

PR 1613

System Weighing Indicator

Compact Weighing Terminal



- High accuracy W&M indicators EC conformity certificate 5000 d acc. to EN 45 501 (corresp. to OIML R 76)
- Alibi memory for W&M
- Free programmable
- Integrated PLC, 6 inputs and 12 outputs
- Max. 4 serial interfaces (current loop, RS 232 or RS 422/485)
- Optional:
 - analogue inputs/putputs
 - BCD-output
 - Parallel printer interface
 - Pulse counter input
 - PROFIBUS-DP
- Various software options for:
 - Weighbridge applications
 - Batching applications
 - Communication protocols
- Real time clock and memory extension
- Protection class IP 65 (front)
- Use inside EX-areas of Zone 2 (IIC T4)

PROFILE

The weight indicators PR 1613 have been designed for high precision weighing applications e. g. for platforms, weigh-bridges, cranes or batching processes.

Operating via:

- front panel
- control inputs/outputs
- remote display/terminal
- communication from a supervisory system (Dust, JBUS/MODBUS, Teleperm, Profibus-DP)

In case of alpha numerical operation as for platforms or batching processes it is recommendable to use the compact weighing terminal.

Indicator specific features:

- Free programmability of internal PLC and weighing sequences

- Easy connection of barcode reader, remote displays, printers or PLCs
- Load cell supply of 12 V or 20 V
- Automatic zero tracking
- Multi-range scales possible (3 ranges)
- SW- and HW options later on extendable
- Disabling keyboard functions
- Analogue test

Customer specific benefits:

- Easy and comfortable operating, calibration and configuration
- Calibration without weights (input of load cell identification data)
- Operator dialogue in local language
- Print layout adjustable
- Typical weighbridge, batching and On-Board Weighing software available

TECHNICAL DATA

Housing (PR 1613/00.../01)

Material: aluminium
Protection class: IP 30
Front panel: IP 65

Housing (PR 1613/03.../04)

