

305 STANDARD INDICATOR

Indicators to measure
and control your daily
operations.

Frequently Asked Questions

1. The ZM305 series is comprised of two different products, what are they?

- › ZM305 Standard stainless steel IP69K desktop with multiple built-in weighing applications with IBN display
- › ZM305 GTN Inbound-Outbound stainless steel IP69K with IBN display

2. What is an IBN display?

This display technology provides tremendous contrast between its illuminated digits and surrounding background. It is used within the automotive industry to improve viewing in both bright and dimly lit environments.

3. Are the rounded enclosure corners and modern coloured keys standard?

Through market research, customer research, and extensive application research, the ZM305 indicator series has been designed using a patented design language (US patent 672,262) to create a common product offering. The design language consists of colourful easy to read keys as well as industry leading, easy to clean rounded corners.

4. What power source is required to operate these indicators?

The indicators can operate from a mains power of 90-264 VAC (110-240 VAC nominal), 50 or 60 Hz, 12 to 36 VDC or from the optional external battery pack ZM-BAT.

5. How long will the optional external battery pack power the scale?

The external optional battery pack ZM-BAT used four D cell batteries. Fresh batteries will maintain operation of a single weight sensor system for six hours, or a four weight sensor system for four hours and systems with eight weight sensors for one hour. The ZQ-BAT option with auto shutoff has selectable sleep mode choices in the Supervisor menu which will extend the battery life if enabled.

6. The excitation voltage to the weight sensors is 10 VDC, how long can the cable length (home run cable) be from the scale to the indicator?

The length of cable is dependent on a number of influences including the number of load cells, the quality and gauge of wire, the cable installation methods (conduit) and any external sources of electrical noise. The ZM305 will support up to 12 (350 ohm) load cells. When using Avery Weigh-Tronix supplied

load cell cable the maximum recommended length for this would be 200 metres.

7. The keys on the front panel have a crisp snapping response, is this normal?

The indicator's durable front panel is chemical resistant and the keys' tactile feedback is maintained by high quality steel spring domes.

8. Is the IP69K stainless steel a standard feature?

The ZM305 is enclosed in a stainless steel assembly with a IP69K certified rating.

9. What does IP69K mean?

IP69K is a worldwide recognised standard which defines the ingress protection of the enclosure. The ZM305 stainless steel models are third party IP69K (IEC 60529) certified by FALAB. Do not be misled by brands that state their products are designed or equal to IP69K without certification.

10. In addition to the ingress protection IP69K provides, is there a solution for internal condensation that may occur when a cold stainless steel enclosure is subjected to hot steamy water during a cleaning cycle?

Each stainless steel IP69K enclosure includes a patented air pressure and temperature equalising solution.

11. How many weigh sensors does the ZM305 support?

These indicators support up to fourteen 350 ohm weigh sensors with 10 VDC excitation.

12. Do the indicators have a built-in suite of operating applications?

Yes in addition to general weighing, the ZM305 Standard indicator can be configured to operate for:

- › Accumulation with two hundred separate registers to store and recall weight and transaction totals
- › Checkweighing with Under, Accept, Over status on multi-segment graph
- › Parts Counting to display the number or pieces on the weighing platform
- › Peak Weighing to capture the maximum weight value
- › Process Control for mixing or filling with a status graph bar and set point controls

- › Remote Display-this can be connected to host devices providing remote key functions
- › In-motion weighing such as conveyor or monorail scales.

13. The General Weighing application can be configured to perform accumulations, how many IDs can it store?

General Weighing can be configured to include accumulations for up to two hundred registers via a seven digit numeric ID with each capturing the Gross and Net totals plus the quantity of transactions.

14. How do you create the sample size for the Parts Counting application?

The Sample size default is five, but that can be changed using the numeric entry. The indicator will use the entered sample for the next calculation or it can be changed. Piece weight values can be calculated from samples or entered by the keypad.

15. How does the captured Peak value get removed once it is captured in this application?

Press the F1 key to clear the Peak value.

16. How many set points are supported for the Process Control application?

The ZM305 provides three internal setpoint outputs for controlling up to three ingredients.

17. When the Remote Display application is used, will the keys on the remote ZM305 function?

Yes the keys on the remote ZM305 will function just like the keys on the master ZM305.

18. What are the specification performances of the In-Motion application?

The nominal minimum weight on scale requirement is one hundred milliseconds, recommended three hundred milliseconds

19. Can communication output strings be changed?

The selected application includes a default print string and protocol, but this can be enhanced or modified through the front panel or by using Ztools. For ease of configuration we recommend the use of Ztools (PC software program).

