

Indicators to measure and control your daily operations.

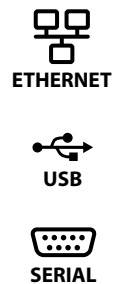
### Technical Specification



**ZM303**  
IP69K Stainless Steel Enclosure  
TN Display  
**IP69K**

**ZM303**  
Panel Mount Enclosure  
IBN Display

**ZM301**  
Aluminum Enclosure  
IBN Display



## DESCRIPTION

Highly adaptable and available with a choice of display technologies and enclosures, these high performance, multi-function indicators give you the flexibility required to suit different applications.

Suitable for the office and high pressure and heavy washdown environments, the ZM300 series will analyze, store, display and transmit data across a range of applications.

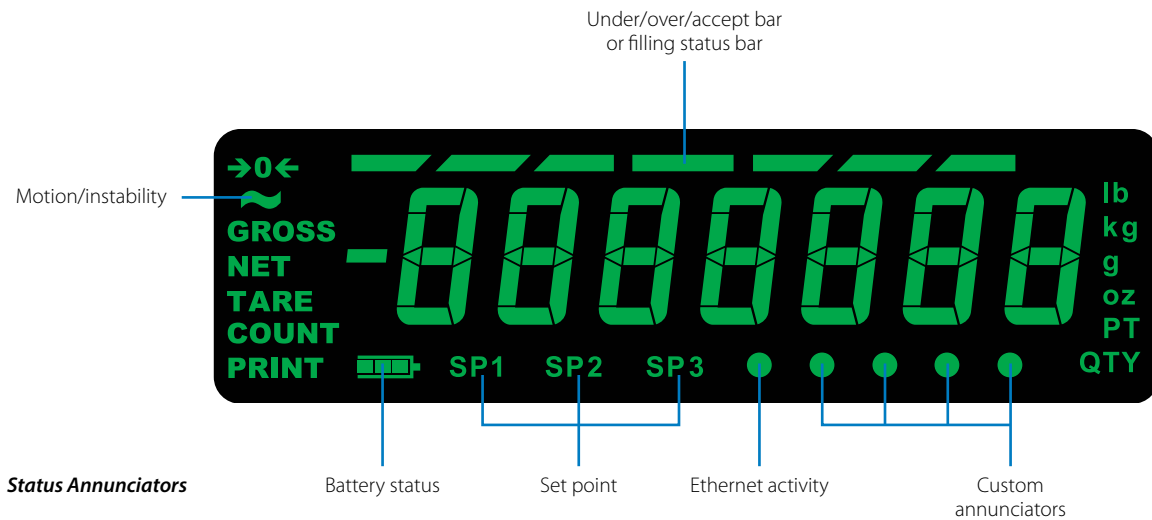
## SPECIFICATIONS

### GENERAL

<b>Operating Applications</b>	General weighing, accumulation, check weighing, counting, peak measurement, batching and remote display
<b>Unit of Measure</b>	Six, configurable (Pounds, Kilograms, Ounce, Gram, Pound/Ounce, Custom)
<b>Capacity Selections</b>	9,999,999 with decimal located zero to five places
<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 linearization
<b>Time and Date</b>	Battery backed up time/date/year (12 hr or 24 hour format)
<b>Calibration</b>	Two to five points stored
<b>Analog to Digital Measurement Rate</b>	80 Hz
<b>Internal Resolution</b>	53,687,100 counts per mV/V per second
<b>Digital Filtering</b>	Harmonizer filtering with adaptable constant and threshold
<b>Self Diagnostics</b>	Display, keys, inputs, outputs, serial port