Material: stainless steel
Protection class: IP 65

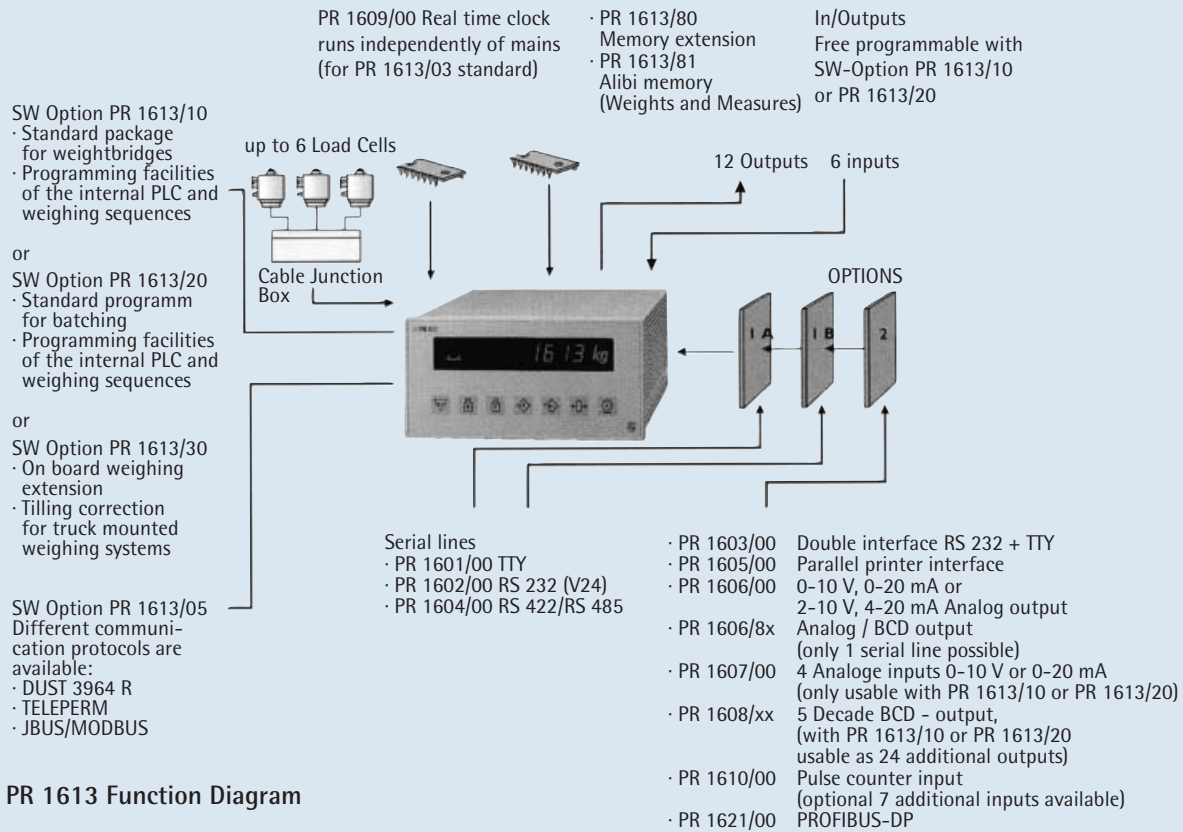
Main voltage

PR 1613/00 and PR 1613/03:
110V/220V AC, -15%/+10%, 50/60Hz
PR 1613/01 and PR 1613/04:
24 V_{AC} -15 %/+10 %,
24 V_{DC} -15 %/+20 %

Power consumption

19 W / 25 VA (PR 1613/00)
18 W / 24 VA (PR 1613/01)
22.5 W / 30 VA (PR 1613/03)
23 W / 30 VA (PR 1613/04)





PR 1613 Function Diagram

M.T.B.F.

35000 hours

Status indicators

->0<- zero display within = 1/4 d

⏏ standstill

B gross weight display

NET net weight display

T tare weight display

Dimensions can be set for: g, kg, t, lb

Decimal point can be set

Display

Type: vacuum fluorescent display

Elements: 7 - digits (7 segments)

Height: 12.5 mm

Colour: bright green

plus weighing and status symbols

Message display

(only PR1613/03../04)

2 lines with 20 characters

Structure: 5 x 7 Matrix

Control input

Number: 6, opto-isolated

Max. voltage 32 V_{DC}

Input current (high):

5 mA at 12 V_{DC}/11 mA at 24 V_{DC}

Control outputs

Number: 12, opto-isolated output

Max. voltage: 32 V_{DC}

Max. current: 75 mA

Accuracy

5000 d class III acc. to EN 45 501;
 corresponds to OIML R 76

Load cell connection

All strain gauge loadcells;

6- or 4-wire connection

Load cell supply

12 V/20 V_{DC} selectable, short-circuit proof. External load cell supply is possible.

Minimum load impedance

(internal supply)

min. 87.5 Ohm

e.g. 6 load cells with 600 Ω

or 4 load cells with 350 Ω

Measuring principle

Meas. amplifier: integrating converter, ratiometric to LC supply

Conversion time 50 ms.

Measuring time: 0.1 s to 2 s, can be set at intervals of 0.1 s.

Measuring range

Meas. signal: 2.4mV to 36mV

(for 100 % nominal load)

Dead load: 0 ... 33.6 mV

There is no interaction between dead load and measuring range setting.

Resolution (internal)

0.2 μV / div.

