

Flexible weight indicator for advanced applications.

Frequently Asked Questions

1. Is the QWERTY keypad standard on the ZM510 indicator?

The ZM510 indicator has individual keys for each letter in the English alphabet, providing quick single press character entry.

2. Does the ZM510 maintain the Avery Weigh-Tronix product design standard of rounded corners and coloured keys?

Yes, the ZM510 maintains the patented Avery Weigh-Tronix design language (US patent 672,262) for a common design platform and corporate identity. This design language provides easy to read keys as well as the industry leading, modern appearance with safe and easily cleaned rounded corners.

3. The green display image is very visible, what technology does the ZM510 use on its dot graphic display?

The graphic display technology is an Improved Super Twisted Nematic (ISTN).

4. Can this dot graphic display show more than alpha numeric characters?

Yes, but the graphic images are controlled by the installed application programme. The configuration menus use graphic images and viewing these can provide you with some ideas of its capability.

5. If there is a brightly lit outdoor application, can the display image be reversed?

Yes, there is a configuration choice to reverse the image to black with a green background. The process is detailed within the ZM510 Service Manual.

6. Does the ZM510 provide RS232 serial interface?

The ZM510 has three serial ports for connection to peripheral devices using this technology.

7. Does the ZM510 include a USB host port?

Yes, the ZM510 has two USB host ports which can be used for connections with keyboards, memory devices and printers.

8. Will the ZM510 support the connection of a USB keyboard?

Yes, a USB keyboard can be connected to either of the two ZM510 USB ports to provide a convenient solution for desktop alpha numeric entry.

9. Can the standard Ethernet port be configured and used to communicate information to a PC?

The Ethernet port can be used for transmitting data to a PC using TCP/IP or FTP protocols.

10. Can the standard Ethernet port be configured and used to communicate with PLC devices?

The Ethernet port can provide Modbus TCP or Ethernet IP protocols for communication to a PLC.

11. When I use this indicator right out of the box, it performs a Vehicle In and Vehicle Out net weighing calculation with a registration process. Is there a configuration for axle weighing?

Within the password protected Supervisor Menu the indicator can be configured for axle weighing (single or combined).

12. Are other operation modes configurable within the password protected Supervisor Menu?

Other choices include:

- › Net Weight Allowance
- › Interlocks
- › Multiple In
- › Haulier Information
- › Customer or Supplier
- › User Defined Fields

13. What is the maximum character width that can be entered for the vehicle registration within the default Vehicle In and Vehicle Out net weighing calculation with a registration process?

Up to 16 alpha numeric characters can be entered for a vehicle registration.

14. How do I use the numeric keys on the indicator's QWERTY keyboard?

A key labeled Num Lock is located at the bottom right of the keyboard. Pressing this key will exclusively enable the numeric keys.

15. How do I re-enable the alpha characters?

Press the Num Lock key again to unlock the numeric entry mode.

16. When I press a key, an audio bleep is heard. Is that normal?

When these large keys are pressed, you will hear a bleep sound providing audio confirmation that the contact closure has occurred.

17. When a key is pressed, it seems to provide a mechanical confirmation?

Yes, each key has a metal dome which provides a physical confirmation when the keys are pressed.

18. The F1-F5 keys don't have any labels, what do they perform?

These are soft keys and the application programme controls what they perform when they are pressed. The labels for these keys are on the display directly above the key.

19. What is the function of the row of keys right below the keys labelled F1-F5?

These are the most commonly used keys during the weighing process and they are common on all ZM indicators.

20. Does the scale key suggest the ZM510 supports more than one scale input?

The ZM510 can support more than one scale, but this will require a different application operating programme and potentially some additional hardware options.

21. In weighbridge and other installations, wind or vibration can create an unstable weight reading. Is there a solution for these situations?

The ZM510 has the Harmonizer™ feature. This provides an adjustable range to filter out influences caused by wind or vibration.

22. What power source is required to operate the ZM510?

Some products only operate on AC or DC input. The ZM510 can operate from a mains power of 110-240 VAC nominal, 50/60 Hz or 12 to 36 VDC.

23. How many 350 ohm weight sensors will the ZM510 support?

The ZM510 will support up to twenty four 350 ohm weight sensors.

24. The excitation voltage to the weight sensors is 10 VDC (+/- 5 VDC), how long can the cable length be from the scale to the indicator?

The length of the cable is dependent on a number of influences, including the number of weight sensors, the

quality and gauge of the cable, the installation method (conduit) and any external source of electrical noise. The ZM510 cable test listed on the certification is 153 meters with twenty four weight sensors. (The E1205 is listed at 138 meters.)

25. Does the ZM510 support the digital T301x load cells?

It supports one T301x system. This connection is a scale configuration and the interface requires the optional Analogue output kit (RS485).

26. Some installations have no mains power available, can I use a car battery for the 12 to 36 VDC input?

A car battery can be used. Its hours of continuous operation will depend on the manufactured Amp Hours of the battery and the number of weight sensors connected. Below are some examples of battery performance when a 12 VDC 35 Amp Hour car battery is used.

- › Eight 350 ohm sensors = 70 hours
- › Twelve 350 ohm sensors = 56 hours
- › Sixteen 350 ohm sensors = 48 hours

27. Is the high quality stainless enclosure standard?

The ZM510 has a 304 brushed stainless steel enclosure and a table top stand. The stand offers provisions for mounting to a pole or surface (table or wall).

28. What is the ingress rating for the ZM510 indicator?

The ZM510 has been laboratory tested by an independent company following the EC 60529 standards and an IP69K certificate stating its compliance has been issued. Do not be misled by brands that state their products are designed or equal to IP69K. A certificate stating compliance by an independent laboratory is proof.