## USER INTERFACE

<b>Keypad</b>	ZM301: 6 key chemical resistant keypad with metal domed tactile feedback ZM303: 24 key chemical resistant keypad with metal domed tactile feedback
<b>Operational Keys</b>	ZM301: Zero, Print, Units, Tare, Select, F1 ZM303: Zero, Print, Units, Tare, Select, Sample, Target, ID, Start, Stop, 0-9, Decimal, Clear, F1, Setup
<b>Status Annunciators</b>	Center of Zero, Motion, Gross, Net, Tare, Count, Print, Battery status, Set point 1,2,3, Over/Under/Accept bar graph or fill bar graph, LB, KG, Gram, Oz, Preset Tare, Quantity, (Custom unit of measure – Ton, Tory Ounce, Tonne, Feet/Meters, etc), Active Ethernet connection.
<b>Display</b>	<i>IBN illuminated</i> : 7 digit, nine segment display, green on black background for indoor use <i>TN backlit (ZM303 only)</i> : 7 digit nine segment display, black on green background ideal for outdoor/indoor use 0.8" (20 mm) high digits Annunciators for status and mode identification Sortbar/Checkweigher segments
<b>Display Rate</b>	Selectable (1, 2, 5, 10, 20) times per second



Status Annunciators



IBN display – Ideal for indoor use



TN display – Ideal for outdoor/indoor use (ZM303 only)



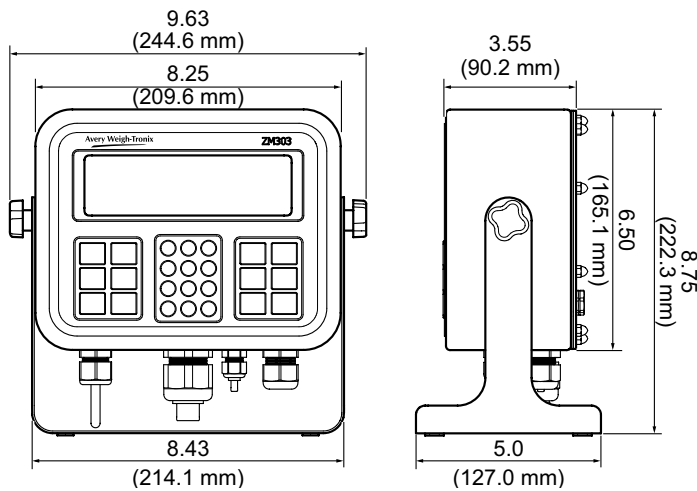
ZM301 keypad - 6 keys



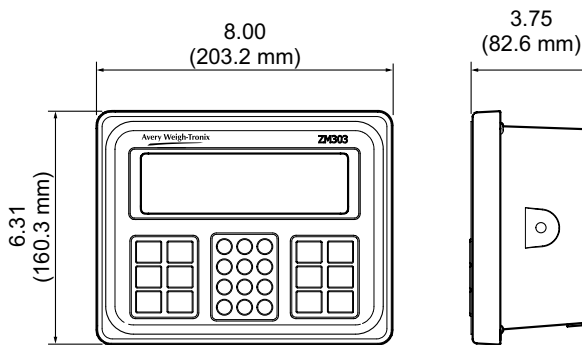
ZM303 keypad - 24 keys

## PHYSICAL

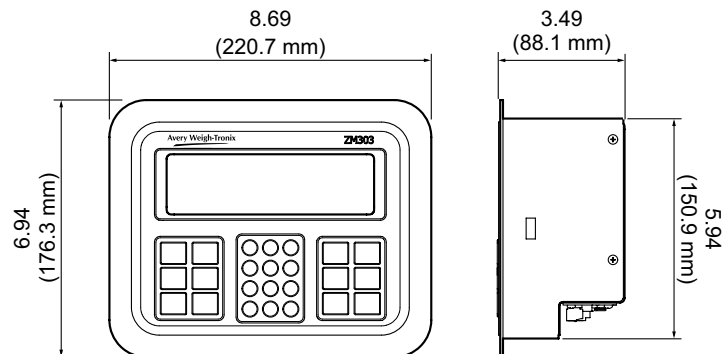
<b>Enclosures</b>	<p><i>Stainless steel:</i> 304 brushed stainless steel (IP69K certified) with GORE® Vent ventilation and tilt stand with provisions for desk, wall and column mounting</p> <p><i>Aluminum:</i> Aluminum black powder painted IP20 with rubber feet</p> <p><i>Panel mount:</i> Stainless steel panel mount IP66</p>
<b>Operating Temperature</b>	<p>14° F to 104° F / -10° C to 40° C (Compliance with legal for trade requirements)</p> <p>-4° F to 140° F / -20° C to 60° C (industrial)</p> <p>10 to 90% humidity non condensing</p>
<b>Shipping Weight</b>	<p>Stainless steel: 8.09 lb (4.05 kg)</p> <p>Aluminium: 4.75 lb (2.37 kg)</p> <p>Panel mount: 6.53 lb (3.27 kg)</p>
<b>Dimensions (L X W X H)</b>	<p><i>Stainless steel:</i> 9.6" x 5" x 8.8" (243 mm x 127 mm x 223 mm)</p> <p><i>Aluminum:</i> 8" x 3.2" x 6.3" (203 mm x 81 mm x 160 mm)</p> <p><i>Panel mount:</i> 8.7" x 3.4" x 6.9" (221 mm x 86 mm x 175 mm)</p>



