Avery Weigh-Tronix

ZM
505 INDICATOR

Flexible weight indicator for advanced applications.

Technical Specification

ETHERNET

USB

SERIAL

IP69K Stainless Steel Enclosure

IP69K

IP66 Stainless Steel Panel Mount Enclosure

DESCRIPTION

This high performance, multi-function indicator provides the flexibility to adapt for your applications that require an elevated level of flexibility over elementary weighing indicators.

Suitable for the office, dusty, wet or high pressure and heavy washdown environments, these indicators can display, analyze, store, and transmit data across a range of technology methods to meet your specific installation.
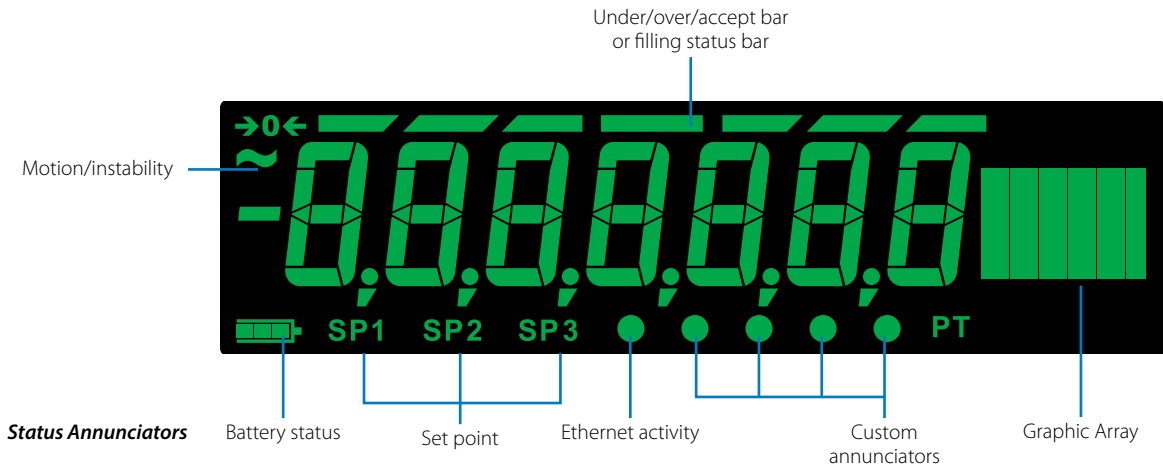
SPECIFICATIONS

GENERAL

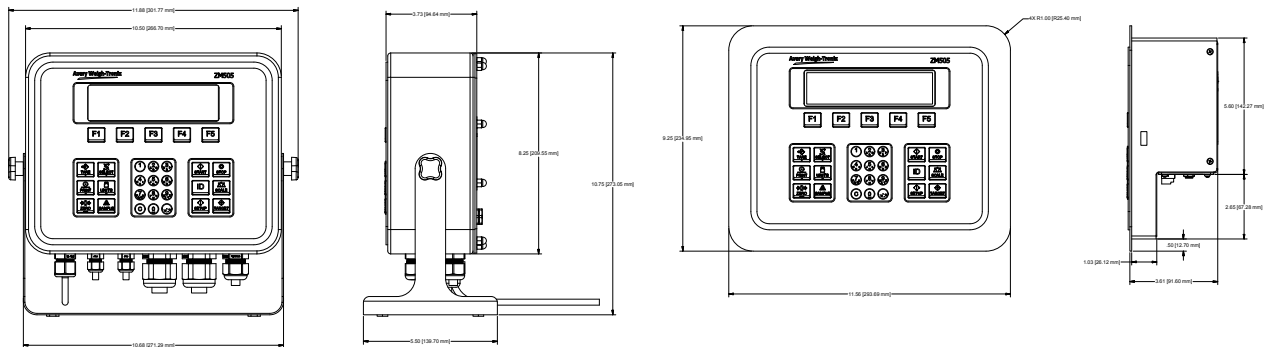|	
Unit of Measure	Four active choices (Kilograms, Ounce, Gram, Pounds, Pound/Ounce, Ton, Tonne, Custom)
Capacity Selections	9,999,999 with decimal located zero to five places
Incremental Selections	Multiples and sub-multiples of 1, 2, 5
Multi-Range/Multi-Interval	Up to three independent weight ranges and divisions
Programmable Selections	Zero range, motion detection, automatic zero tracking, eight point linearization
Time and Date	Battery backed up time/date/year (12 hour AM/PM or 24 hour format)
Calibration	Two to ten points
Analog to Digital Measurement Rate	100 Hz
Internal Resolution	67,108,864 counts per mV/V per second
Digital Filtering	Harmonizer™ filtering with adaptable constant and threshold
Self Diagnostics	Display, keys, inputs, outputs, serial port, scale A to D, USB port and option cards
Dynamic Weighing	Minimum nominal weigh time 100 milliseconds, recommended minimum three hundred milliseconds
Programming Language	Avery Weigh-Tronix Lua, GSE Macro