(max. 180,000 counts)

Analog filter

Active Butterworth low pass filter,
 40 dB / decade, 2 Hz cut-off frequency

Linearity

<0.007 %

Temperature effects

Zero: <0.1 μV / K RTI

Span: <0.006 % / 10 K

ENVIRONMENTAL CONDITIONS

Vibration safety

Acc. to IEC 68-2-6. Test Fc

Static discharge

Acc. to IEC 1000-4-2

Interference on mains and input/output

Acc. to IEC 1000-4-4

Electromagnetic field

Acc. to IEC 1000-4-3

26MHz to 1 GHz

Radio noise suppression

Acc. to EN 55 011

Electrical safety

Acc. to IEC IEC 1010-1

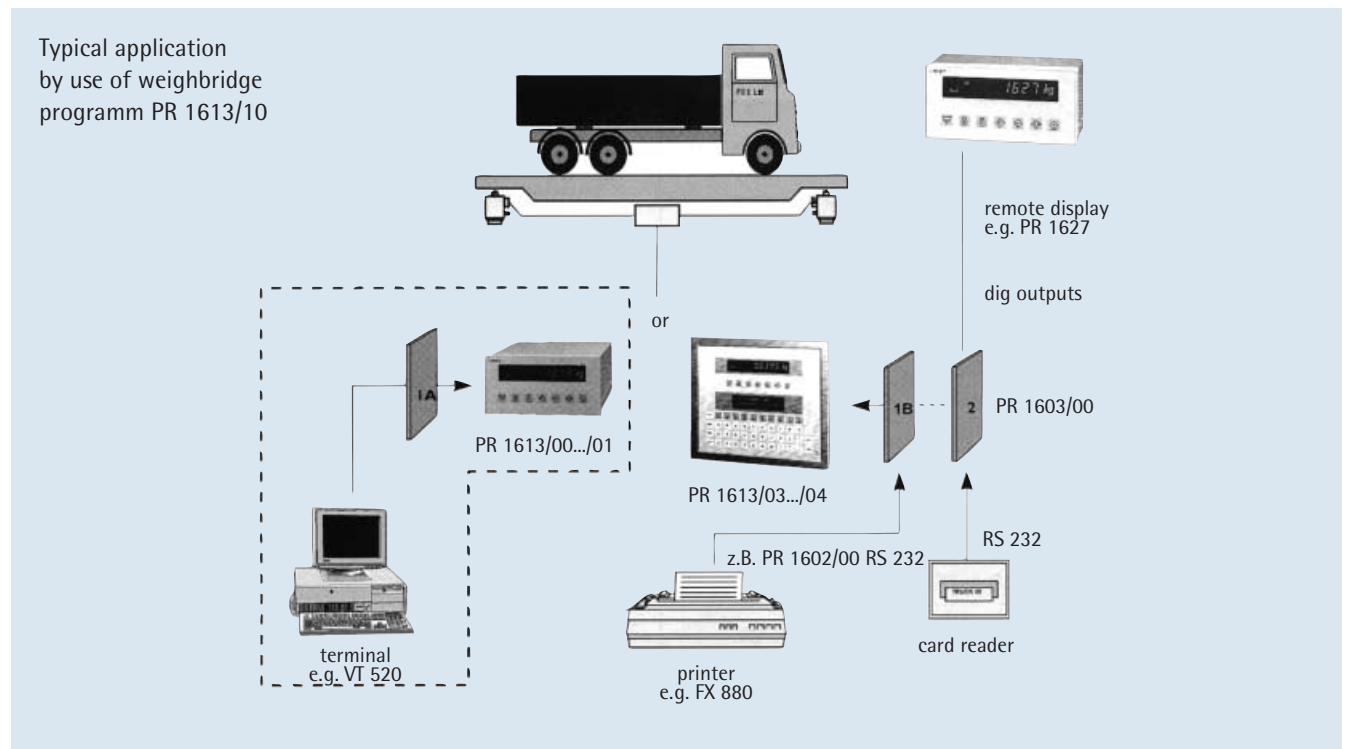
Temperature

W & M operation: -10 °C to +40 °C

industrial: -10 °C to +55 °C

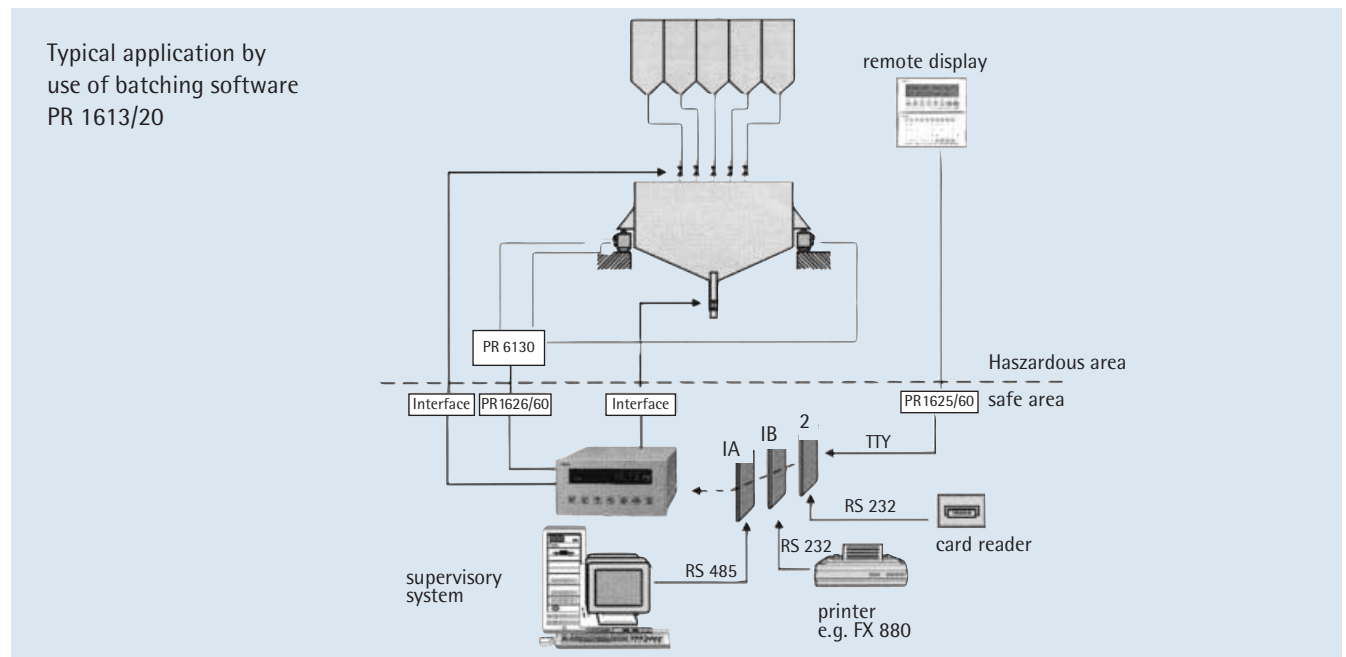
Storage: -40 °C to +70 °C

System Weighing Indicator Compact Weighing Terminal



STANDARD FUNCTIONS BY USE OF WEIGHBRIDGE SOFTWARE PR 1613/10

- record the charge/discharge weight with saving of the data
- editing of: customers tables
vehicles tables
material tables
- print of customers lists
material quantity per customer
- create or delete a list of all the vehicles on the site



STANDARD FUNCTIONS BY USE OF THE BATCHING SOFTWARE PR 1613/20

- editing of: material tables
recipe tables
- batching process control with alarm signals
- print of batching-reports
production reports
material consumption reports

Standard I/O connection (including PR 1613/10)