Stainless Steel **IP69K**



Aluminum



Panel Mount

## INPUT/OUTPUT

<b>Remote Inputs</b>	Three logic level inputs for Zero, Print, Tare, Units or F1
<b>Standard Outputs</b>	Three set point outputs, open collector design
<b>Serial Ports</b>	Two serial ports: - Comm 1 RS232 full duplex - Comm 2 RS232 full duplex Or - Comm 1 RS232 full duplex with handshaking - Comm 2 Not available Programmable serial response to ASCII input SMA protocol, broadcast, enquire
<b>USB Host</b>	Printer, Connect USB flash memory
<b>Ethernet</b>	The Ethernet port can be configured to support five independent devices, it supports DHCP client/server and Ethernet sockets plus it supports all the serial protocols
<b>Fieldbus</b>	Ethernet IP and Modbus TCP
<b>Optional</b>	Analog output Current Loop/RS485/RS422 USB Device Internal Wireless 802.11b/g

## ELECTRICAL

<b>Power Requirements</b>	<i>Line voltage:</i> 90-264 VAC (110-240 VAC nominal), frequency 50 or 60 Hz, 12 to 36 VDC <i>Power consumption:</i> estimated at 200 mA at 12 VDC for one weight sensor and 250 mA at 12 VDC for six weight sensors.
<b>Excitation</b>	5 VDC, short circuit protected Supports up to six 350 ohm weight sensors 4 or 6 conductors with sense leads Detachable plug connectors
<b>Analog Signal Input Range</b>	-1 mV/V to 5 mV/V
<b>Analog Signal Sensitivity</b>	0.1 $\mu$ V/V/divisions minimum 0.5 $\mu$ V/V/divisions recommended
<b>Circuitry Protection</b>	RFI, EMI and ESD protection

## OPTIONS

<b>PC Card (choose one)</b>	<i>Analog output card:</i> 0-5 VDC, 0-10 VDC and 4-20 mA <i>Current Loop Card:</i> Current Loop and RS485/RS422 <i>USB device card:</i> Provides USB interface to PC <i>Wireless internal card:</i> 802.11b/g wireless data communications kit with antenna
<b>External Battery Pack</b>	Attachable external battery pack with on/off. Uses four D batteries providing 12 hours operation on a single weight sensor system and 11 hours on a four weight sensor system
<b>ZM-OPTO</b>	Provides setpoint interface
<b>USB Watertight Gland</b>	Rubberized and sealed with 6" lead
<b>Ethernet Watertight Gland</b>	Rubberized and sealed with 6" lead
<b>Stand Kit</b>	For aluminum enclosure models

## APPROVALS

<b>Patent</b>	US Patent 672,262
<b>Agencies</b>	NTEP (US) Class III/IIIL 10,000 d (CC# 11-096) OIML (European and UK) Class III 6,000 d (R76/2006-GB1-12.04) Measurement Canada (AM-5841C) Australia (NMI S570) MID R61 New Zealand (MCA 2100) CE UL/C-UL EC IP69K (case)



Measurement Canada Approved



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