



Indicators for daily weighing tasks with powerful built-in applications.

*Technical Specification*

## DESCRIPTION

ZM201 Series indicators are ideal for applications that require a basic weighing indicator for performing Zero, Tare and Print functions. Their simple yet powerful design makes them the perfect choice for connecting with bench, platform or floor scale and bin/tank/hopper (vessel) scales.

## SPECIFICATIONS

### GENERAL

<b>Operating Applications</b>	General weighing, general weighing with accumulation, checkweighing, counting, peak measurement, batching and remote display
<b>Calibration</b>	Two to five points stored
<b>Analog To Digital Measurement Rate</b>	80 Hz
<b>Unit Of Measure</b>	Two, 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>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

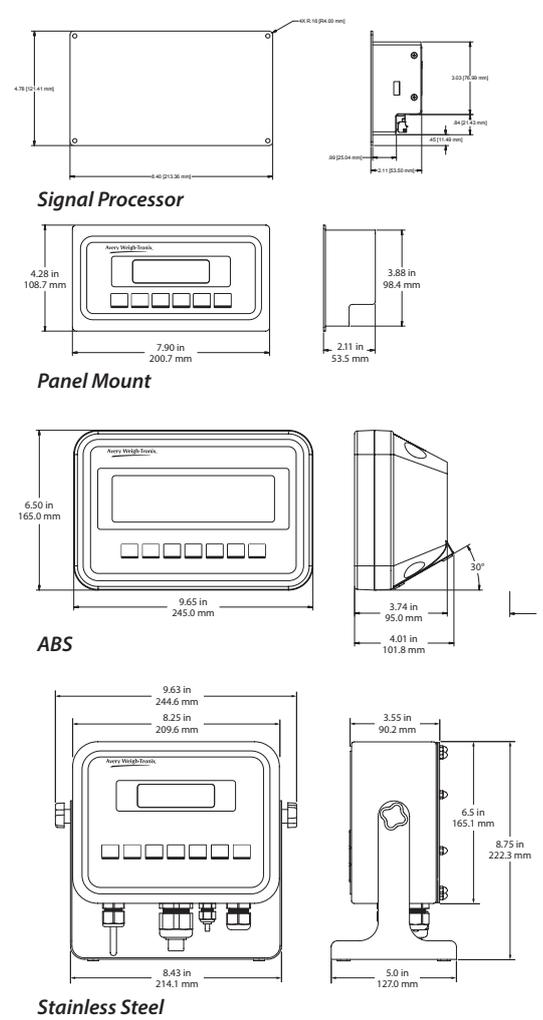
### ELECTRICAL

<b>Power Requirements</b>	<i>Line voltage:</i> 90 VAC to 264 VAC (110-240 VAC nominal), frequency 50 or 60 Hz, 12 to 36 VDC <i>Power consumption:</i> estimated at 150 mA at 12 VDC for one weight sensor and 180 mA at 12 VDC for four weight sensors
<b>Excitation</b>	5 VDC, short circuit protected Supports up to four 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

### USER INTERFACE

<b>Operational Keys</b>	Tare, Select, Zero, Print, Units, F1, On/Off (no keys on signal processor)
<b>Status Annunciators</b>	Center of Zero, Motion, Gross, Net, Tare, Count, Print, Battery Status, Setpoint 1, Setpoint 2, Setpoint 3, Over/Under/Accept bar graph or fill bar graph, lb, kg, Preset Tare, Total, (Custom unit of measure- lb/oz, ton, gram, configurable), Active Ethernet connection
<b>Keypad</b>	7 key chemical resistant polycarbonate

<b>Display</b>	<p>ABS: TN backlit 7-digit seven segment display with 1.2 in / 30 mm high digits</p> <p>Stainless steel: TN backlit 7-digit seven segment display with 0.5 in / 13 mm high digits</p> <p>Panel mount: TN backlit 7-digit seven segment display with 0.5 in / 13 mm high digits</p> <p>Signal processor: No display</p> <p>Displays have annunciators for status and mode identification</p>
<b>Display Rate</b>	Selectable (1, 2, 5, 10) times per second
<b>INPUT/OUTPUT</b>	
<b>Remote Inputs</b>	Three logic level inputs for Zero, Print, Tare, Units, or Select
<b>Standard Outputs</b>	Three set point outputs, open collector design
<b>Communications</b>	<p>Two serial ports:</p> <ul style="list-style-type: none"> <li>- Comm 1 RS232, no handshaking</li> <li>- Comm 2 RS232, no handshaking</li> </ul> <p>Ethernet: TCP/IP, DHCP, Static IP</p> <p>Protocols (all ports):</p> <ul style="list-style-type: none"> <li>- SMA Broadcast, Remote Display, and NCI</li> </ul> <p>ZM201 Signal Processor Modbus/TCP</p>
<b>Circuitry Protection</b>	RFI, EMI and ESD protection
<b>PHYSICAL</b>	
<b>Operating Temperature</b>	<p>Compliance with legal-for-trade requirements</p> <p>Approval: 14° to 104° F / -10° to 40° C at 10 to 90% relative humidity, non-condensing</p> <p>Industrial: -4° to 140° F / -20° to 60° C at 10 to 90% relative humidity, non-condensing</p>
<b>Enclosure</b>	<p>Stainless steel: 304 brushed stainless steel IP66 with tilt stand/mounting bracket</p> <p>Plastic: ABS plastic IP20 with rubber feet</p> <p>Panel mount: Stainless steel panel mount IP66</p>
<b>Weight</b>	<p>ABS: 3.87 lb / 1.75 kg</p> <p>Stainless steel: 7.34 lb / 3.32 kg</p> <p>Panel mount: 4.18 lb / 1.89 kg</p> <p>Signal processor: 4.25 lb / 1.93 kg</p>
<b>Dimensions</b>	See drawings
<b>APPROVALS</b>	
<b>Patent</b>	US Patent 672,262
<b>Agencies</b>	<p>NTEP (US) Class III/IIIL 10,000 d CC# 13-017</p> <p>OIML (European and UK) Class III 6,000 d (R76/2006-GB1-13.02)</p> <p>Measurement Canada AM-5902C†</p> <p>Australia (NMI S655)</p> <p>MID R61</p> <p>New Zealand (2135)</p> <p>CE</p> <p>UL/cUL</p> <p>EC</p>
    	<p>† Signal Processor not approved by Measurement Canada</p>
<b>OPTIONS</b>	
<b>Battery Pack</b>	Internal NiMH rechargeable pack providing 18 hours operation on a single weight sensor system and 14 hours on a four weight sensor system. For application environments that operate above 50° F / 10° C, the maximum charge time is five hours. For application environments that operate and charge below 10° C, the charger circuit will utilize trickle charging and full recharge will take up to 23 hours.
<b>ZM-OPTO</b>	Provides setpoint interface
<b>Ethernet Watertight Gland</b>	Rubberized and sealed
<b>AC to DC Power</b>	In-Line AC to DC power module
<b>Pole Mounting Kit</b>	For ABS model



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## Avery Weigh-Tronix

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