Avery Weigh-Tronix

ZQ

375 IP69K CHECKWEIGHER

Checkweighing solutions for food processing and beyond.

Technical Specification

NSF IP69K

Certified by NSF to NSF/ANSI Standard 3-A and with IP69K approval, the Avery Weigh-Tronix ZQ375 Checkweigher is a fast and easy solution for food environments and beyond.

Fully stainless steel construction with minimal food trap areas for ease of cleaning.

High and low capacity base designs automatically transfer shock loads and overloads away from the load cell.

From straightforward checkweighing to complete visibility of weighing data and statistics, the ZQ375 provides you with the information you need through Wireless, USB or Ethernet to maximise performance and profitability.

SPECIFICATIONS

OPERATING APPLICATIONS

Quick Check Application	± Target check mode with adjustable 6 segmented red under, orange over and large green accept bar.
Gross/Net Checkweighing Application	Gross/net checkweighing mode with adjustable segmented red under, orange over and green accept bar. Built in transaction counter. Pack run. Configurable standard deviation and Xbar R.
Advanced Checkweighing Application	500 PLU storage, gross/net checkweighing settings with fully adjustable segmented red under, orange over and green accept, under over alarms. Full range of built in statistical packages, transaction counter, pack run, custom and standard deviation data capture, Xbar R, negative checkweighing and auto tare.
Percentage Checkweighing Application	A fast and simle way to monitor and record percentage weight gain seen in meats when brine water injection machines are used.
Grading Application	Up to 10 easy-to-set grading bands

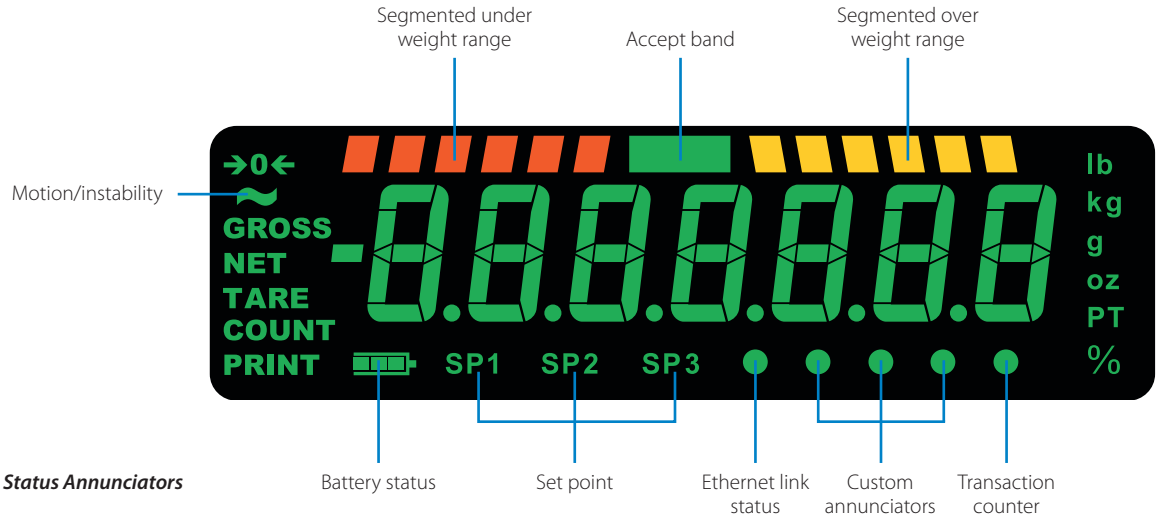
ZQ375 CHECKWEIGHER *Technical Specification*

