

# Weighing System

## MWS3XX / BWS3XX



### Features

- MWS300 Weighing Indicator and BWS300 Weighing transmitter**
- MWS350 Weighing Processor and BWS350 Weighing Processor (1 component)**
- MWS370 Weighing Processor and BWS370 Weighing Proc. (formula & multi comp.)**

- Applicable as modular weighing electronics, weighing indicator and dosage processor for PLC aided component weighing or self-contained weighing processor. After passing the dosage parameters, all dosage operations are handled by the weighing processor. The PLC gets disengaged but it anyway has the dosage process under control. All gross-, net-, control- and status information are permanently available over Profibus-DP and indicated on the local display.
- AD-Conversion with highest resolution, up to 20,000 d on the scale.
- Ethernet and Profibus-DP interface are included within the standard delivery, so the MWS/BWS3XX can be connected directly to S7, Allen Bradley, etc. or to a DCS (Modbus/TCP).
- Local display with indication of actual status.
- Multi-language menu-driven handling.
- The optional analog output can be used as dosage ramp for time optimized dosage control respectively to control a frequency converter.
- 3 modules with 8 digital IOs per module and 2 analog inputs (4-20 mA) can be optionally equipped for self-contained dosage functions.
- The following dosage functions are supported: Set value/actual value comparison, tare, coarse / fine power or control over dosage ramp via frequency converter, tolerance control and dosage time surveillance.
- Loss-in-weight via time and batch-in mode are supported.
- The calibration can be made optionally via local keypad, Profibus-DP or Ethernet interface over network.

### Technical description

#### Measure signal input (standard)

Analog input for up to 4 strain gauge cells à 350Ω, supply voltage 8 V.  
Resolution: 20,000d linear (20 bit ADC).  
Internal resolution of the signal 200,000 digits.  
Zero point stability < 0.005 % / C°.

#### Serial interface

RS232 standard, RS 485 optional.

#### Interface to PLC

Profibus-DP interface to connect to PLC modules with a maximum data rate of 12 Mbit/s. For the PLC, the weighing processor is a set of IOs. Ethernet, Modbus/TCP.

#### Analog output (option)

Analog output 0-10V or 4-20mA, usable as actual value signal respectively, as controlled dosage ramp or PLC controlled analog signal.

#### Analog input (option)

Up to 2 analog inputs 4-20mA, usable for humidity correction, temperature measuring or transparent AI-input to the PLC.

#### 8 DI / 8 DO module (option)

Up to 3 modules per device applicable e.g. for dosage signals start / stop / tare, etc. as well as formula selection. The outputs control the dosage, e.g. coarse / fine / component selection, component ready.

#### SD card (option)

Pluggable memory for parameters and as formula storage, accessible on rear panel.

#### Power supply: 24 V<sub>DC</sub>

#### Housing

Installation housing 175 x 115 x 240mm (W x H x D).

#### Display

MWS3XX: Double spaced LCD with backlight.  
BWS3XX: No display

#### Keypad

MWS3XX: Keypad with 20 keys.  
BWS3XX: No Keypad

#### Damping

Via hardware (low-pass filter) and software.

