Avery Weigh-Tronix

ZM510/ZM615
BULK WEIGHING

Weight-based Bulk Weighing System to Maximise your Throughput and Profits

BULK WEIGHING APPLICATION

The Avery Weigh-Tronix Bulk Weighing Application has been designed to meet the growing demands for accurate loading or unloading of bulk materials.

Ideal for controlling any bulk weighing filling process that handles large quantity of grains, aggregates, powders, or raw bulk materials that get shipped out in large vessels such as train wagons, cargo ships and hopper trailers.

Using our dynamic ZM510 or ZM615 Process Control Device provides accurate, live feedback to the operator, pinpointing the filling process's status with unparalleled accuracy.

The application is designed to effortlessly calculate the exact number of tips needed to complete any large bulk order, whilst also adjusting each tip to deliver just the required amount of product without giving any unwanted material away.

Precision Bulk Weighing to a Target Weight:
Enables precise bulk weighing to a target weight, ensuring every shipment meets the exact specifications.

Throughput Mode:
This can be used instead of target mode, giving a total of product received or despatched over a period, providing a complete overview of your plant's performance, and managing your shifts.

Dynamic Process Control:
Provides live feedback to operators, pinpointing the filling process's status with unparalleled accuracy.

Capital Investment Saving
Fast, flexible, and simple to install within most existing bulk filling process systems with little to no custom hardware or software needed to run and support this bulk dynamic weighing process. Simple to monitor and control, the complete automated bulk weighing process can be managed from a single device.

Valuable PC Data Capture
When linked to a PC, this bulk weighing system can provide an array of valuable tip information showing what has been processed over that day, shift, or set time period. Data captured includes number of tips completed, tip weight, tip error, cumulative total weight, and throughput per hour.

Surge Hopper Control:
Keeps your weighing process continually running by controlling the amount of material in your surge hopper preventing loss of throughput and downtime cost.

Fast and Slow Filling Gate Control:
Allows the Fast Gate to switch off at a percentage of the tip target leaving only the Slow gate open until the target is achieved, giving a fast and accurate fill.

› Increased profits by improving accuracy and reducing giveaway.

› Individual batch numbers for your quality system.

› Increased throughput with more control over your processes.

› Fast and accurate process.

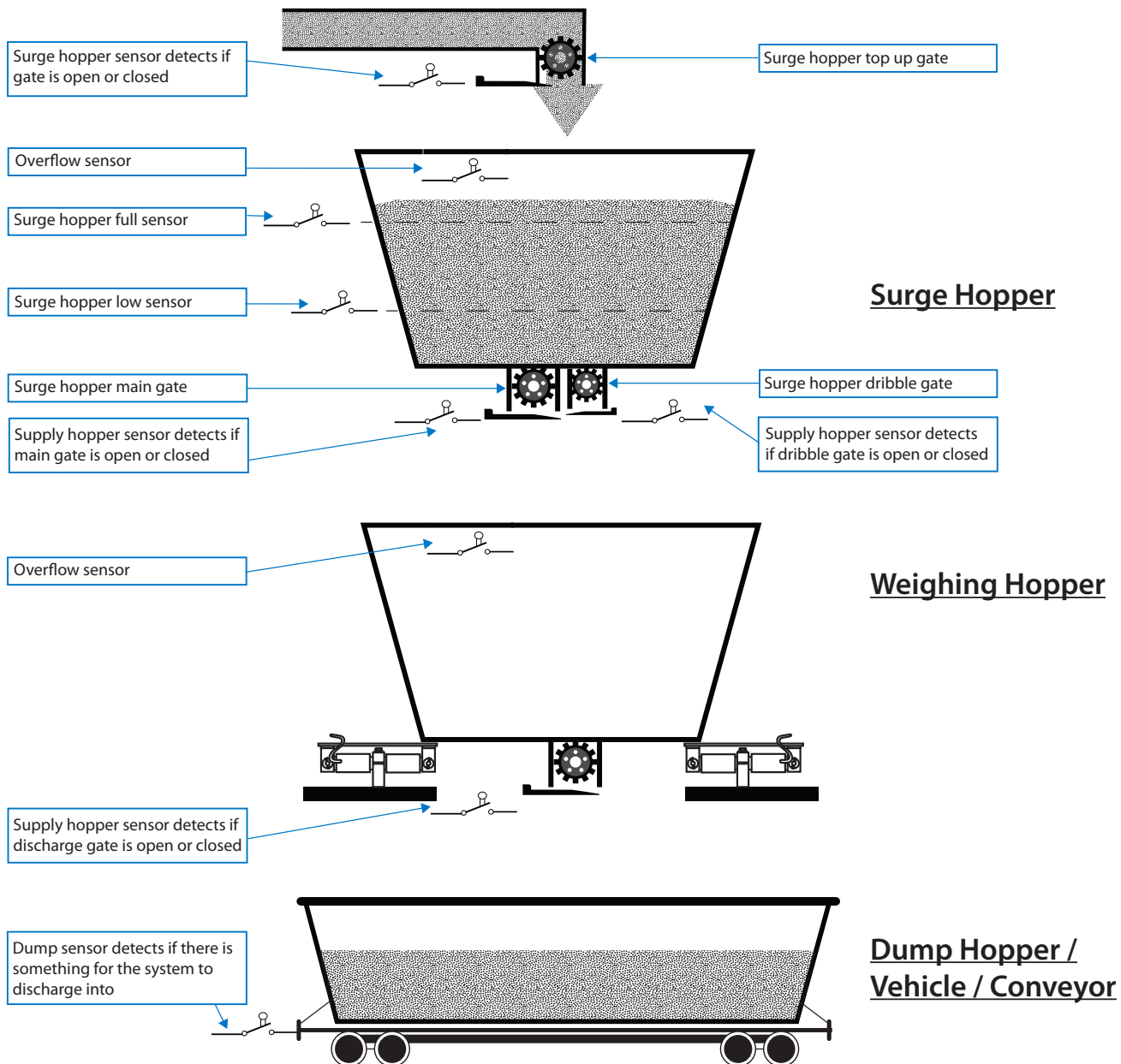› Full and easy system integration into your existing plant infrastructure.