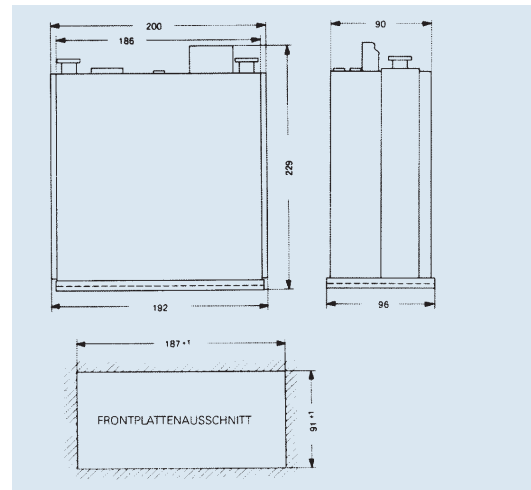
Output	Function	Output	Function	Input	Function
1	tare active	7	pass active	1	set zero
2	within $\pm 1/4$ d	8	minus sign when net display	2	set tare
3	standstill	9	within zero set range	3	reset tare
4	limit 1	10	display dimmed	4	start print
5	limit 2	11	analogue/load cell/memory error	5	switch display to gross
6	W&M not fulfilled	12	analogue test active	6	switch display to net

Type numbers

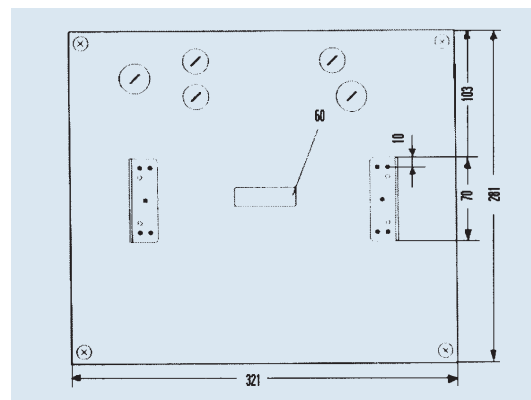
Type	Type Number
System weighing indicator	PR 1613/00
in 24 V _{AC/DC} version	PR 1613/01
Compact weighing terminal	PR 1613/03
in 24 V _{AC/DC} version	PR 1613/04
Hardware Options	
Current loop TTY	PR 1601/00
RS 232 (V24)	PR 1602/00
RS 232 +TTY	PR 1603/00
RS 422 /485	PR 1604/00
Parallel printer interface	PR 1605/00
Analogue output	PR 1606/00
Analogue / BCD output (open emitter)	PR 1606/80
Analogue / BCD output (open collector)	PR 1606/81
Analogue input (4x)	PR 1607/00
BCD-output (open emitter)	PR 1608/00
BCD-output (open collector)	PR 1608/10
Real time clock	PR 1609/00
Pulse counter	PR 1610/00
Memory extension	PR 1613/80
Alibi-memory (W&M)	PR 1613/81
PROFIBUS-DP	PR 1621/00
Connecting cable	PR 1623/10
Relay I/O module	PR 1623/20
Terminal I/O module	PR 1623/30
Software Options	
Weighbridge-package	PR 1613/10
On board weighing-package	PR 1613/30
Communications-package	PR 1613/05

Instrument dimensions

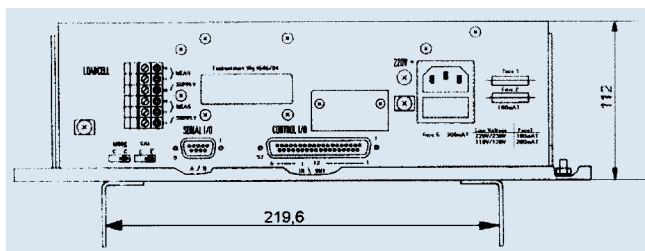
PR 1613/00 and /01



Rear panel PR 1613/03 and /04

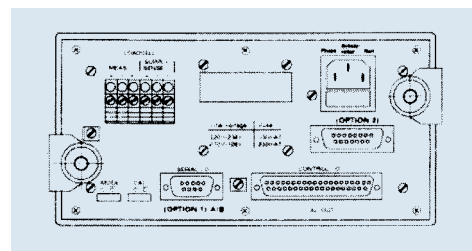


Cable connections PR 1613/03



Weight net 9.9 kg / shipping 11.2 kg

Rear panel PR 1613/00



Weight net 3.6 kg / shipping 4.5 kg

all dimensions in mm