#### EMC / EC-norms

EN 50081 – 2/07.93 / EN 50082 – 1/01.92

# Weighing System MWS3XX / BWS3XX

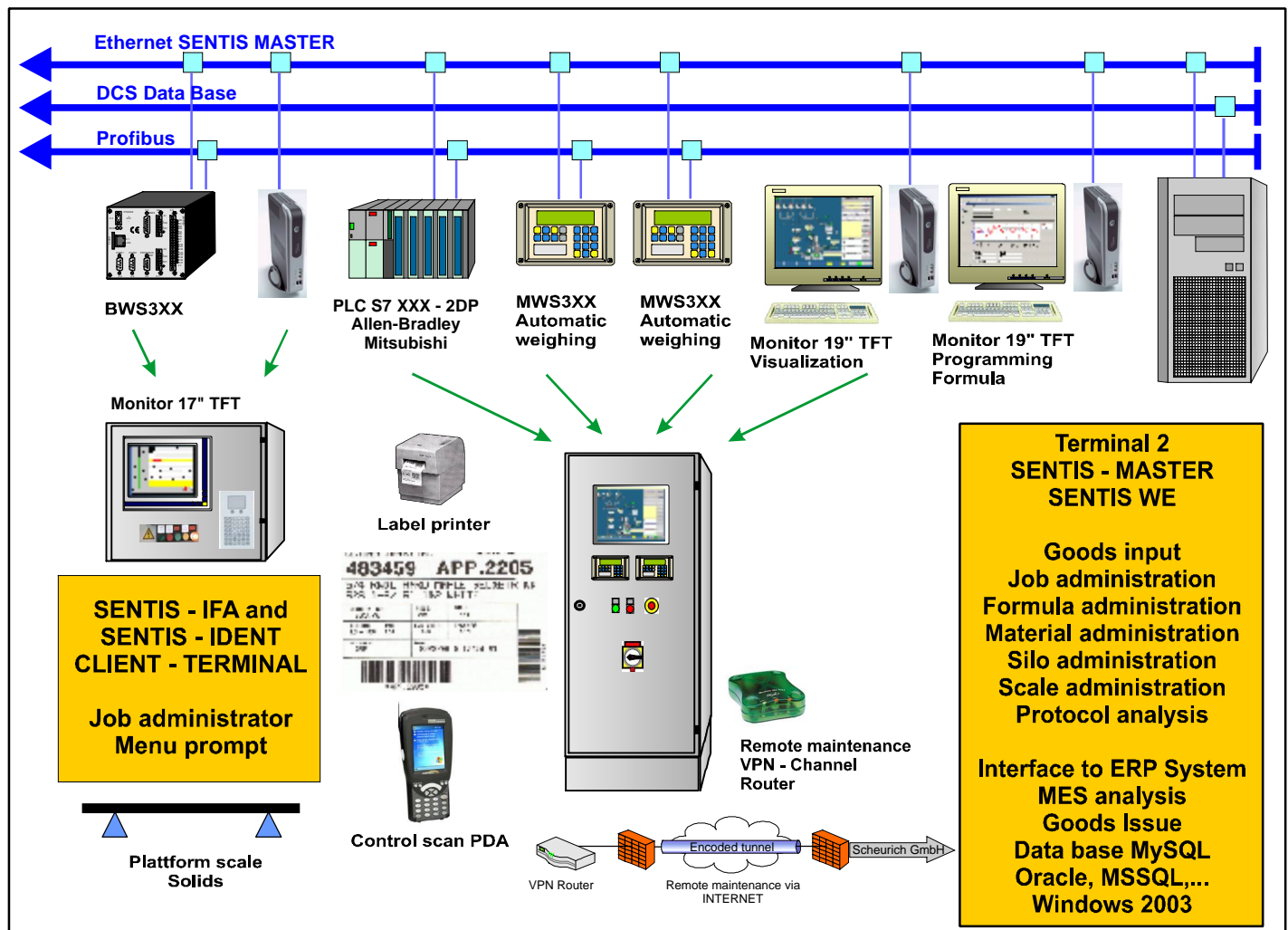


## Versatile

- Freely programmable digital and analog signals can be processed via Ethernet interface. Machine control can be programmed in the DCS. Time-critical applications can be implemented directly in the weighing processor. (Program on SD card) Calibration, analog or digital addressing of single actuators and sensors can be practiced over the DCS or a workstation in the network. Application: Carousel, weighing stations with flaps, etc.
- Knockers, discharge aid, analog sensors and actuators, packing machines, etc. Up to 24 digital inputs, 24 digital outputs, 2 analog inputs and 2 analog outputs can be processed.

## Remote control over Ethernet

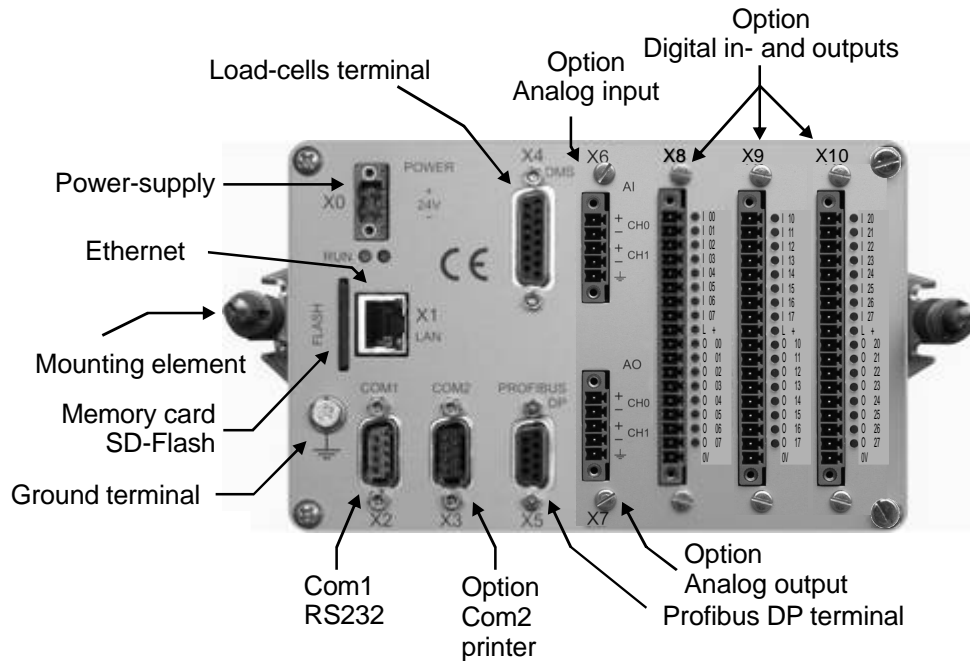
- Operating in PLC environment and control system Over 100 MWS3XX/BWS3XX weighing processors can operate on a system bus via Profibus-DP interface. The devices can be mounted in the strain gauge terminal box or in a central control cabinet without limiting the communication speed. Batch protocols and formulas are passed over the Ethernet interface.