› Data visibility

APPLICATION SCREENS

Screen Layouts.


```
IP1 FILLING              2.410 Gross
IO2
IP3
IO4
IP5     TIP                              -0.490
IP6     TARGET                           -4.502
IP7     TEST-TARGT-ST TIP=2.900      TARGET=10
IP8     35.99/h          EFT=8min     TIP# 2 OF 3
      PAUSE                    STATUS
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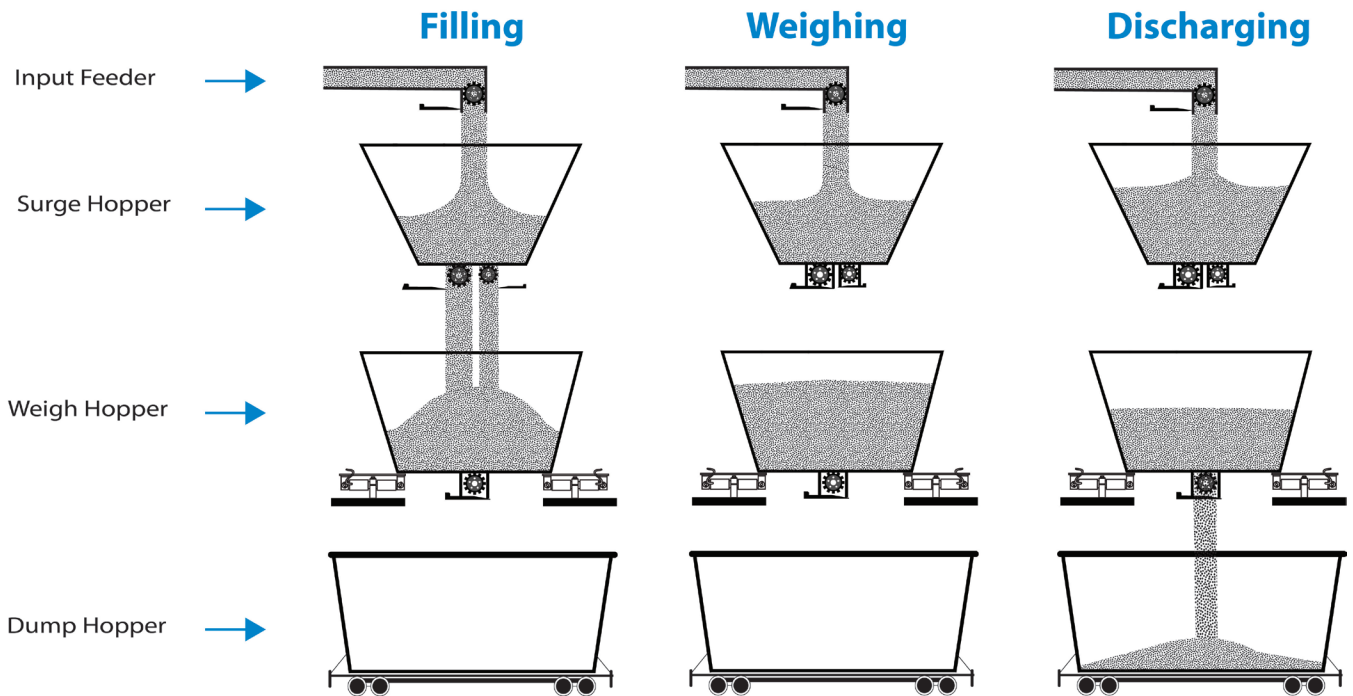
APPLICATION CONFIGURABLE OPTIONS

› System can be configured to use a surge hopper or a direct feed into the weighing hopper
› Gate and level sensors can be disabled or enabled
› Single or dual filling heads can be configured
› External start and stop button can be wired

Surge hopper sensor detects if gate is open or closed

Surge hopper top up gate

Overflow sensor

Surge hopper full sensor

Surge hopper low sensor

Surge Hopper

Surge hopper main gate

Supply hopper sensor detects if main gate is open or closed

Surge hopper dribble gate

Supply hopper sensor detects if dribble gate is open or closed

Overflow sensor

Weighing Hopper

Supply hopper sensor detects if discharge gate is open or closed

