

miniPond 3C Checkweighing Controller

approved for automatic weight check



The **miniPond 3C** weighing controller provides the necessary functions **for trade-approved weight determination in automatic checkweighers**. The high internal resolution, speed and signal filtering ensure fast and accurate measurements. With the weight registration, the assignment to one of the five tolerance zones is made.

The versatile miniPond 3C is suitable for a wide range of applications and can be customized to the specific task at hand with parameter settings. Clear, application-oriented dialogues and messages allow intuitive operation. The integrated web server and effective diagnostic tools facilitate commissioning, parameterization, remote access and remote maintenance via a network. In addition, full access to all parameters and data is available via the Modbus interface or the optional fieldbus.

Features

- Evaluation electronics for strain gauge load cells
- Fast, precise signal processing and weight measurement with standstill detection
- High internal measurement resolution and stability
- High operational reliability due to comprehensive monitoring functions
- Diagnostic tools and support for commissioning, optimization and troubleshooting
- User-friendly display of weight and status data with tolerance class
- Plain-text operator guidance in 5 languages
- Rugged, industry-oriented design

Functions

- Automatic weight registration with tolerance evaluation in 5 zones
- Memory for 100 articles/parameter sets
- Weighing start via position sensor/control signal or weight threshold
- Tare by means of weighing or parameter entry
- Control of the process via digital I/Os possible (e.g. tolerance signaling or product rejection)
- 1 additional set point, freely configurable
- Fault monitoring with alarm and logging
- Totalizer and counter
- Actual-weight logging
- Statistics function

Configuration and operation

- Local operator terminal
- Fieldbus
- Web server for parameter input and backup, data exchange, firmware download, remote terminal and weighing curve analysis

Technical Data miniPond 3C Checkweighing Controller

Measurement technology

- 24-bit A/D converter, conversion rate: 110 Hz
- Input signal range: up to 2 or up to 4 mV/V (selectable)
- Load cell excitation: 5 VDC for strain gauge load cells, max. 4 x 350Ω
- Displayed weight resolution: max. 200,000d (10,000d approved use)
- Configurable weighing range, also as multi-range or multi-interval scale, 2 ranges
- Signal sensitivity: 0.5 μV/e (approved)
- Multi-stage, parameterizable digital filter for suppression of vibrations on the scale and in its vicinity
- Adjustment with test weights or mathematically by entering the load cell parameters

Approved weighing modes

- Automatic catchweighing / Automatic checkweighing: Weight registration with stability criterion

Data collection / Statistics

- Actual-weight logging
- Totals memory
- Product statistics
- Weighing curve in real time
- Error logbook
- Data is retained in the event of power loss

Connectivity / Networking

- Ethernet TCP/IP
- Serial COM port (RS-422/485 or RS-232)
- Modbus (TCP and RTU)
- Web interface
- WebSocket (RFC6455)
- Optional fieldbus: Profibus DP or Profinet or EtherNet/IP, further protocols on request

Digital I/Os

- 8 inputs / 8 outputs, 0.4 A short-circuit proof
- 24 VDC, galvanically connected
- Configurable function or assignment

Display / Keypad

- Graphic LCD display, LED-backlit
- Weight display with 20 mm digit height
- 9 keys, 4 of which are context-related multiple-function soft keys
- Plain-text dialogue guidance in 5 languages (DE, EN, FR, IT, ES), plus 1 additional language freely definable via language file
- Clear display of weight and status data with the corresponding tolerance class
- Copy function for parameter sets simplifies data entry
- 3 operating levels with password protection

Mounting variants

- Main unit can be mounted inside a control cabinet on DIN rail (flat or upright) or on a mounting plate with separate display unit, or
- On the cabinet's door or front panel: directly behind the display unit (panel mount)
- Display unit can be mounted on the door/ front panel without a cut-out. Template provided for drilling only 7 holes.

Power supply

- 24 VDC 3.5 W (with display and 4 load cells)

Environmental conditions

- -10 ... +40 °C (approved use)
- -10 ... +60 °C (non-approved use)
- 0 ... 90 % rel. humidity (non-condensing)

Housing

- Control unit: metal; IP20
168 x 140 x 52 mm; 0.7 kg
- Display unit: ABS; IP65 (when mounted)
170 x 130 x 18 mm; 0.2 kg

Approvals

- 2014/31/EU (NAWI) to OIML R76: Class III/IIII 10,000 e
- 2014/32/EU (MID) to OIML R51
- 2014/34/EU (ATEX) Zone 22
- ISO 9001 QM System and C € Conformity