

505, 510, 605 and 615 INDICATOR

Flexible weight indicator for advanced applications.

Frequently Asked Questions

1. The ZM505, ZM510, ZM605 and ZM615 appear to have similarities and differences - can you provide more details?

These indicators have the same robust IP69K laboratory certified desk top stainless steel enclosure and use the same main board, power supply and options.

2. The display on the ZM615 appears to be larger than the others.

Yes the display on the ZM615 is twice as high as the other models (320 X 160 pixels).

3. The ZM615 display appears to provide light emitting characters and reverse character images.

The ISTN display technology in the ZM615, ZM510, ZM605 does provide a configuration choice allowing it to adapt to a bright or dimly lit environment by selecting its light emitting display or reverse character images like a LCD display.

4. The ZM505 doesn't appear to have the dot matrix ISTN display?

The ZM505 display has an IBN display consisting of digits and a Graphic Array for alpha numeric characters or images.

5. Is the ZM505 a legacy replacement for the GSE models with the VFD display?

Yes, the ZM505 is designed to provide an update and legacy transition for the GSE indicator models 560, 660 and 665.

6. The ZM510 doesn't seem to be legacy replacement product.

The ZM510 provides a new solution for applications where it is convenient to have the QWERTY keypad on the device versus a separate keypad. A panel mount application or where space is limited would benefit from the ZM510 design.

7. What legacy solution does the ZM605 provide?

The ZM605 with its dot graphic display is designed to provide an update and legacy transition for the GSE indicator models 562, 662, and E1310.

8. What legacy solution does the ZM615 provide?

The ZM615 with its large dot graphic display is designed to provide an update and legacy transition for the GSE indicator models 665.

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

The ZM510 QWERTY keypad has 48 keys for each letter in the English alphabet providing quick single press character entry, plus soft keys that are labeled on the display and more.

10. Do the ZM505, ZM605 and ZM615 have a keypad similar to the ZM405?

Yes, the keypad on the ZM505, ZM605 and ZM615 is similar to the ZM405 and includes five Function Keys.

11. Do these indicators maintain the Avery Weigh-Tronix product design standard of rounded corners and colored keys?

Yes, these indicators maintain 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.

12. The green display image is very visible, what technology do these indicators use on their dot graphic display?

The dot graphic ZM510, ZM605 and ZM615 display technology is an Improved Super Twisted Nematic (ISTN). The ZM505 has the IBN illuminated display with Graphic Array.

13. Can the dot graphic display and Graphic Array show more than alpha numeric characters?

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

14. If there is a brightly lit outdoor application, can the display image on the ZM510, ZM605 and ZM615 be reversed?

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

15. Do these indicators provide RS232 serial interface?

There are three serial ports for connection to peripheral devices using this technology.

16. Do they include a USB host port?

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

17. Will these indicators support the connection of a USB keyboard?

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

18. 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.

19. 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.

20. How do I use the numeric keys on the ZM510 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.

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

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

22. When I press a key, an audio beep is heard. Is that normal?

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

23. 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.

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

These are soft keys and the application program controls what they perform when they are pressed. The ZM510, ZM605 and ZM615 display has an area where labels for these keys can be shown directly above the key. If your application requires, softkeys can operate without having labels on the display.

25. Does the scale key suggest these indicators support more than one scale input?

They can support more than one scale, but this will require a different application operating program and potentially some additional hardware options. In total the ZM505 and ZM510 can support up to four scales while the ZM605 and ZM615 can support up to five scales.

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

These indicators have the Harmonizer™ feature. This provides an adjustable range to filter out influences caused by wind or vibration.

27. What power source is required for operation?

These indicators can operate from a mains power of 110-240 VAC nominal, 50/60 Hz or 12 to 36 VDC.

28. How many 350 ohm weight sensors will these indicators support?

The ZM505, ZM510 and ZM605 support up to twenty four 350 ohm weight sensors and the ZM615 supports up to thirty two 350 ohm weight sensors.

29. 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 OIML cable test identifies 153 meters with twenty four weight sensors.

30. 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 or 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

31. Is the high quality stainless enclosure standard?

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

32. What is the ingress rating for these indicators?

The desk top indicators have been laboratory tested by an independent company following the EC 60529 standards and an IP69K certificate stating 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.

33. 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'?

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

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

35. Can the communication output strings be changed?

Yes, the default print strings and protocol can be enhanced or modified.

36. Many printers sold today have a USB connection; can these indicators communicate to them?

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

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

Yes, the USB host port can be configured and used for connection to a memory device (USB thumb drive).

38. What printers and interface technologies have been tested with these indicators?

- › 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)

39. 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 indicator 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.

40. 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.

41. Are any additional options available for these indicators?

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

- › Analog Output
- › 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

42. The ZM505, ZM510, ZM605 and ZM615 have 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 desk top model 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.

43. Does the new high resolution BSQ bench base work with the ZM505, ZM510, ZM605 and ZM615?

Yes, the BSQ operates with these indicators.

44. How does the BSQ connect to these indicators?

The BSQ bench base is connected using a standard RS232 port on the indicators.

45. If an old mechanical scale has a linearity issue, do these indicators provide a solution to address this performance?

These indicators provide a ten point calibration feature.

46. 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 ZM505, ZM510, ZM605 and ZM615 offer this multi-range and multi-interval capability?

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

47. Some specifications focus on the speed of the Analog to Digital circuitry, what is the speed of the ZM505, ZM510, ZM605 and ZM615?

The Analog to Digital activity is occurring at 100 Hz.

48. Can the beep used for key pressing confirmation be used for other functions?

Yes, an application program can be created to use the beep as an alarm, as one example.

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

These indicators all have three, on-board set point outputs for controlling up to three events. They support multiple events which can be used for set points or event related activities within the application program. Please review this area by model within Ztools to become familiar with this feature packed flexibility.

50. Do the ZM505, ZM510, ZM605 and ZM615 have the connection friendly detachable connectors for the wiring of the cables?

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

51. What is required to create an application program?

Avery Weigh-Tronix has created Ztools: an application development tool which includes utilities, documentation and application programs for use or modification. This utility resides on a PC allowing for configuration, application program development, simulation, and installing applications into a Zseries product.

52. Can an application program be created to display non-English characters?

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

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