Dump sensor detects if there is something for the system to discharge into

Dump Hopper / Vehicle / Conveyor

SYSTEM PROCESS OVERVIEW

Filling **Weighing** **Discharging**

Input Feeder →
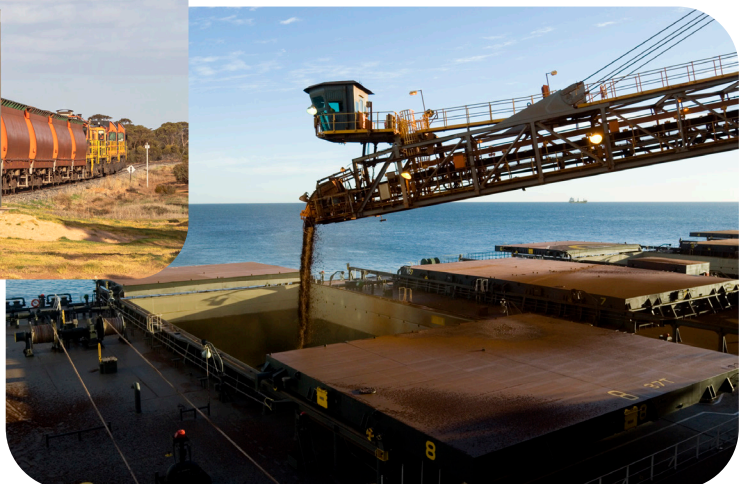
Surge Hopper →

Weigh Hopper →

Dump Hopper →

The dump hopper is the vessel that you are discharging into, for example, a train, truck, ship, or conveyor.

The input feeder, surge hopper and dump hopper are all options which can be turned on or off.

The system can be configured to meet most bulk weighing applications, whether they are a simple manual filling system or a fully automated system.
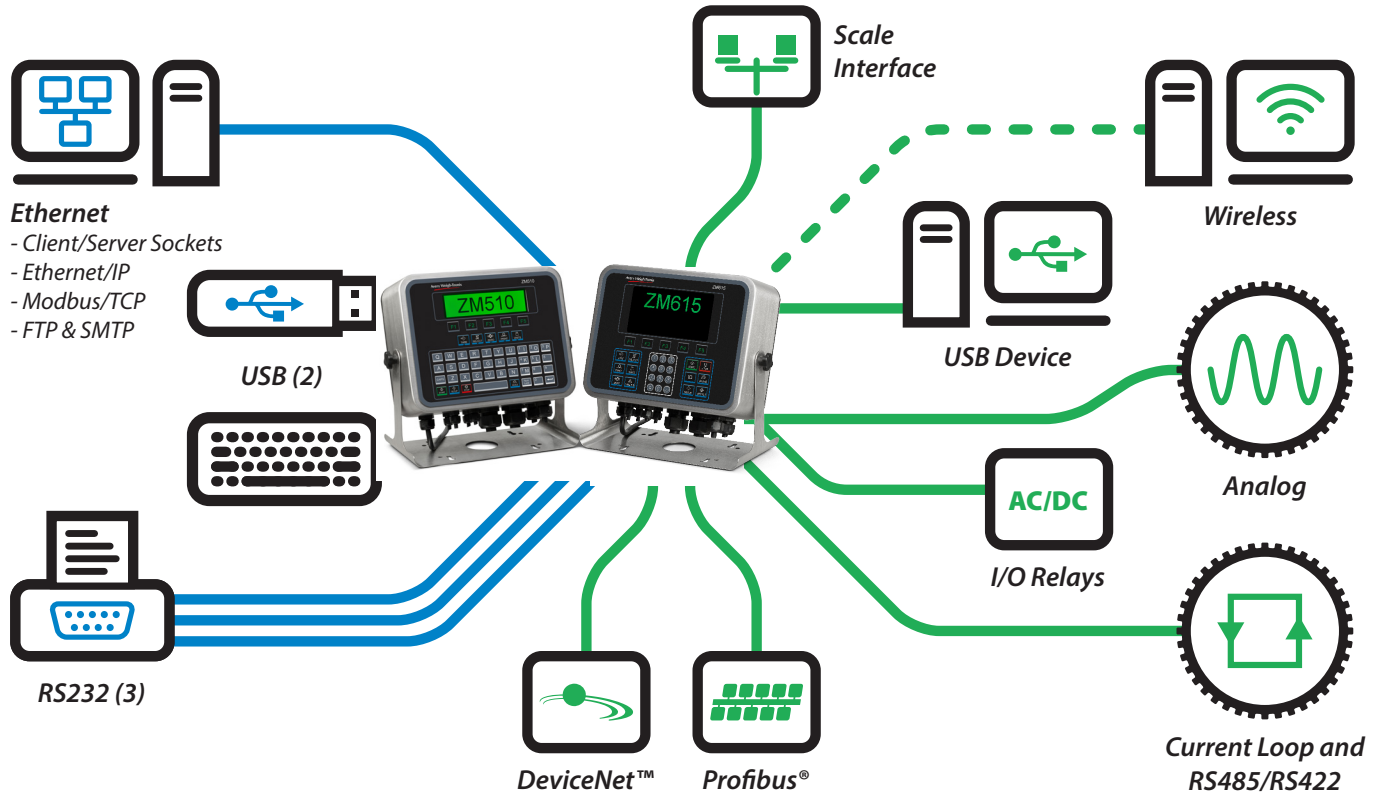
Grain weighing for bulk loading of trains

Vessel bulk loading

INDICATORS

The high performance, ZM510/615 multi-function indicators provide the flexibility to be adapted to your individual application requirements.

Suitable for the office, dusty, wet or high pressure and heavy washdown environments, the ZM510/615 can display, analyse, store and transmit data across a range of technology methods to meet your specific installation.

STANDARD CONNECTIVITY   OPTIONAL CONNECTIVITY

Scale Interface

Ethernet
- *Client/Server Sockets*
- *Ethernet/IP*
- *Modbus/TCP*
- *FTP & SMTP*

Wireless

USB (2)

USB Device

RS232 (3)

Analog

AC/DC

I/O Relays

DeviceNet™   **Profibus®**

Current Loop and RS485/RS422

Easy-to-use interface and displays, the use of high definition, Improved Super Twisted Nematic (ISTN) or Improved Black Nematic (IBN) graphic display technology gives the weight displays excellent visibility and colour contrast. With wide viewing angles, the ultra-bright green and black dot graphic display is easily visible in extreme working conditions and can be inverted for optimum viewing in brightly lit environments. Pixels can be organized on the displays to create personalized messages and images. All models feature chemical resistant, metal domed keys which give the user crisp, positive tactile feedback when compressed. Assign commonly used weighing tasks to five programmable function keys below the display.

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www.averyweigh-tronix.com

Avery Weigh-Tronix is an ITW company