Technical data

Environmental characteristics

Mains supply
- Voltage .... 230 V -15% / +10%
- Frequency .... 50 Hz ± 1 Hz
- Consumption terminal .... 250 W

Temperature range
- In operation .... - 10 ºC / + 40 ºC
- In storage .... - 20 ºC / + 60 ºC

Functional characteristics

Analogue intercom option
- Connection by phone cable, 1 pair.
- Maximum distance between 2 stations .... 200 m
- Power .... 3 W

Inputs/Outputs option (up to 2)
- 2 inputs to activate by dry contact or PNP-type transistor (12 to 24 V).
- 4 relay outputs - Rating .... 250 V - 6 A

Printer option (continuous printing)
- Thermal printer with guillotine ticket cutting.
- Printing speed: 80 mm/s.
- Standard interface RS 232.
- Paper:
  - 1 copy
  - Maximum roll diameter .... 156 mm
  - Paper width .... 76 or 110 mm
  (depending on printer type)
  - Paper total length .... 300 m
  (around 1500 tickets)
  - Detection of paper end by optical system (end and near end alarms)
- Guillotine lifetime................................. 300 000 cuts
- Mechanism lifetime.................................... 10 km

Printer option (pre-printing and fast eject)
- Thermal printer with ticket eject.
- Printing speed: 150 mm/s.
- USB interface.
- Paper:
  - 1 copy
  - Maximum roll diameter .... 200 mm
  - Paper width .... 76 mm
  - Paper total length .... 500 m
  (around 2500 tickets)
  - Detection of paper end by optical system (end and near end alarms).
- Mechanism lifetime: 100 km.
- Guillotine: 1 000 000 cuts.

Badge scanner option
- RFID Industrial Technology 125 kHz (Badge in ISO card format).
- RFID MIFARE (read/write), surface mount.
- Bar code reader.

Interface
- Piezoelectric effect alphanumeric keyboard, AZERTY or QWERTY.
- Backlit 240 x 128 pixels graphic display with self-adjusting contrast according to light and anti-glare (adjustment contrast/luminosity directly at keyboard).

Ethernet Port
- Female 100 base T RJ45 plug.
- Speed .... 10/100 Mbps
- Fixed or dynamic IP address (DHCP).

Simulation kit for development.

Metrological characteristics
- Max. number of analogue load cells per channel   12 SCL
- Max. number of digital load cells per channel   12 CDL
- 2-channel summation board.
- **Data Storage Device** on 48 000 records (DSD nº, Gross weight, Tare, Net weight,...)

Extra Options & Accessories

Traffic management	IP intercom (via Ethernet)	Remote display (D570)	Other options
Barriers and Lights		20700 kg *Delivered with fastening kit on terminal.*	- Radioactivity - WI-FI link. - VDSL modems (distance > 100 m) - Ethernet network extenders: EIR Extender EIS Extender *For customisation:* *(integration of a device,* *type of link, etc.), please contact us.*

BI 410
Terminal - Weighbridge weighing

Application

The BI 410 terminal has been jointly designed as a weighing instrument, a peripheral for drivers' use and a traffic management tool.

Entirely monitored by a remote PC via its Ethernet link, it ensures the traceability of weighing operations regardless of time limits and of the presence of an operator.

Created as a product in its own right, it takes into account all the requirements applicable to a tool designed for continuous operation in severe use conditions:
- Simple and safe to use,
- Resistant to environmental disturbances,
- Offering easy access to various equipments (maintenance and replacement of consumables).

The BI 410 terminal is available with standard applications designed by PRECIA MOLEN:
▼ Stand-alone version (embedded PC board),
▼ Slave version that can be monitored via TCP/IP socket, open protocol with simulation kit to develop.

Communication

The BI 410 terminal offers, according to its application, various data exchange modes:
- USB port to exchange tables and transfer results via USB stick (stand-alone terminal)
- Ethernet TCP IP port.
  The communication protocol is compatible with all PRECIA/MOLEN terminals and access control devices.

European conformity
- 2004/108/EC modified directive on *Electromagnetic Compatibility**.
- 2006/95/EC directive on *Low voltage* equipment.
- 2009/23/EC directive on *Weighing instruments*.

Range
▼ BI 410 I: Analogue indicator version.
▼ BI 410 I D: Digital indicator version (PMNet link).
▼ BI 410 R: Remote display version (connection to an existing indicator or to a BI 410 I/D terminal).

* The compliance with this directive is directly related to the proper operation of the installation.

