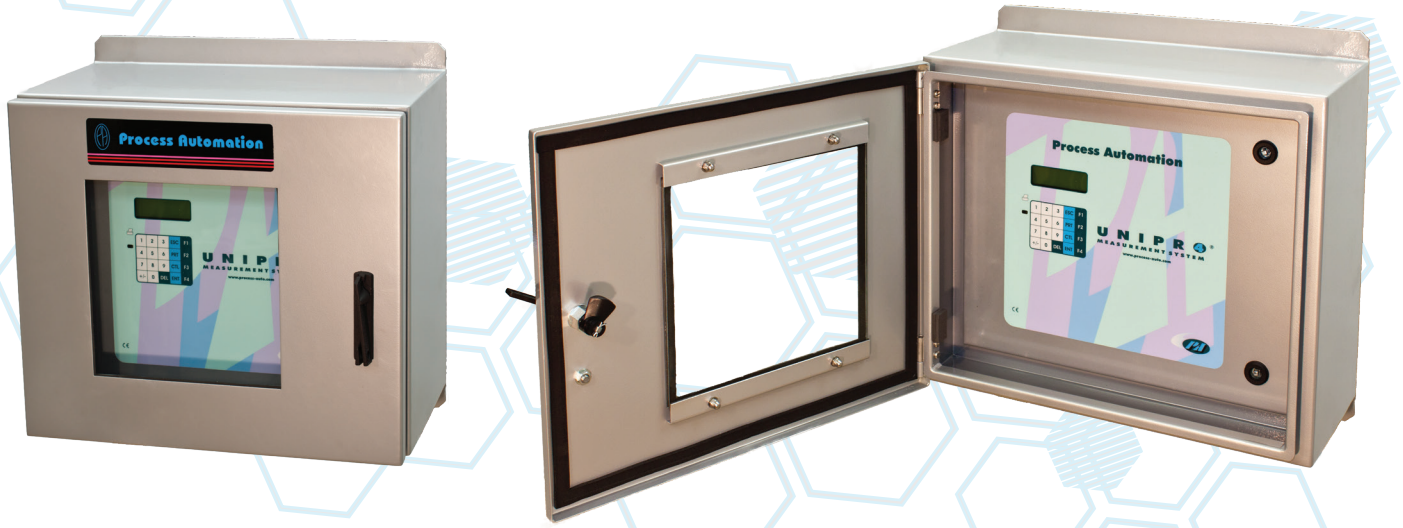
PROCESS AUTOMATION
Industrial Process Measuring & Control Equipment

Weighing Transmitters
Unipro IV



UNIPRO IV Weighing Transmitter

The fourth generation UNIPRO® transmitter was designed for flexibility. This Transmitter may be used on almost every measurement system manufactured by Process Automation (Pty) Ltd. This makes it suitable for use on applications such as: Conveyor weighing, Belt Weigh Feeding, Bin Weighing, Loss-In-Weight, Density Gauging, Level Gauging and more.
A simple change of operating software is all that is required.

In addition to the basic input and outputs required for a particular measurement, UNIPRO IV may be equipped with up to 32 additional I/O modules which include:

- 4-20 mA Input;
- 4-20 mA Output;
- Digital Input;
- Digital Output.

The MMI comprises 20 key keypad and either a 4 row x 20 column alpha-numeric Liquid Crystal display or a 8 line x 30 character graphic LCD.

UNIPRO IV is approved for use on Custody Transfer applications.

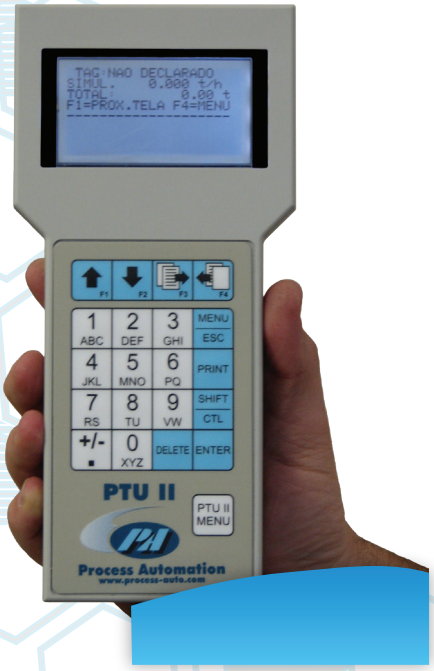
SABS APPROVED FOR CUSTODY TRANSFER DUTY

CERTIFIED IQNet MANAGEMENT SYSTEM
Quality Management LRQA ISO 9001:2015

Reg. No. 324369 QM15

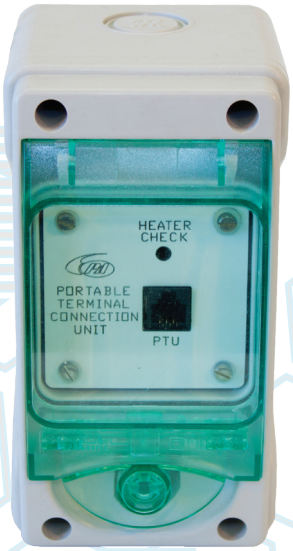
Accessories

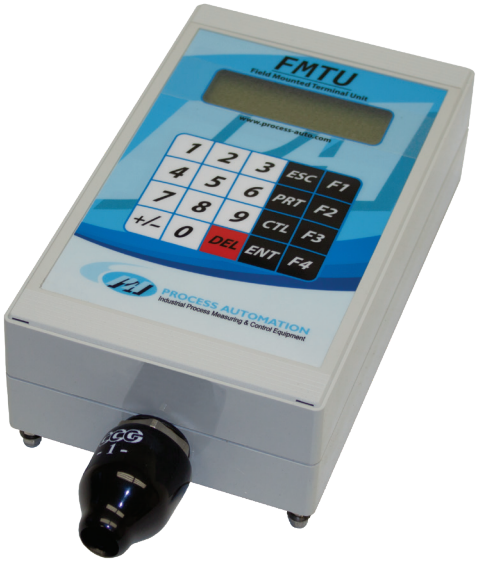
The UNIPRO^{IV} transmitter has been designed to support the following accessories;