USER INTERFACE

Keypad	ZM505 has a 29 key chemical resistant keypad with metal domed tactile feedback and audio confirmation when pressed
Operational Keys	ZM505: Zero, Print, Units, Tare, Sample, Setup, ID, Scale, Target, Start, 5 Function keys (F1-F5), Select, Stop, 0-9, Alpha, Decimal, Clear, and common symbols
Status Annunciators	Center of Zero, Motion, Battery status, Set point 1,2,3, Over/Under/Accept bar graph or fill bar graph, Preset Tare, Active Ethernet connection. Additional annunciators are shown in the dot matrix display area
Display	IBN illuminated: seven digit, nine segment display, green characters with black background 0.8" (20 mm) high digits and Graphic Array used for Annunciators, mode identification and HMI (Human Machine Interface). Sort bar/Checkweigher segments
Display Rate	Selectable (1, 2, 5, 10, 20) times per second

Under/over/accept bar
or filling status bar

Motion/instability

Status Annunciators   Battery status   Set point   Ethernet activity   Custom annunciators   Graphic Array

PHYSICAL

Enclosure	Stainless steel desktop: 304 brushed stainless steel (IP69K certified) with GORE® Vent ventilation and tilt stand with provisions for desk, wall and column mounting Stainless steel panel mount: Stainless steel with easy access to interface connections
Operating Temperature	14° F to 104° F / -10° C to 40° C (Compliance with legal for trade requirements) -4° F to 140° F / -20° C to 60° C (Industrial) 10 to 90% humidity non condensing
Shipping Weight	Stainless steel desktop: 12.4 lb (5.62 kg) Stainless steel panel mount: 11 lb (5 kg)
Dimensions (L x W x H)	Stainless steel desktop: 11.88" x 5.5" x 10.75" (301.69 mm x 139.70 mm x 273.05 mm) Stainless steel panel mount: 11.56" x 3.61" x 9.25" (293.69 mm x 91.60 mm x 234.95 mm)

INPUT/OUTPUT

Remote Inputs	Three TTL or voltage free logic level inputs can be received for basic key functions or application program events
Standard Outputs	Three outputs can be used for system variable setpoints or in combination with application program events
Serial Ports (3)	Three serial ports: - Comm 1 RS232 full duplex Or - Comm 1 RS232 Full duplex with handshaking - Comm 2 RS232 full duplex - Comm 2 RS232 Not available - Comm 3 RS232 full duplex - Comm 3 RS232 Full duplex with handshaking Manual and Autoprint function Supports SMA, ENQ and NCI command response protocols and broadcast Supports BSQ digital bench base
USB Host (2)	Two USB Host ports for: › Printer › USB flash memory › Remote USB keyboard
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

ELECTRICAL

Power Requirements	Line voltage: 90-264 VAC (110-240 VAC nominal), frequency 50 or 60 Hz, 12 to 36 VDC Power consumption: estimated at 300mA at 12VDC for one 350 ohm weight sensor and 650mA at 12VDC for fourteen 350 ohm weight sensors
Excitation	10 VDC (+/-5 VDC), short circuit protected Supports up to twenty four 350 ohm weight sensors (four scales) 4 or 6 conductors with sense leads Detachable plug connectors
Analog Signal Input Range	-1 m/V/V to 5 mV/V
Analog Signal Sensitivity	0.1 µV/V/divisions minimum 0.5 µV/V/divisions recommended
Circuitry Protection	RFI, EMI and ESD protection (10 V/m minimum RFI noise immunity)

OPTIONS

Option Kits (maximum four internal options)	Analog output kit: 0-5 VDC, 0-10 VDC and 4-20 mA Current loop kit: Current loop and RS232/RS422 USB device kit: Provides USB interface to PC (virtual comm Port) Device Net™ Profibus© Wireless (Ethernet) internal kit: 802.11b/g wireless data communications kit with antenna Internal 120 VAC Relay module for IP69K model Scale Input 5 VDC excitation Scale Input 10 VDC excitation with STVS kit External I/O interface kit DC Output, 4 relays 3-60VDC at 2A Kit DC Input, 4 Inputs 4-30VDC kit AC Output, 4 relays 20-240VAC at 1A kit (IP69K models) AC Input, 4 Inputs 120-240VAC kit (IP69K models) Severe Transient Voltage Suppressor (STVS)
ZM-OPTO	Provides 3 inputs and/or 3 outputs, external G4 interface modules
USB Watertight Gland	Rubberized and sealed
Ethernet Watertight Gland	Rubberized and sealed

APPROVALS

Patent	US Patent 672,262
Agencies	NTEP (US) Class III/IIIL 10,000d (CC# 14-039) Measurement Canada class III/III HD (AM-5955C) UL/cUL IP69K

Measurement Canada Approved

Avery Weigh-Tronix

www.averyweigh-tronix.com

Avery Weigh-Tronix is an ITW company

zm505_spec_501685.indd
V1   AWT35-50685