General description

The BI 410 terminal can include the following elements:
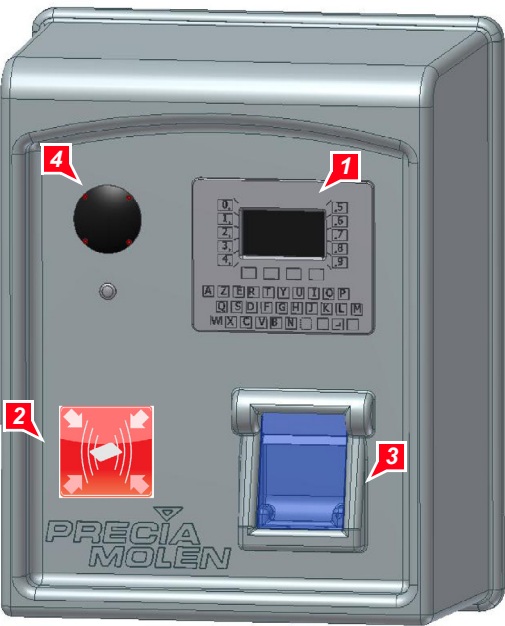
1. User interface:
   • Alphanumeric keyboard (AZERTY or QWERTY)
   • Backlit graphic screen.

2. Badge reader option:
   • RFID 125 kHz read
   • RFID MIFARE read/write
   • Bar code

3. Printer option:
   • full ticket issue
   • ticket print and present

4. Intercom option:
   • Analogue
   • IP intercom

5. Post (2 versions: **L**ight **V**ehicle or **H**eavy **V**ehicle)

6. Ethernet Switch Option (5-port switch) to link several terminals

ANY HARDWARE AND/OR SOFTWARE CONFIGURATION MAY BE CONSIDERED *PLEASE CONTACT US.*
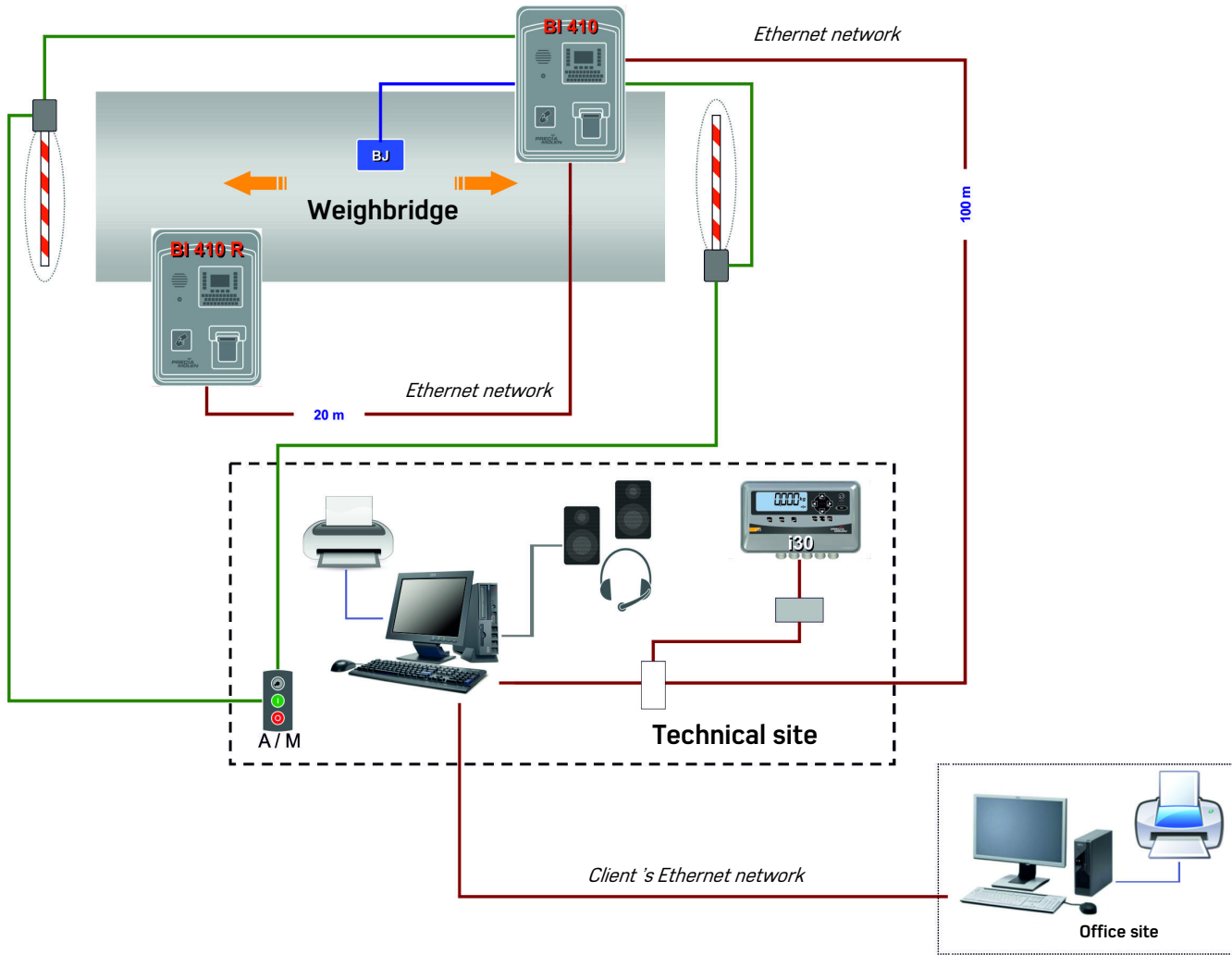
Physical characteristics
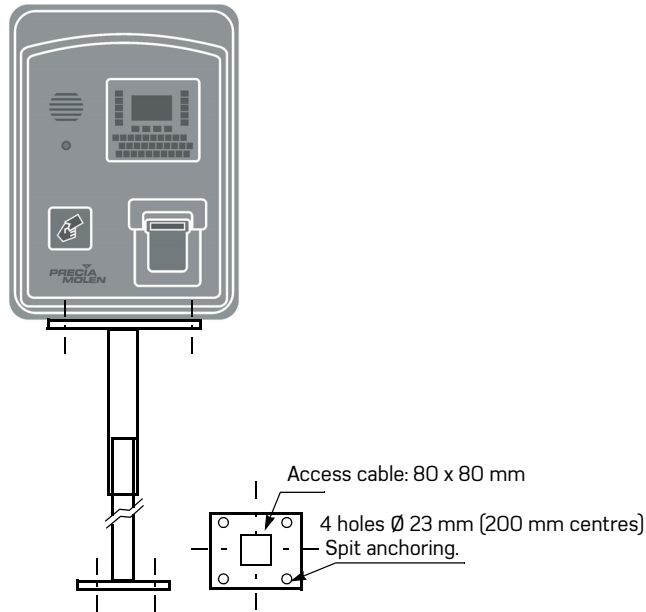
▼ Housing:
   • Height .... 782 mm
   • Width .... 623 mm
   • Depth .... 370 mm

