



**ZM223**

**Avery Weigh-Tronix**

# Specifications

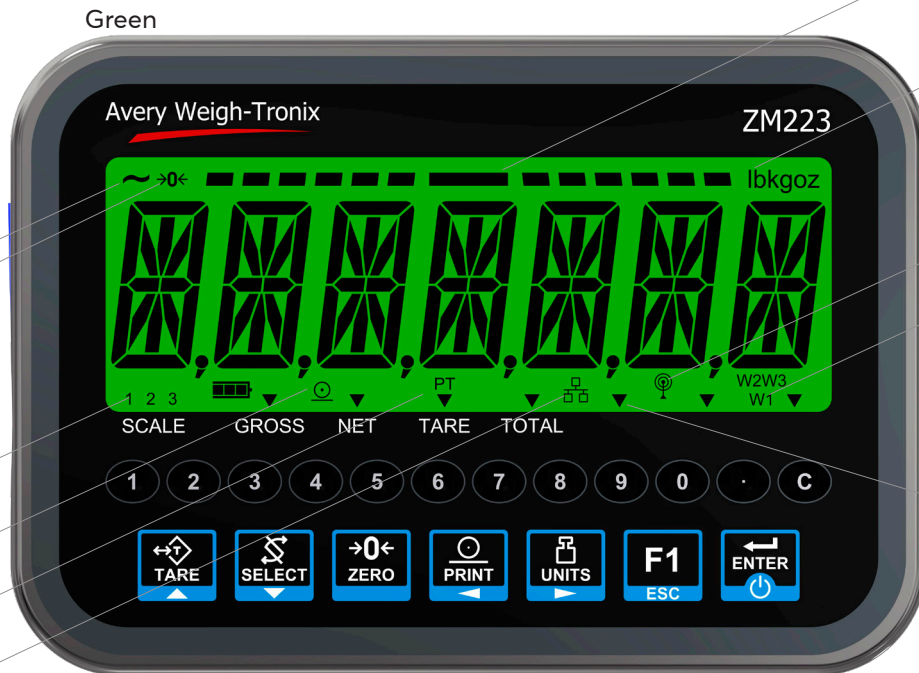
This high-performance, multi-functional indicator gives you the required flexibility to suit most industrial applications. It is suitable for office areas, industrial facilities, food production, and indoor/outdoor environments, as well as dusty, wet, or heavy washdown environments. The ZM223 provides an easy way to analyse, store, display and transmit data across a wide range of technology methods and comes standard with a wide range of configurable/programmable software applications to meet your needs.

## General

<b>Operating Applications</b>	Configurable and programmable apps stored on a micro-SD card: General Weighing, Accumulation, Counting, Check-Count, Checkweighing, % Weight Gain, Grading, Filling, Batching, Animal Weighing, Peak Hold, Remote Display, Weighbridge In-Out (See App functionality for more info)
<b>Remote Assist™ Mobile App</b>	Compatible with Avery Weigh-Tronix Remote Assist™ Mobile App. Provides an easy method to quickly enter valuable alphanumeric data into the indicator which can be used for printing or for viewing weight data from a distance through to fast line setup and other data retrieval.
<b>Unit of Measure</b>	Up to three configurable: lb, lb/oz, oz, kg, g, one custom
<b>Capacity Selections</b>	9,999,999 with decimal located zero to five places. Display supports up to six decimal places, if software supports that many.
<b>Incremental Selections</b>	Multiples and sub-multiples of 1, 2, 5
<b>Programmable Selections</b>	Zero range, motion detection, automatic zero tracking, five-point linearisation
<b>Time and Date</b>	Battery backed up time/date/year (12-hour AM/PM or 24-hour format)
<b>Calibration</b>	Two to ten points stored
<b>Analogue to Digital Measurement Rate</b>	Rate 80Hz
<b>Internal Resolution Analogue</b>	53,687,100 counts per mV/V per second
<b>Internal Resolution Digital</b>	One billion internal counts per second when linked to the BSQ Digital Base
<b>Digital Filtering Harmonizer</b>	Harmonizer filtering with configurable constant, average and threshold
<b>Self-Diagnostics</b>	Display, keys, inputs, outputs, serial port, Scale A to D, USB port and option cards
<b>Dynamic Weighing</b>	Minimum nominal weigh time 100 milliseconds, recommended minimum 300 milliseconds