29. What does IP69K certified mean?

Avery Weigh-Tronix has posted a FAQ online explaining the process and value of this water and dust ingress protection. This can be found by a simple web search of 'what is IP69K'?

30. Is there a solution for potential condensation that may occur during extreme temperature and moisture changes?

Each ZM510 stainless steel IP69K certified enclosure includes the patented air pressure and temperature equalizing GORE® Vent technology.

31. If the application requires a remote ZM510, will the keys on this unit work just like the keys on the other ZM510?

Yes, keys on the remote ZM510 can function just like the keys on the master ZM510 if properly configured and supported by the application programme.

32. Can the communication output strings be changed?

The default print strings and protocol can be enhanced or modified.

33. Many printers sold today have a USB connection; can the ZM510 communicate to them?

Yes, the ZM510 has two USB host USB ports that can be used for communication with a compatible printer.

34. Can the ZM510 USB host port be used to download data to a USB memory device?

The ZM510 USB port can be configured and used for connection to a memory device (USB thumb drive).

35. What printers and interface technologies have been tested with the ZM510?

- › Avery Weigh-Tronix ZG110 Impact Printer (serial)
- › Avery Weigh-Tronix ZG310 Thermal Printer (serial)
- › HP Officejet Pro 8500A e-All-in-One Printer - A910a (USB, Wired and Wireless Ethernet)
- › HP Officejet Pro 8600 Plus e-All-in-One Printer (USB, Wired)
- › HP LaserJet Pro CP1525nw (USB, Wired and Wireless Ethernet)
- › HP A799 (USB, serial)
- › Zebra LP2824 (USB, serial)
- › Zebra LP2844 (USB, serial)
- › Epson TM-u220b (serial, Ethernet, USB)
- › Epson TM-T88V M244A (USB, Wired Ethernet, serial)
- › Epson TM-T20 (USB)
- › LP-250 Brecknell Thermal Printer (serial)
- › LP-470 Brecknell Thermal Printer (serial)

36. What if I have a printer that is not on this list?

As manufacturers change their designs, Avery Weigh-Tronix will continually review the list of printers. Printer manufacturers maintain levels of backward compatibility. For example, if you own an HP 8600 series printer, connecting it to the ZM510 USB port works by selecting the HP 8500 selection. The generic printer settings in the product also allow flexibility with new and legacy printers that are not listed.

37. When one printer model offers multiple interfaces, which interface is active?

Please review the printer specifications as some communication ports may require activation before data is accepted from the indicator.

38. Are any additional options available for the ZM510?

Up to four additional option kits can be added inside the ZM510 indicator and the list of choices include:

- › Analogue Output
- › Current Loop/RS485/RS422 (T301x)
- › USB Device
- › Profibus®
- › DeviceNet™
- › Internal (Ethernet) wireless 802.11b/g
- › Internal 120 VAC relay module
- › ZM-OPTO setpoint interface
- › Scale Input 10 VDC excitation with STVS kit
- › DC Output, 4 relays 3-60VDC at 2A Kit
- › DC Input, 4 Inputs 4-30VDC
- › External I/O Interface
- › AC Output, 4 relays 20-240VAC at 1A kit
- › AC Input, 4 Inputs 120-240VAC kit

39. The ZM510 series has built-in standard lightning and transient voltage protection plus there is an option for protection against Severe Transient Voltage (STVS) and Extreme Lightning. On what installations would this option be recommended?

The additional Severe Transient Voltage (STVS) and Extreme Lightning Protection option is recommended for scale installation areas that experience frequent weather conditions involving severe lightning storms and environments where radiating voltages could potentially be picked up by the incoming scale cable.

Plus if the installed application has containers with plastic rubbing on the scale creating a static charge.

40. Does the new high resolution BSQ bench base work with the ZM510?

Yes, the BSQ operates with the ZM510 indicator.

41. How does the BSQ connect to the ZM510 indicator?

The BSQ bench base is connected using an RS232 port.

42. If an old mechanical scale has a linearity issue, does the ZM510 provide a solution to address this performance?

The ZM510 series provides a ten point calibration feature.

43. Occasionally a system will require the indicator to change its division size as the weight increases, for example a scale that performs vehicle and train weighments. Does the ZM510 offer this multi-range and multi-interval capability?

Yes, the ZM510 indicator can perform multi-range and multi-interval weighing also known as Automatic Variable Resolution (AVR).

44. Some specifications focus on the speed of the Analogue to Digital circuitry, what is the speed of the ZM510?

The Analogue to Digital activity is occurring at 100 Hz.

45. Can the bleep used for key pressing confirmation be used for other functions?

Yes, an operational routine can be created to use the bleep as an alarm, as one example.

46. How many set points are supported when a Process Control application is created?

The ZM510 has three, on-board set point outputs for controlling up to three events. The ZM510 will support up to 64 events which can be used for set points or event related activities within the application programme.

47. Does the ZM510 have the connection friendly detachable connectors for the wiring of the cables?

Yes, the ZM510 includes the detachable connectors for completing wire terminations conveniently and then simply plug this connector back together on the circuit board.

48. What is required to create an application programme?

Avery Weigh-Tronix has created Ztools: an application development tool. This utility resides on a PC allowing application programmes to be developed, simulated and edited. Ztools provides a method for importing application programmes into the ZM510.

49. Can an application programme be created to display non-English characters?

Yes, an application programme can be created via Ztools to display Operators information based on the UTF-8 character standard.

More online

- › Technical specifications
- › User manuals
- › News and information



www.averyweigh-tronix.com/ZM510

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V1 AWT35-501593