Avery Weigh-Tronix

ZK840
PRECISION SCALE

ZK840 9" x 12"
(230 mm x 305 mm)

ZK840 6" (150mm) round
platter with draft shield

Fully programmable
parts counter with built-in
inventory control

Technical Specification

DESCRIPTION

ZK840 12" x 14" (305 mm x 350 mm)
with column and stack light

The ZK840 is a touch-screen fully programmable, configurable, high resolution Quartzell™ digital bench scale designed to meet a range of industrial applications from warehouse, production lines, kitting stations, quality assurance to laboratory environments.

Out of the box, this high precision scale is pre-programmed to be a dedicated high resolution parts counter with built-in inventory control. The ZK840 also has a wide range of dedicated applications available, including:

› High precision general weighing
› Counting
› Checkweighing
› Pick list kitting
› Grading
› Percentage recipe formulation
› Filling
› Balance and Density weighing

The ZK840 is designed to work within most inventory management applications. A wide range of stored data can be accessed quickly from its fully configurable database.

World class count accuracy

Fast and reliable, this digital parts counter / weighing platform provides outstanding count accuracy of over 99.75% for parts weighing, from as little as 10 mg through to much heavier items. The unique modular

base and indicator combination uses our robust BSQ Quartzell bench base with up to 1 billion internal count resolution and 1100% overload protection.

Display main features

Designed to communicate a vast range of operator data on its large easy to read 5.3" x 2.75" dot graphic display, the ZK840 has been specially designed to aid the operator by providing more comprehensive graphical data representation. These on-screen images and prompts aid the operator in filling or recipe formulation mode, or on a quality control line.

Fitted with a range of time saving sampling and process routines the ZK840 can easily be adapted to meet most customer applications.

Product connectivity

With a full range of ports, the ZK840 can be connected to a wide array of devices from PCs and printers, to scanners, remote displays, additional bases, external light stacks or memory cards. Ethernet (TCP/IP), RS232, USB, built-in I/O and external I/O relays are available, with the option to extend the number of ports for additional flexibility.

OPERATING APPLICATIONS

Applications	Can be downloaded from Ztools library by a fully trained technician. All ZM615 Lua applications can also be used within the ZK840 subject to allowable keys on the ZK840 being available. If any of these keys are required, a small Lua program modification will be required to remap key location
Available Applications	ZK840 Counting application with built-in database and inventory control ZK840 Checkweighing with built-in database, QA messaging and average checkweighing ZK840 Grading with built-in database, 10 grading points, positive & reverse grading ZK840 Pick list kitting with built-in database, with up to 25 different parts per assembly kit ZK840 Balance, 16 units of measure, GLP, percentage weighing, percentage recipe mixing, density formulation, high res mode.
Display Screens	Display screens have been designed to be simple and easy to follow with step by step prompts Visual display aids under over and accept can be set to graphically show when the actual counted parts targets is reached

Average Checkweighing

Checkweighing

Counting

Pick List Kitting

Grading

Balance

Operator Keys	Subject to configuration, basic keys being: zero, tare, print, units of measure Advanced keys: recall, operator I.D., setup, abort
Database Storage	Will hold around 1000 typical PLUs internally, or around 3500 PLUs if installed with a microSD card. However turning on data fields other than the standard ones will reduce the amount of internal PLU storage space. External databases are available with the use of PLU Lookup which will allow multiple scales to easily communicate with a centrally PC stored database. Ideal for inventory control counting scale applications