# User Interface

<b>Keypad</b>	19 robust, flat, easy-to-clean keys and chemical resistant keypad with audio beep feedback
<b>Operational Keys</b>	Tare, Select, Zero, Print, Units, F1, Enter, 0-9, Decimal, Clear
<b>RPN Function</b>	Provides a secondary function for each key via configuration. Configurable Keys: Select, Print, Units, F1, and Enter
<b>Status Annunciators</b>	Center of Zero, Motion, Gross, Net, Tare, Preset Tare, Print, Battery Status, Scale Numbers 1, 2, Over/Under/Accept Bar Graph, Bluetooth®, Ethernet Connection, Weight Bands 1,2,3, lb, kg, g, three Custom Annunciators
<b>Display</b>	Sunlight readable transfective HTN display, seven fourteen-segment, 1.5" (38 mm) high alphanumeric characters, illuminated with colour changing backlight (Green, Red, Orange & Yellow)
<b>Display Rate Selectable</b>	(1, 2, 5, 10) times per second



Motion Annunciator  
Center of Zero

Under Over Accept Bar Graph  
Units

Bluetooth  
1-3 Weight Bands

2 App Driven  
Annunciators

Scale Number  
Print  
Preset Tare  
Ethernet Connection

# Electrical

<b>Power Requirements</b>	Line voltage: 90-264 VAC (110-240 VAC nominal), frequency 50 or 60Hz, 12 to 24VDC Power consumption: estimated at 200mA at 12VDC for one 350-ohm weight sensor and 250mA at 12VDC for eight 350-ohm weight sensors	<b>Excitation</b>	5VDC, short circuit protected. Supports up to eight 350-ohm weight sensors Four or six conductors with sense leads Detachable plug connectors
<b>Max Current</b>	0.5A or 1A using an external 12VDC power	<b>Analogue Signal Input Range</b>	-1 mV/V to 5 mV/V
<b>Weight Ranges</b>	Single range: up to 10,000d Legal-for-Trade Multi range (MR): 2 to 3 ranges Automatic Variable Resolution (AVR): 2 to 3 ranges	<b>Analogue Signal Sensitivity</b>	0.1 $\mu$ V/V/divisions minimum 0.5 $\mu$ V/V/divisions recommended
<b>Number of Bases</b>	Up to two bases: one analog base and one BSQ Digital Bench Base or two BSQ Digital Bench Bases	<b>Analogue Signal Protection</b>	RFI, EMI and ESD protection

# Physical Housing

## Enclosures

Stainless steel: 304 brushed stainless steel (IP69K certified) with water and dust resistant, breathable, vented gland and tilt stand with provisions for desk, wall and column mounting

## Shipping Weight & Dimensions

8.4 lb (3 kg)  
14" x 12" x 6.5" (356 mm x 305 mm x 165 mm)

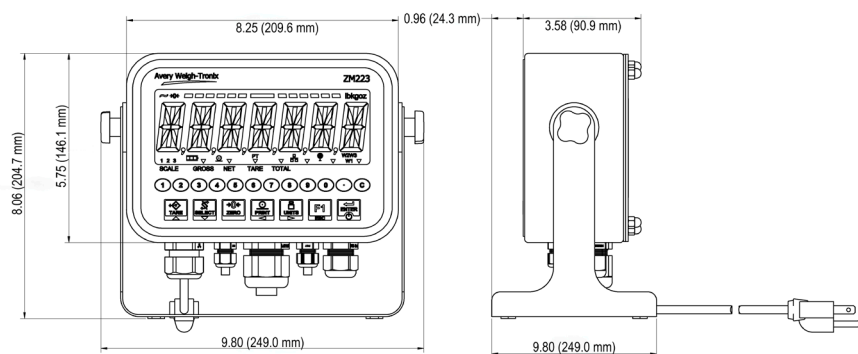
## Operating Temperature

14° F to 104° F / -10° C to 40° C  
(Compliance with legal-for-trade requirements)

