WA-804 Totalizing Scale Controller

for Automatic Receiving and Load-out Scales

- Dosing functions
  - Full and fine filling
  - Automatic discharging
  - Multi-part dosing
- Legal-for-trade, MID, Automatic gravimetric filling instrument

- Integrated Ethernet
- 3 serial interfaces, 4 digital inputs, 4 relay outputs
- Analog output 0(4) - 20mA
- Fieldbus Modules (option)
- LFT Memory (option)

APPLICATION

WA-804 Totalizing Scale Controller is designed to fast and accurate counting and totalizing of material amounts.

WA-804 controls independently both the dosing and the discharging equipment.

The controller can be programmed to function in continuous or in batch operating mode.

For materials with varying properties (e.g. density), two selectable material parameter records are available.
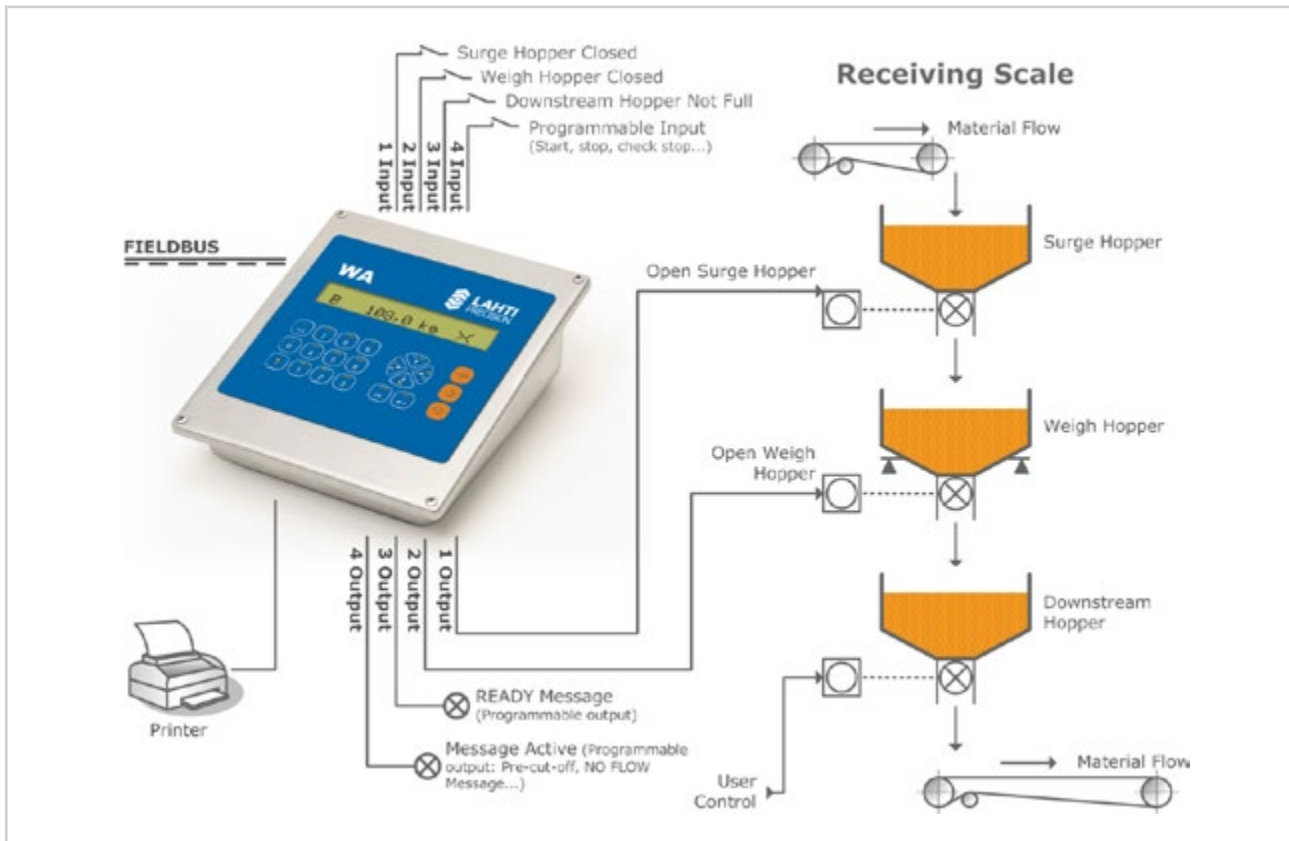
EQUIPMENT

WA-804 Totalizing Scale Controller has a standard stainless steel console shaped case in protection class IP65 that is suited for table-top and wall mounting (cable outlet downward with wall mounting). WA-804 has an easily readable back lighting LCD display for showing weight with clear text operator guidance. Data is keyed in via flexible membrane keyboard with 21 keys.