Database Fields	ZK840 Database has been designed to be very flexible and can be used with a wide range of applications from counting, checkweighing to grading and recipe formulation Designed with hundreds of predefined data fields that can be turned on or off subject to the data being stored **Most commonly used data fields** *(subject to application)* › PLU Part number - Alphanumeric (20 characters) › Description (3 lines) - Alphanumeric (40 characters) › Lot /location › Piece weight › Tare weight › Stock on hand › Target weight › Upper and lower count limit › Upper and lower weight limit › Grading points › Assembly PLUs
Security Control	Database is password protected to limit access and control by the operator
Database Backup	Designed to allow easy database backup and retrieval by means of FTP or by using a USB memory stick in one of the side USB ports. Backup is password protected
Programmable Language	Avery Weigh-Tronix Lua *(all applications are fully configurable)*
Base Compatibility	Supplied connected to one BSQ base as standard *(local base)*
Maximum Number of Bases Allowed	Allowed five *(one local BSQ base, two remote BSQ and two analog platforms)*. Can link to a second and third BSQ by utilizing each RS232 port Can also link to two analog remote bases by installing two optional 5 VDC excitation analog base cards within the ZK840 indicator (each analog card can run up to six 350 ohm load cells) All bases can run independently to each other, so if one fails the remaining bases will continue to operate
Units of Measure	Four active choices *(Kilograms, Ounce, Gram, Pounds, Pound/Ounce, Custom)*
Base Construction	High resolution Quartzell mounted inside a robust aluminum die-cast clamshell BSQ base with 1100% overload and shock load protection ZK840 indicator is protected inside a tough ABS indicator housing that is most commonly mounted to the front of the BSQ base. This ZK840 indicator can also be easily removed for wall, deck or column mounting and will connect to the same indicator brackets as used on the ZK830. Maximum distance for the indicator to work away from the base is 50 ft (15m)
Indicator Display	Touch screen with protective screen cover. Display type is an Improved Super Twisted Nematic (ISTN) Graphic Display 5.3" x 2.75" (135mm x 70mm) : the green illuminated with black background 320 x 160 pixel display provides wide viewing angles and high brightness. Pre-defined or customer operator messaging, user prompts and graphics can be displayed on screen. A mode selection in supervisor mode allows the image to be displayed in reverse for applications that would benefit from dark characters with a clear/light contrasted background

Operator Keys	ZK840 uses a touch screen display with six metal domed keys with audible feedback *(Sample ,Tare, Zero, Setup and two custom keys)*
Indicator to Base Communications	Local BSQ base connection: one dedicated RS232 connection using a keyed RJ45 connector found on the rear of the ZK840 indicator Second and third BSQ bases: to be wired in through the RS232 communication ports (found on the rear of the ZK840 indicator) (SMA, 115200, eight data bits, none, one stop bit) Remote analog base: wired into one of the analog base connectors. Requires optional 5V excitation card fitting per base
BSQ Base Port	One dedicated RJ45 keyed socket for connecting ZK840 indicator to local BSQ base
Power Jack	Two 12-36V DC power socket found on the rear of the BSQ base or on the rear of the ZK840 indicator. This allows the base or indicator to be powered from any 12-36V DC power source

Power Options	100V to 240V AC 50/60 Hz switch mode power supply mounted to the rear of the base Base can be powered using either a 12 to 36 VDC power jack on the rear of the base or to the rear of the indicator
Battery Power Option	NiMH rechargeable battery option to give up to nine hours of continuous usage or ZQ remote battery option gives up to eleven hours continuous usage