-4° F to 140° F / -20° C to 60° C  
(industrial)

10 to 90% humidity non-condensing

## Dimensions



# Approvals

Agencies Single-interval, multi-range or multi-interval:  
NTEP 10,000d (24-075), Measurement Canada 10,000d (AM-6261C), EU 10,000d (0200-NAWI-19072), OIML R76 10,000d, India 10,000d (I-21/177/2025-W&M), CE, NOM, IFT, NSF, UL/C-UL, IP69K

# Input-outputs/Data Storage

<b>Remote Inputs</b>	Up to six logic level inputs for Zero, Print, Tare, Units, F1, and more Configurable apps: Mostly use three inputs Programmable apps: Can be programmed to be either inputs or outputs up to a maximum of six	<b>Micro-SD Slot</b>	Compatible with micro-SD cards up to 32GB, read individual files up to 4GB  Supplied with 16GB micro-SD cards as standard
<b>Standard Outputs</b>	Up to six outputs Configurable apps: Mostly use three inputs, three outputs Programmable apps: Can be programmed to inputs or outputs	<b>Micro-SD Card Usage</b>	Micro-SD card also holds all our configurable Avery Weigh-Tronix apps that can be selected to run based on each customers needs <ul style="list-style-type: none"> <li>• Scale profile backup</li> <li>• PLU database storage backup area</li> <li>• Alibi memory data storage backup area</li> <li>• ZM223 app library retrieval area</li> <li>• Transaction data storage</li> </ul>
<b>Serial Ports</b>	Two serial Comm ports: internally wired <ul style="list-style-type: none"> <li>• Comm 1 RS232 full duplex</li> <li>• Comm 2 RS232 full duplex</li> <li>• Both RS232 comm ports can also be used to drive a BSQ high-precision digital bench base</li> </ul> Utilise via all standard protocols: SMA, Broadcast, ENQ, NCI, etc. Fully programmable via LUA.	<b>Programming Language</b>	Lua programmable and fully configurable. Comes standard with a library of applications stored on the internal micro-SD card.
<b>USB Host</b>	Internal USB A connection for USB Printer, USB Memory, USB Scanner, USB Keyboard, and optional external washdown USB connector	<b>Data Drive Storage</b>	Configurable (flash memory, USB storage memory, micro-SD card, or external to a PC or cloud server)
<b>Bluetooth</b>	BLE used to connect to Remote Assist™ Mobile IOS, Android, Windows App	<b>Alibi/Archiving Memory</b>	100,000 transactions
<b>Ethernet</b>	The Ethernet port can be configured to support multiple independent devices, it supports DHCP, Client/Server TCP Socket Connections, and UPD Fieldbus: Enet/IP & Modbus TCP Cloud Server Connection: HTTPS & MQTT. Ideal for connecting to customers cloud data base servers	<b>Optional</b>	Holds one of the following option cards <ul style="list-style-type: none"> <li>• Analogue output card</li> <li>• STVS extreme lightning surge protection ideal for use with outdoor platforms or weighbridges</li> </ul> Can be fitted with one of these external glands <ul style="list-style-type: none"> <li>• USB A watertight gland</li> <li>• Ethernet watertight gland</li> </ul>



More online

- Technical specifications
- User manuals
- News and information

## Avery Weigh-Tronix

[www.averyweigh-tronix.com](http://www.averyweigh-tronix.com)

Avery Weigh-Tronix is an ITW company