The Portable Terminal Unit (PTU^{II}) provides a duality of function. It provides all the functions of the regular Hand Held Terminal, plus it incorporates additionally, the ability to record in non-volatile memory, Reports & Calibration Data. This information stored in PTU^{II} may be downloaded to a PC, simply and easily, using the USB connection.

Portable Terminal Connection Units (PTCU). The PTCU provide a means to connect a PTU to the UNIPRO^{IV} transmitter at any convenient location.





Field Mounted Terminal Units (FMTU). The FMTU allows the display of information at any fixed location, remote from the sensing (measurement) system. It is also possible to enter Set point, Batching Set-point etc. from the FMTU.

Field Bus connectivity.
UNIPRO^{IV} supports the majority of Field Buses used in Industry.
These include:

- Modbus Plus
- Profibus® PA
- DeviceNet®
- Ethernet
- Profibus® DP
- Modbus® RTU
- ControlNet®
- ProfiNet-IO®

Specifications

Power Supply	Instrumentation Quality, 90 to 230 VAC, 50/60 Hz at 50 VA.

Electromechanical Scales

Detector Type	High Sensitivity Scintillation Type
Detector Sensitivity	From 200 to 13 000 counts per second for 1 mR/h of ^{137}Cs.
Transmitter	Integrated into detector electronics
Outputs	4 - 20 mA - Density or Control; RS-485 to UNIPRO® transmitter.
Field Bus support	Profibus PA, Profibus DP, Devicenet
Power Supply	Requires transient free, Instrumentation Quality power, either: 220 VAC, 50/60 Hz at 10 VA or; 110 VAC, 50/60 Hz at 10 VA or; 24V DC at 10 VA (optional).
Detector Enclosure	Epoxy painted, welded mild steel enclosure to IP 66 protection. - Stainless steel optional.
Operating Temp	Std: -10º to +45º Celsius. Others on request.
Mass	Subject to Isotope activity and source holder model

Load cell weighing

Power Supply	Can excite up to six 350 Ω load cells.
Variable Inputs	1 x 0 - 20 mVDC - input from load cell(s). 1 x 0 - 10 kHz input from PT-500/PT-500LS tachometer
Analogue Output	1 x (Isolated) 0/4 - 20 mA (1kΩ max.) - programmable for either Rate or Control.
Digital Input	1 x (Optically isolated) nominal 24 VDC (10 – 40 VDC) @ 10 mA - for speed sensor replacement or motor running feedback.
Digital Output	1 x Programmable output for either Remote Totalisation (with programmable pulse width) or for Sampler Control.
Display	GTU - 1/4 VGA graphics type with 240 x 64 pixels

Quad load cell weighing

Power Supply	Power to each load cell channel is individually fused (120mA). Each load cell channel can excite up to four 350 Ω load cells.
Variable Inputs	4 channels each with a selectable input range (0-10mV, 0-20mV, 0-40mV, 0-80mV) input from load cell(s). Up to two Quad load cell boards may be employed in a single UNIPRO^{IV}.
Display	GTU - 1/4 VGA graphics type with 240 x 64 pixels
Analogue Output	Via Expansion I/O

Gamma Gauge

Variable Inputs	1 x RS-485 @ 9600 bit/s (multi-drop loop) for networking single through multiple gamma detectors. 1 x 0 - 10 kHz input from PT-500/PT-501 tachometer.
Analogue Output	1 x (Isolated) 0/4 - 20 mA (1kΩ max.) - programmable for either Density Rate or Control.
Digital Input	1 x (Optically isolated) nominal 24 VDC (10-40 VDC) @ 10 mA - for speed sensor replacement or motor running feedback.
Digital Output	1 x Programmable output for either Remote Totalisation (with programmable pulse width) or for Sampler Control.
Display	GTU - 1/4 VGA graphics type with 240 x 64 pixels

General

Totaliser Output where applicable	Up to 90 000 pulses per hour max. The output may be in the form of either: Volt free relay contact rated at 0.5 Ampere at max. 24 VDC) (for count rates < 1000 per hour). Solid State relay rated at 0,25A with either 24 VAC or 24 VDC) (for higher count rate applications).
Display	4 row x 20 column LCD – with LED back lighting or 8 line x 30 character graphic LCD
Expanded I/O	Up to 32 I/O - analogue or digital.
Enclosure	Single door (Standard) - Epoxy painted "Siemens Grey" (RAL-7032), welded mild steel. Stainless steel & others optional.
Protection rating	Single door - IP 54 to IP66. Double door – IP55 to IP 66.
Operating Temperature Range	0°C to 40° C (Standard) Low Temperature version (optional): -10°C to +40°C Ultra low temperature (optional): -30°C to +40°C (heated enclosure)
Storage Temperature Range	-20°C to +70° C
Mass	Approx. 11.0 kg (subject to I/O configuration).