WA-804 can be conveniently configured and calibrated via the WA-plan PC program.

For materials with varying properties, 2 selectable parameter records (material data sets) are available.

Receiving Scale

Inputs:
- Surge Hopper Closed (1 Input)
- Weigh Hopper Closed (2 Input)
- Downstream Hopper Not Full (3 Input)
- Programmable Input (Start, stop, check stop...) (4 Input)

FIELDBUS

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Outputs:
- Open Surge Hopper (1 Output)
- Open Weigh Hopper (2 Output)
- READY Message (Programmable output) (3 Output)
- Message Active (Programmable output: Pre-cut-off, NO FLOW Message...) (4 Output)

Printer

Material Flow → Surge Hopper → Weigh Hopper → Downstream Hopper → Material Flow

User Control

COMMUNICATION

With as many as three serial interfaces, WA-804 is excellently equipped for exchanging data with its environment. For example, printer, large display and data processing can be connected at the same time. Two of the interfaces are designed as RS-232. The third (RS-485 2/4 wire) is especially suited to communication on the bus and at greater distances.

The Ethernet connector (10/100 MBit) is operated in the control systems via the MODBUS/TCP protocol. The controller can also be configured via the Ethernet connector. Beyond this, the standard fieldbus system
- Profibus DP-V0 and
- DeviceNet

can be connected via matching optional coupling modules.

PARALLEL SIGNAL INTERCHANGE

For control jobs, WA-804 has the following parallel inputs and outputs:
- 4 optocoupler inputs 24 Volt
- 4 relay outputs

Beyond this, WA-804 has a 12-bit analog output that can transfer e.g. weight or material flow to a PLC or display. Also it is possible to use an analog output for e.g. frequency converter control.

OPERATION AND SETTINGS

All operator guidance is carried out and data is entered in clear text.

Standard operation languages are:
- Finnish
- English.

You can easily load other operating languages into the instrument via the PC-assisted WA-plan configuration program (WINDOWS program).

WA-plan also allows:
- setting of all instrument parameters
- calibrating the instrument
- conveniently configuring the print pattern
- read-out and display of weight signals
- reading out the complete instrument
- configuration (backup)

- restoring stored data into a WA weight indicator. This means a substitute can be prepared at short notice.

All parameter and calibration data are stored power failure safe in the instrument. The real-time clock runs at least 7 days without a power supply.

FUNCTIONS

WA-804 Totalizing Scale Controller is designed to fast and accurate counting and totalizing of large material amounts.

The controller can be programmed to function in continuous or in batch operating mode. In the continuous mode no target amount has been set for the receiving scale. In the batch operating mode, on the contrary, the controller accurately doses an amount according to a preset target value.
When dosing is started the controller fills the scale according to set target or maximum filling value of the material. After that, taring is performed and the scale is discharged.

When the scale is empty and stabilized, the net weight is added to the totalizing counter and saved in to legal-for-trade memory.

The sequence is repeated until the set target amount is reached (batch operating mode), or (in the continuous operating mode) until the material to be received has run out, when the remaining material on the scale is discharged and added to the totalizing counter through a separate command. Then the controller is reset.

During the dosing process the operation status and eventual alarms are shown in the display.

The totalizing counter contains the cumulative sum weight and the number of weighings. The sum can be displayed and printed.

The totalizing counter is zeroed automatically when a new dosing sequence is started.

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LEGAL FOR TRADE MEMORY

The additional built-in legal-for-trade memory releases the user from the necessity of creating and archiving legal for trade vouchers on paper.

COMPUTING POWER

In spite of its low price, WA-804 Totalizing Scale Controller has enormous processing performance. The 32-bit ARM controller also has sufficient power reserves for fast weighing processes, simultaneous operation of various interfaces and also for future applications.

DONGLE STRATEGY

All of the scale's relevant setting and calibration data are stored in the dongle. Since all of our instruments are calibrated at the factory for identical sensitivity, you can interchange the electronic equipment at any time if there is a defect. After attaching the dongle, the scale is correctly configured and calibrated again. This means that even legal for trade scales do not have to be recalibrated or reverified.