the following selectable information:

- ▼ On the 7-segment 25 mm high main line
  - flow rate with selectable measuring unit: kg/h, kg/s, t/h or lb/h.
  - weight per meter with selectable measuring unit: kg/m or lb/m.
  - belt speed with selectable measuring unit: m/s, m/min, ft/s or rpm.
- ▼ The overall or partial summation with selectable measuring unit on the 10-segment 8mm high secondary line: kg, t or lb.

  When necessary, this second line alternately displays the summation and a message depending on the operation in progress.

The i40 BS electronics can also favourably replace some existing electronics.

The i40 BS meets the basic requirements of its application domain:

- ▼ Weighing
  - Weight and belt speed measuring.
  - Automatic or manual belt zero request.
  - Instant flow calculation.
  - Average flow rate with adjustable time constant.
  - Partial and overall summations
  - Min/max threshold management on the flow rate value with displayed colour change
- ▼ Printing

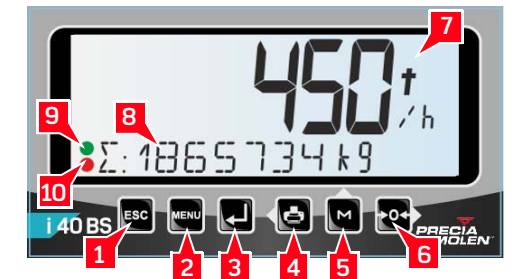 Manual or automatic batch ticket printing.

Printing example:

```
      SBS   21/08/10  13:43
Début du lot le 21/08/10 à 13:43
Tonnage lot      0.09 t

Débit du lot     32.4 t/h
Temps en charge   0:00 h
Temps à vide      0:00 h
Temps d'arrêt     0:00 h
Débit de pointe  31.4 t/h
Temps surdébit    0:00 h
Temps sousdébit   0:00 h

Derniers zéros effectués:
01/06/10    17:12      +0.08%
02/06/10    16:11      +0.12%
03/06/10    16:11      -0.24%
05/06/10    16:11      +0.02%
12/06/10    16:11      -0.16%
```

Front panel

Keyboard

1. Allows exiting a menu.
2. Allows accessing the user or engineer menu.
3. Validation (Enter) key.
4. Allows starting a paper printing and navigation function.
5. Allows accessing the application screen, the metrological menu and the navigation function.
6. Allows a dynamic zeroing of the scale and the navigation function.

Display

7. Display the flow rate, weight per metre or belt speed.
8. Display the total or partial summation and the current fault or the current zero state alternately.
9. Indicate the maximum flow rate reached.
10. Indicate the minimum flow rate reached.

Serial communication options

- ▼ USB port and/or RS 232 port and/or RS232/485 port
  Protocols: Slave RTU Modbus
- ▼ 10/100Mb RJ 45 Ethernet port
- ▼ **micro SD** µSD card
  - Allows parameter backup / restore.
  - DSD data storage memory, 300,000 recordings, legal use
- ▼ **CANopen** CanOpen bus
  - Allows connecting a d 20 remote display unit
  - Allows integrating an i 40 BS weight indicator into an i 400 network

Electrical certification

- Compliant with the requirements of the Electromagnetic Compatibility directive 2004/108/CE
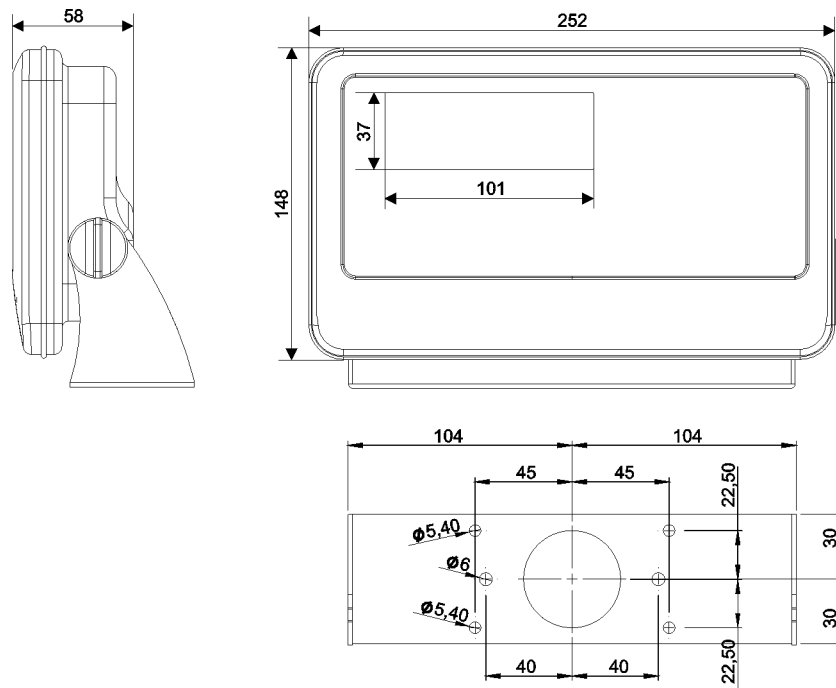- Compliant with the requirements of the Low Voltage directive 2006/95/CE