ZK840 CONNECTIVITY OPTIONS

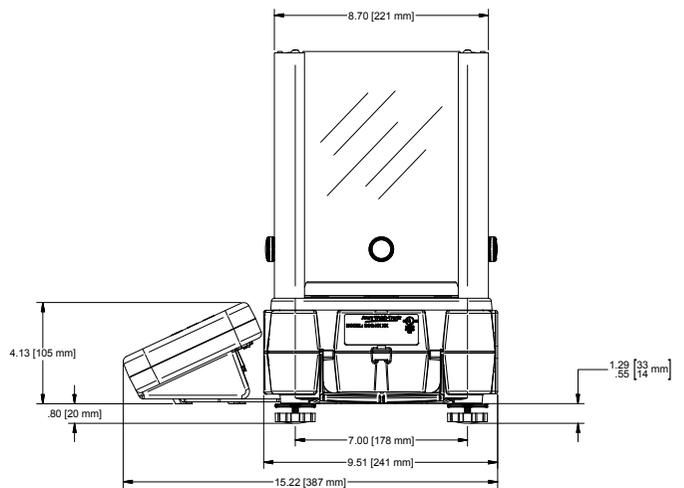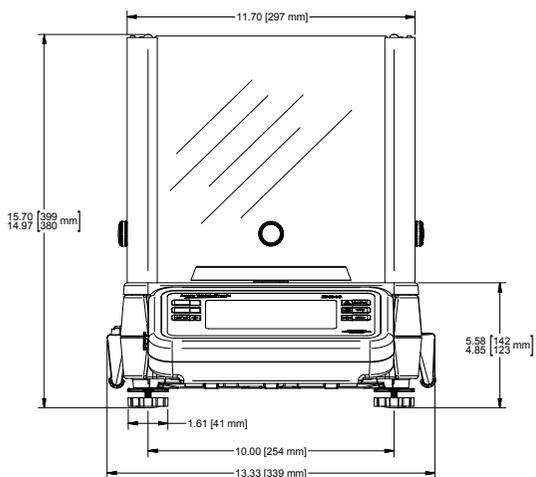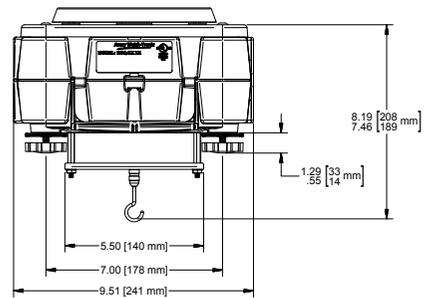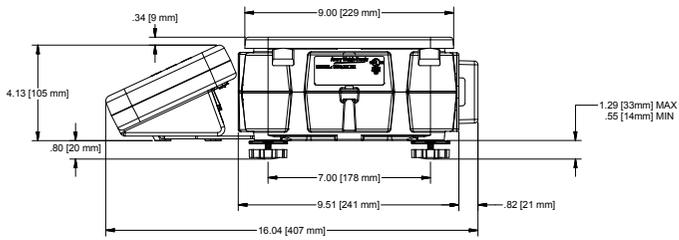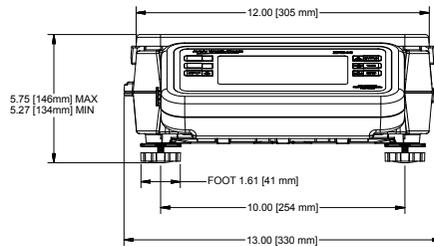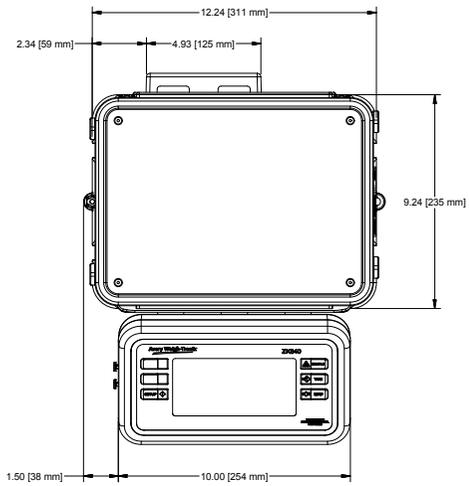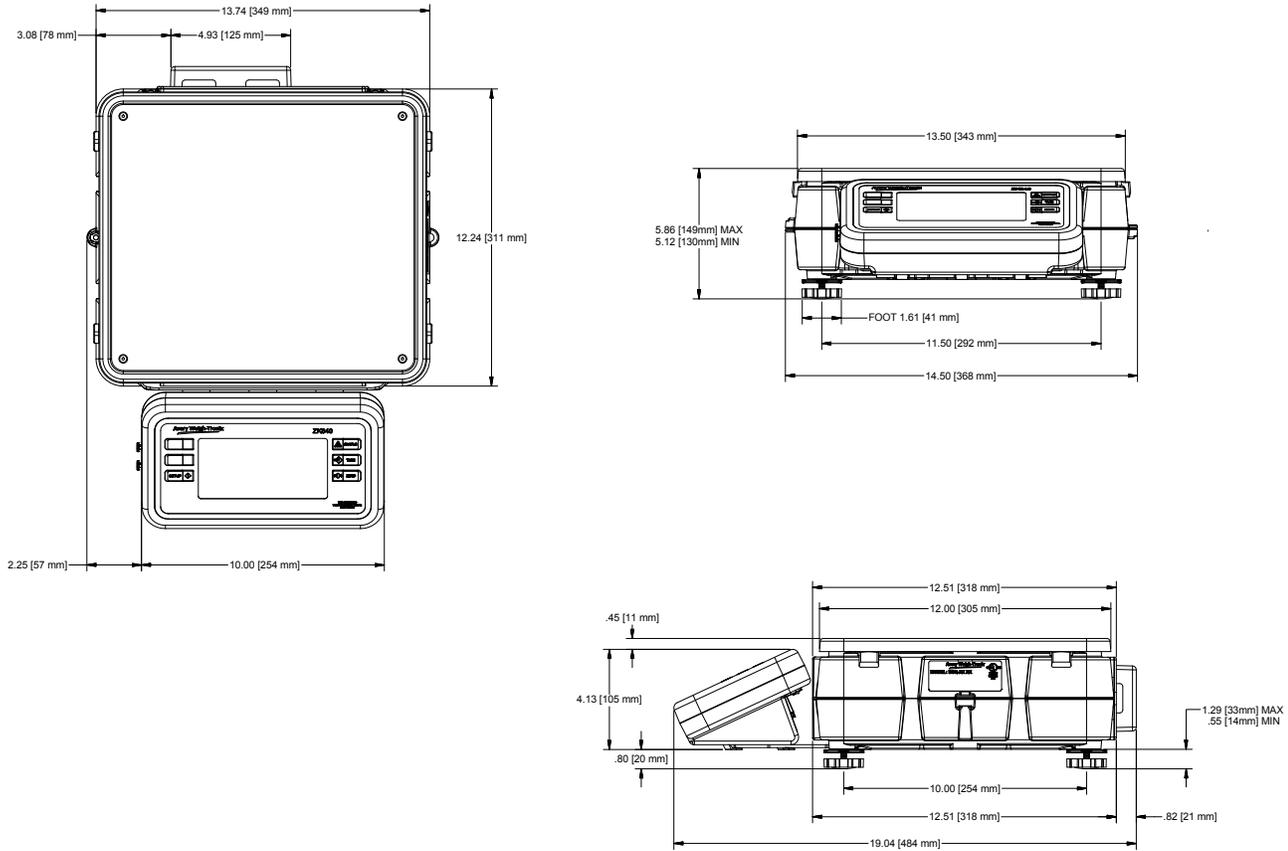| **Remote Inputs**	Three TTL or voltage free logic level inputs can be received for basic key functions or application program events *(up to 128 extra I/O by using the external expansion box / cards with external I/O cards and SSCU8 boxes)*
Standard Outputs	Three outputs can be used for system variable set points or in combination with application program events *(up to 128 extra I/O by using the external expansion box or cards with external I/O cards and SSCU8 boxes)*