20. What are the PC requirements for Ztools software?

Minimum:

- › CPU: Intel i3
- › RAM: 2GB
- › Hard Drive: 500GB
- › Video Card: 512MB Integrated
- › Display: 15.6 inch display
- › Resolution: 1366x768
- › OS: WinXP (32-bit), Windows 7 Home Premium (32/64-bit)
- › Communications: 10/100 Ethernet Optical Drive: CD/DVD

Recommended:

- › CPU: Intel i5
- › RAM: 4GB
- › Hard Drive: 500GB
- › Video Card: 512MB Integrated
- › Display: >15.6 inch display
- › Resolution: 1366x768
- › OS: WinXP (32-bit), Windows 7 Home Premium (32/64-bit)
- › Communications: 10/100 Ethernet Optical Drive: CD/DVD

Top of the line:

- › CPU: Intel i7
- › RAM: >4GB
- › Hard Drive: >500GB
- › Video Card: 1024MB Dedicated Video Card
- › Display: >15.6 inch display
- › Resolution: 1920 x 1080
- › OS: WinXP (32-bit), Windows 7 Professional (32/64-bit)
- › Communications: 10/100 Ethernet Optical Drive: CD/DVD

21. The ZM305 indicators have so many communication ports, which one is used for downloading the Ztools configuration to the indicator?

The indicators include an Ethernet communication port which is used for connecting to the PC and communicating Ztools configurations.

22. The standard Ethernet permits the product to be configured from the PC Utility Ztools. Can the Ethernet port also be used to transmit data to a PC?

The Ethernet port can be used for sending data to a PC using TCP/IP or FTP protocols and can be used for PLC communication using Modbus TCP or Ethernet IP protocols. Settings for each of these methods are described in the Service manual and additional information may be found in the On Demand Library Tech Guides located in the secure area of the Avery Weigh-Tronix website.

23. Many peripheral devices including printers have USB interfaces; do these indicators provide a solution to connect to these printers without using a serial to USB converter?

Yes, the ZM305 series provides a standard USB Host communication port which can be interfaced to supported USB printers.

24. The ZM305 has a standard USB port. Can it be used for attaching a memory device to download data?

The USB port can be used for connection to a memory device to store transactions. When connected, transaction data can be transferred as individual files or in an appended file where all transactions are saved.

25. What printers and interface technologies have been tested with the ZM305 Series?

- › 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 and Wireless Ethernet)
- › HP LaserJet Pro M1536dnf Multifunction e-Printer (USB, Ethernet)
- › HP LaserJet Pro CM1415fnw Color e-MFP (USB, Ethernet, Wireless Ethernet)
- › 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)
- › Brecknell DT 2205 (serial, USB)

26. 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 ZM303 or ZM305 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.

27. 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.

28. Are any additional options available for the ZM305 Series?

Additional options that can be added to the ZM305 Series include:

- › Analogue Output
- › Current Loop/RS485/RS422
- › USB Device
- › Internal (Ethernet) wireless 802.11b/g
- › External battery pack
- › USB and Ethernet watertight glands
- › ZM-OPTO setpoint interface
- › Severe Transient Voltage Suppressor (STVS) Extreme Lightning protection

29. The ZM305 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 the Severe Transient Voltage (STVS) and Extreme Lightning Protection option is recommended for scale installations 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.

30. Are the ZM305 indicators approved as legal for trade?

The agency listings for these products include:

- › EC UK2923 & GB-1446 $\leq 10,000$ divs single interval Class III, ≤ 1000 divs single interval Class IIII
- › R61 UK/0126/0122 & GB-1447 $\leq 10,000$ divs, Ref(x)=0.02, Scale Interval $\geq 0.5g$
- › NTEP (US) Class III/IIIL 10,000 d (CC# 11-096A)
- › OIML R76 Class III and IIII
- › AM (Measurement Canada) (AM5841C)
- › Australia (NMI)*
- › South Africa*
- › New Zealand*
- › India*
- › CE
- › UL/C-UL
- › IP69K (case)

* Pending

31. The previous indicator range used levered connectors for interface cables; does this product have a better solution?

Improving accessibility for connecting cables was a common request from participants in the customer research interviews. These indicators use a two part detachable solution allowing connections to be made outside of a confined space and then to plug this assembly into its socket.

32. Is there a relay control option for the setpoint outputs?

The optional ZM-OPTO assembly provides a solution to activate devices used for setpoints and for inputs.

More online

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

www.averyweigh-tronix.com/zm305



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