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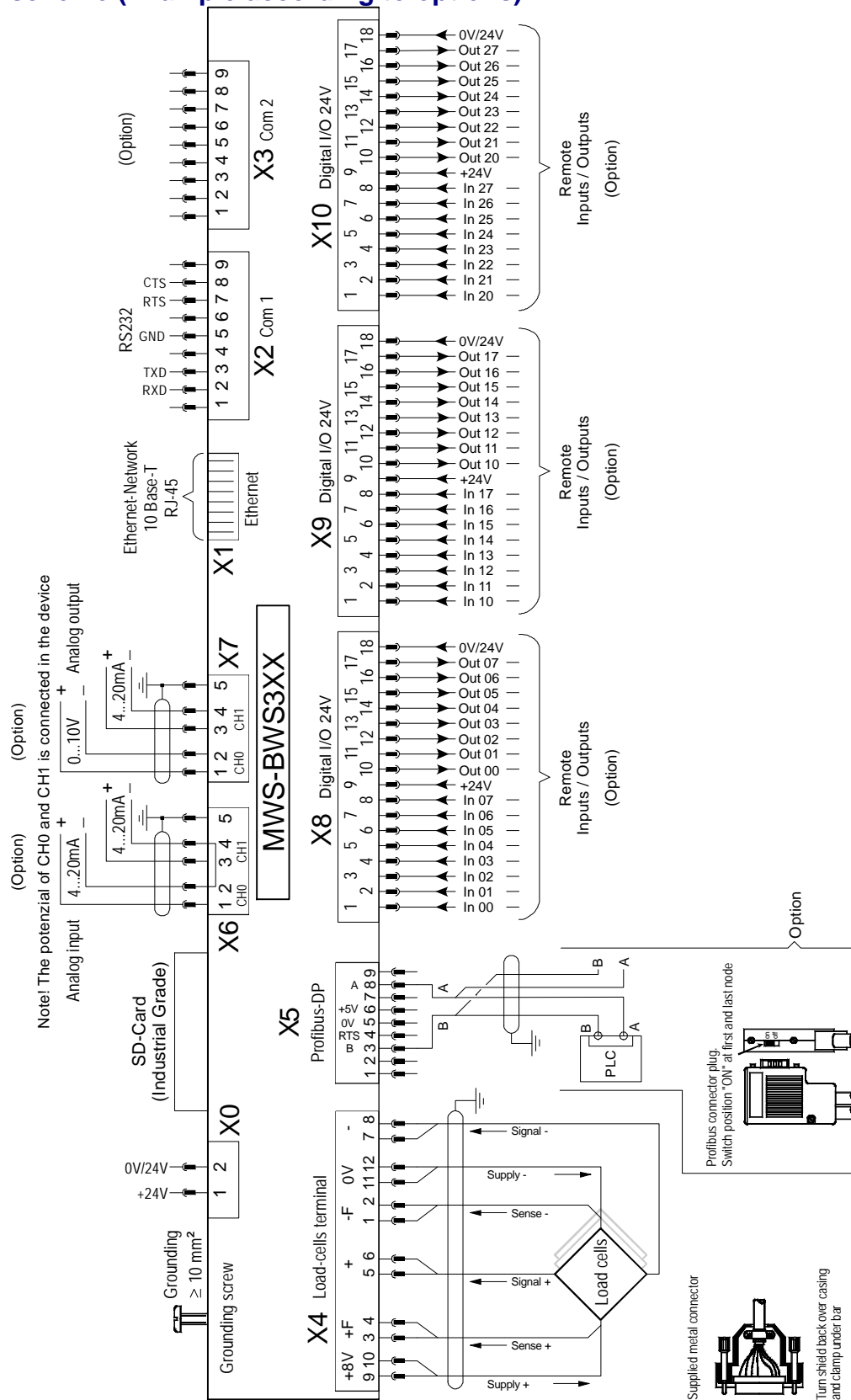
## Rear side view MWS3XX / BWS3XX



# Weighing System MWS3XX / BWS3XX



## Connection scheme (Example according to options)



# Weighing System MWS3XX / BWS3XX



## Dosage parameters in MWS350 / BWS350 (batch-in mode)