Serial Ports	(2) Two serial ports:
	  › Comm 1 RS232 full duplex with handshake
	  › Comm 2 RS232 full duplex
	Manual and Auto print function
	Printer and scanner can share one RS232 port, with a custom application
	  › Supports SMA, ENQ and NCI command response protocols and broadcast
	  › Supports BSQ digital bench bases
	  › Supports external expansion box for allowing other external option cards

USB /VCP (device)	PC Connection *(uses one of the RS232 ports)*

USB Host	(2) Two USB Host ports *(found on the side of the indicator)* can be used for:
	  › USB flash memory
	  › Remote USB keyboard
	  › Scanner
	  › Printer

Ethernet	The Ethernet port can be configured to support ten independent devices. It supports DHCP, UDP Sockets, TCP/IP (client or server), embedded web server, email, SMA, NCI, FTP, ENQ and Broadcast. Fieldbus Ethernet/IP™ and Modbus- TCP

Expanded Memory	Internal expanded data storage can hold up to 4GB extra storage data , ZK840 has one Micro SD slot that is compatible with most Micro SD cards from 4GB to 32GB ideal for:
	  › Database expansion
	  › USB port expanded buffer space
	  › Audit trail data storage capability
	  › Can be used for storing a wide range of Distributor installed applications

Analog Scale Ports	Two analog base ports (green connector) only active when optional 5V analog cards are fitted

Internal Options Cards	Maximum of 2 option cards can be installed inside the ZK840 indicator
	Options are as follows:
	  › Scale Input 5 VDC excitation card (maximum two)
	  › Wireless (Ethernet) internal kit: 802.11b/g wireless data communications kit with antenna

External Option Expansion box /card	With the use of an RS232 external option expansion card / box this now allows up to two extra option cards to be installed *(each external option expansion box /card will use up 1 RS232 port)*
	  › Analog output kit
	  › Current Loop/RS485/RS422 kit
	  › USB device kit
	  › External I/O interface kit (only one I/O card per expansion card / box, must be on top)
	  › DC Output card *(4 Output optically isolated relays 3-60 VDC @ 2A)*
	  › DC Input card *(4 Inputs 4-30 VDC)*
	  › AC Output card *(4 Output optically isolated relays 20-240 VAC @ 1A)*
	  › AC Input card *(4 Inputs 120-240 VAC)*

Other Options	› USB keyboards
	  › Draft shield (1-10 lb /1-5kg only)
	  › Printer
	  › Scanners
	  › Underhook (1-10 lb /1-5kg only)
	  › Columns 15" & 23" high
	  › Desk and wall brackets
	  › Stack lights
	  › Ball top (12" x14" base only)
	  › Battery option
	  › ZM-OPTO Provides 3 inputs and/or 3 outputs, external
	  › OPTO22 G4 interface modules
	  › 64G Micro SD card

DIMENSIONS 9" x 12"
(12" x 14" dimensions can be found on the next page)

DIMENSIONS 12" x 14"

Approvals

NTEP 10,000d single range of 3 range MI /MR
Measurement Canada 10,000d
OIML 10,000d, EC 10,000d single range*
UL/c-UL-US, CE, RoHs, RCM approved*
pending

Avery Weigh-Tronix

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