Models available

i 40-SS BS housing version

- 304L stainless steel housing
- IP66 protection rating
- 180 º swivel bracket
- Weight 1.5 kg
- Optional panel mounting kit:
  - Cut-out 270 $^{+2\,mm}_{-0\,mm}$ x 165 mm $^{+2\,mm}_{-0\,mm}$ (max thickness 6 mm).

i 40-SS BS

Dimensions in mm

58 · 252 · 148 · 37 · 101

104 · 104 · 45 · 45 · 22,50 · 30 · ∅5,40 · ∅6 · ∅5,40 · 40 · 40 · 22,50 · 30
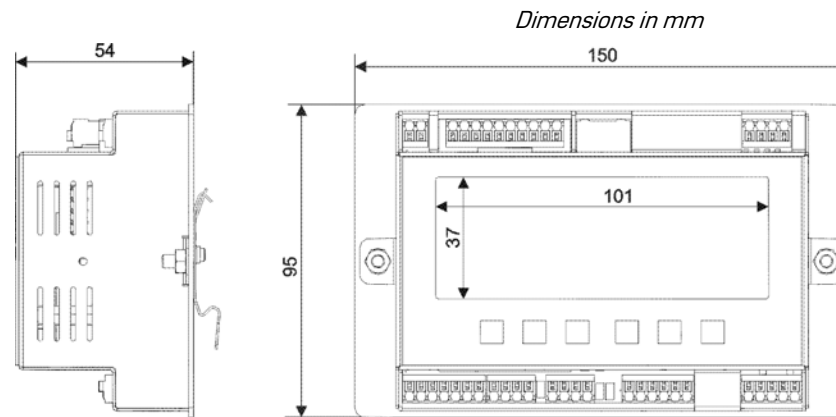
i 40-DR BS DIN rail version

- Omega 35mm DIN EN 500022 rail mounting
- Metal housing
- IP30 protection rating
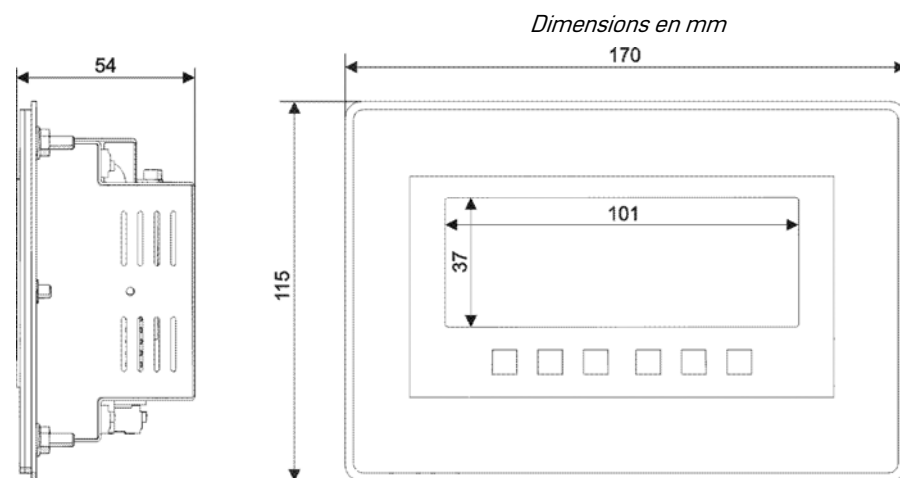- Weight 450 g

i 40-DR BS

Dimensions in mm

54 · 150 · 95 · 37 · 101

i 40-PM BS panel mounting version

- Front panel in 304L stainless steel
- Metal housing
- IP54 protection rating
- Overall IP30 protection rating
- Weight 450 g
- Cut-out for panel mounting:
  - 153 $^{+2\,mm}_{-0\,mm}$ x 95 mm $^{+2\,mm}_{-0\,mm}$ (max thickness 5 mm).

i 40-PM BS

Dimensions en mm

54 · 170 · 115 · 37 · 101