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New PC based weighing terminal PUE 5
flexible solution for demanding customers

RADWAG presents a new weighing terminal in a stainless steel housing intended for industry. A large 12.1" colour TFT display assures a satisfactory view from different angles and a from a significant distance. A touch panel allows intuitive operation without using a keyboard. Using common operating systems enables creating software by customers or 3rd party companies or using already existing programs. Forward-looking technology based on IBM PC class computer gives flexibility and simplicity in implementing terminals in one-stand and net solutions.

A basic presumption to the PUE 5 project was to meet growing demands of customers concerning readability of graphic user interface, software flexibility, and capacity of non-volatile memory. A particular attention has been turned to obtain a satisfying functionality and quality of the device.

General description
The entirely closed housing of the PUE 5 terminal is designed as a compact unit completely in stainless steel with high ingress protection rating - IP65. This type of housing enables the device to operate in difficult industrial conditions (dust, moisture). It simplifies a cleaning process and guarantees durability against disinfection agents. It is equipped in 12.1" TFT colour matrix with 800x 600 resolution what gives good readability from different viewing angles. Applying a space-saving touch screen is a good solution (instead of traditional keyboard) for fast and user-friendly operation. The terminal can be operated directly via the screen using fingers, allowing intuitive operation, full advantage of contemporary operating systems and quick access to all necessary data.

It can be supplied from 88 264 V of 50 60Hz alternative current. It is equipped in the following interfaces: RS 232C, RS 485, Ethernet, USB 2.0 x 2, 4 inputs/4 outputs (digital, opto-insulated). Terminals can contain one or two weighing modules with A/D converters for external weighing platforms. A/D converters gives 5V of excitation voltage for tensometer bridges.

Additional modules
Apart from standard interfaces it is possible to equip terminals in additional modules: voltage output 0 10V, current loop 4-20mA, relay module, I/O expanding module, additional platform, Profibus module.

Special features
PUE 5 weighing terminal has been designed for operation in difficult environmental conditions. High ingress protection rating IP65 assures an appropriate protection against moisture and dust which allows them to be used in most industrial conditions.

The unique solution is applying commonly known multi-tasking operating systems. It allows customers and 3rd party companies to create their own software on the basis of the attached software libraries and manuals. It increases, together with a wide selection of interfaces, flexibility of this solution and can cause cost reduction in connection the PUE5 terminals to existing industrial systems. In net solutions terminals can serve either as a central servers or as an input terminals operated by untrained stuff.

This terminal has an option to connect two weighing platforms. Owing to that some customers are not forced to buy two scales.

Computer description

The main board of PUE5 terminals is equipped in 32-bit Celeron M 800MHz microprocessor, 512MB of DDR memory and 40GB HDD. It allows installing fully autonomic one-stand applications with databases and net applications with databases placed on a server.

Basic applications

PUE5 will be always sold with a basic application that operates on weighing modules with some basic functions that every scale should have. Other programs are optional for those terminals. Every terminal has attached a set of libraries to simplify using all peripherals for writing software by 3rd party companies or customers.

The following systems will be introduced:
- Labelling system,
- Counting-labelling system,
- Filling/dosing,
- Interactive terminal.

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Peripherals

The following devices can be connected to terminals: barcode scanners, transponder card readers, slip or label printers, additional displays, remote displays, external buttons TARE, PRINT and all devices connected to USB in standard computers of IBM PC class after installing drivers
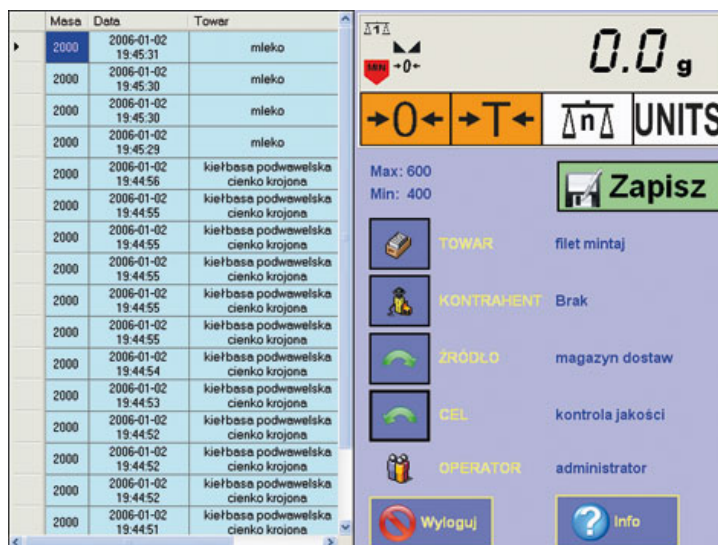
Selected parameters

Housing	Stainless steel
Ingress protection rating	IP65
Display	TFT 12.1" (800x600) with a touch panel
Power supply	88-264 VAC 50-60Hz
Supply of external devices	2 x 5V 500mA
Operation temperature	0 C to +40 C (storing -20 C to +60 C)
Maximal number of A/D converter divisions	8 388 608
OIML class	III
Predicted number of verification divisions	6 000
Maximal signal change	19mV
Maximal voltage for 1 verification divisions	3,3 µV
Minimal voltage for 1 verification divisions	1µV
Minimal load cell impedance	90 Ω
Maximal load cell impedance	1200 Ω
Excitation voltage of tensometer bridge	5V
Connection of load cells	4 or 6 wires + shield
Processor	Celeron M 800MHz
Chipset	INTEL 855GME
RAM	DDR 512MB
Non-volatile memory	HDD 40GB or Flash Disk
Graphic card memory	max. 64MB
Ethernet	10/100Mbp/s
Serial interfaces	RS232C, RS485, 2 x USB 2.0 (max. load 500mA)
I/O	4 inputs, 4 outputs – opto-insulated