▼ Material:
   • Laminated polyester

▼ Recommended shrouds:
   • Power supply .... 60 mm
   • Measurement and command .... 60 mm
   • Lights power supply .... 40 mm
   • Barrier power supply .... 60 mm
   • Other signals .... 40 mm

Access cable: 80 x 80 mm
4 holes Ø 23 mm (200 mm centres)
Spit anchoring.

	LV post			HV post		
	Min	Standard	Max	Min	Standard	Max
Height *Screen/Keyboard (mm)*	1650	1650	2480	1950	2550	2930

Options - Stands and protection

Stand extension	Swivel stand	Wall stand	Impact protection

Standard installation

Weighbridge
BI 410
BI 410 R
BJ
Ethernet network
20 m
100 m
Ethernet network
Technical site
A / M
i30
Client's Ethernet network
Office site

Extension of Ethernet network

Above 100 m and up to 1900 m, a pair of network extenders (EIS - EIR) is mandatory.

PC
EIS
Ethernet Extender
Twisted pair cable
EIR Ethernet Extender
BI 410 terminal
I 410
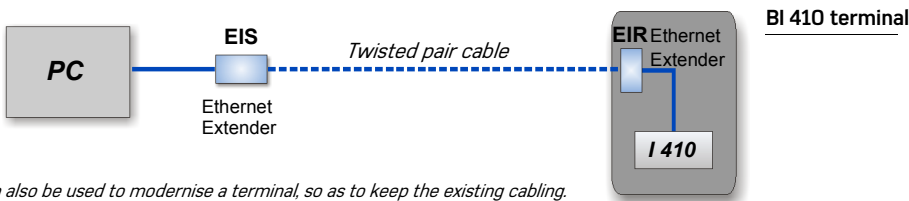
Note: *The network extender pair can also be used to modernise a terminal, so as to keep the existing cabling.*

Functional diagram

Analogue or digital load cell connection
Ethernet cable connection
Switch
Main operating PC
Telemaintenance
VPN remote network via ADSL