

## SWA 2000-C Filling Controller

Approved automatic weighing controller for filling & packing machines



**SWA 2000-C** is a weighing controller **for filling and bagging processes** that has been proving its quality and reliability in use for many years and still meets the requirements of fast, modern filling machines today. It controls and monitors the entire dosing process, ensuring outstanding accuracy and repeatability even with difficult materials.

The versatile SWA 2000-C is suitable for a wide range of applications and can be customized to the specific task at hand and different filling goods with parameter settings. Clear, application-oriented dialogues and messages allow intuitive operation. Effective diagnostic tools facilitate commissioning, parameterization and troubleshooting. In addition, full access to all parameters and data is available via the serial interface or the optional Profibus.

### Features

- Evaluation electronics for strain gauge load cells
- High internal measurement resolution and stability
- Fast and precise control of the dosing process powered by long-proven algorithms
- High operational reliability due to comprehensive monitoring functions
- Diagnostic tools and support for commissioning, optimization and troubleshooting
- User-friendly weight and status display
- Plain-text operator guidance in 4 languages
- Rugged, industry-oriented design

### Filling and dosing control functions

- Two-stage dosing: coarse and fine
- Dosing in filling and dispensing mode
- Switch-off accuracy 2 ms or better
- 32 sets of parameters for filling weight and material parameters
- Automatic zero setting or taring
- Automatic dosing time optimization
- Auto. free-fall compensation in 3 selectable modes: mass-flow dependent, statistic, classic
- Auto. checkweighing with tolerance evaluation
- Automatic topping-up when below tolerance
- Batch mode, preselect by count or total weight
- Refill/complete function for prefilled units
- Monitoring of material flow rate, dosing time and faults with alarm
- 2 additional set points, freely usable
- Totals memory, counter and statistics

## Technical Data SWA 2000-C Filling Controller

### Operating modes

- Filling / dosing
- Dispensing / loss-in-weight mode
- Batch mode with preselection by bag/count
- Batch mode with preselection by total weight, also usable for loading/unloading (discontinuous totalizing)

### Measurement & control technology

- EC-approved and verifiable up to 6,000d
- Configurable weighing range, also as multi-range or multi-interval scale, 2 ranges
- 24-bit Delta-Sigma A/D converter (50 Hz)
- Input signal range: 1 to 31 mVDC
- Signal sensitivity: 1  $\mu$ V/e (approved)
- Load cell excitation: 10 VDC for strain gauge load cells, short-circuit proof, 6-wire configuration
- Connection of up to 10/350  $\Omega$  load cells
- Digital calibration and parameter set-up via interactive dialogue for weighing ranges of 1 kg to 990,000 kg and scale intervals of 100d to 99,000d
- Application of proven measurement and signal processing techniques with 16-bit processor
- Multi-stage, parameterizable digital filter for effective suppression of scale vibrations

### Data processing functions

- Test protocol to facilitate commissioning
- Print protocols for checkweighing, batch start and end; fill and batch protocols with statistics
- Printout of all parameters, total or selective
- Print protocols in the dialogue language selected (DE/EN/FR/IT)
- Totals memory of all weighings and for each sort
- Flash memory of all parameters and totals, thus data is retained in the event of power loss

### Power supply

- 24 VDC (typical power consumption: 7 W)

### Digital I/Os, interfaces & connectivity

- 16 inputs/16 outputs (24 VDC) for control signals, outputs 0.4 A, short-circuit proof
- Serial COM port (RS-422/485) usable for printer, data output, serial communication with full access to all parameters (bus-capable) or as PLC programming interface
- Integrated PLC function
- Optional: Profibus DP

### Display and operating terminal AT25

- Bright, self-luminous weight display (LED) with 14 mm digit height, 7 digits
- 4-line plain-text display (LCD), backlit, dialogues in 4 languages (German/English/French/Ital.)
- Alphanumeric, tactile membrane keypad
- Function keys, status indicators
- Optional: 19"/3U version for ATEX Zone 22

### Mounting

- Control unit can be mounted inside a control cabinet on DIN rail, screw terminal connection
- Display unit can be mounted separately in the cabinet's door or front panel

### Environmental conditions

- -10 ... +40 °C (approved use)
- -20 ... +50 °C (non-approved use)
- 0 ... 90 % rel. humidity (con-condensing)

### Housing

- Control unit: metal, powder-coated; IP20  
220 x 135 x 48 mm; approx. 0.6 kg
- Display unit: ABS; IP65 (front, when mounted)  
205 x 160 x 30 mm; approx. 0.7 kg

### Approvals

- 2014/31/EU (NAWI) to OIML R76:  
Class III/IIII 6,000e
- 2014/32/EU (MID) to OIML R61, OIML R51  
and OIML R107
- ISO 9001 QM System and  $\text{C}\text{E}$  conformity