GENERAL

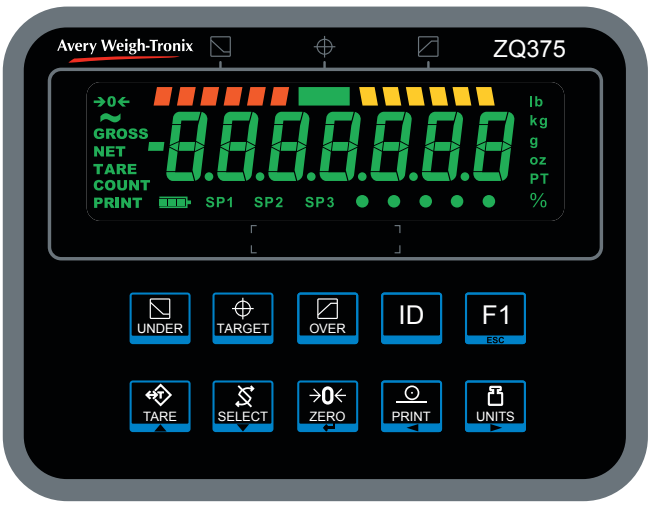
Unit of Measure	Three independently configurable (Pounds, Kilograms, Ounce, Gram, Pound/Ounce, Custom)
Capacity Selections	Base capacities 5lb to 500lb (3kg to 200kg) configurable 999,999 with decimal located zero to five places
Incremental Selections	Multiples and sub-multiples of 1, 2, 5
Programmable Selections	Zero range, motion detection, automatic zero tracking, five point linearization
Time and Date	Battery backed up time/date/year (12 hour or 24 hour format)
Calibration	Two to five points stored
Analog to Digital Measurement Rate	80 Hz
Internal Resolution	53,687,100 counts per mV/V per second
Digital Filtering	Harmonizer filtering with adaptable constant and threshold
Self Diagnostics	Display, keys, inputs, outputs, serial port, installed options, and last 10 Error messages

USER INTERFACE

Keypad	Ten button knife and chemical resistant with audible keypress feedback
Operational Keys	Zero, Tare, Print, Select, Units, Under, Target, Over, ID, F1 Function
Status Annunciators	Zero, Motion, Gross, Net, Tare, Count, Print, Battery Status, Set Point 1/2/3, Over/Under/Accept bar graph, lb, kg, gram, oz, Preset Tare, Percentage, Active Ethernet connection
Display	IBN illuminated, 0.8" (20mm) high 8-digit, nine segment display, green on black background for indoor use. Bar graph: 6 red under segments, large green accept segment and 6 orange over segments. 22 annunciators for status and mode identification.
Display Rate	Selectable (1,2,5,10) times per second



Status Annunciators



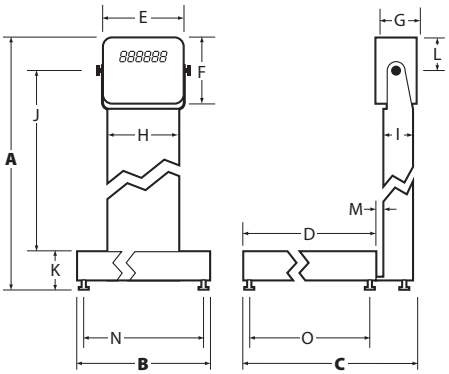
Keypad - 10 keys

PHYSICAL

Enclosures	Certified by NSF to NSF/ANSI Standard 3-A 14159-1 -2010, food-grade 304 brushed stainless steel enclosure (IP69K certified) with GORE® Vent ventilation and column-mounted to a range of stainless steel pickled and electropolished IP69K bases.
Operating Temperature	14° F to 104° F / -10° C to 40° C (Approvals) at 10 to 90% humidity -4° F to 140° F / -20° C to 60° C (industrial) at 10 to 90% humidity
Humidity	10% to 90% relative, non-condensing
Base Construction	Easy to clean, certified by NSF to NSF/ANSI Standard 3-A, fully stainless steel food-grade 304 brushed base construction with pickle and polish weigh pan and column suitable for food contact areas. Designed with breakaway load transfer system to help fully protect the loadcells from unwanted overloads and shock loads.
Overload Protection	Torsion base: 500% Diamond base: 150%
Corner Loading	100%
IP Protection	*Torsion BSG 3000d base:* IP69K *Torsion BSF 5000d base:* IP69K *Diamond 5000d BS base:* IP69K
Approved Accuracy	*Torsion Base BSG:* 3000d NTEP (3000d UK/EC/OIML) *Torsion Base BSF: 5000d* NTEP *and Measurement Canada* (3000d UK/EC/OIML) *Diamond Base BS: 5000d* NTEP *and Measurement Canada* (5000d UK/EC/OIML)

BASE CAPACITY/RESOLUTION

	Base size	*US Resolution*	*Resolution (Europe)*
BSG 3000d Tosion base IP69K	8.75"x 8.75" (220mm x 220mm) 12"x 14" (310mm x 350mm)	6 x 0.002 lb (3 x 0.001 kg) 12 x 0.005 lb (6 x 0.002 kg) 30 x 0.01 lb (15 x 0.005 kg) 60 x 0.02 lb (30 x 0.01 kg) 100 x 0.05 lb (50 x 0.02 kg)	3 x 0.001 kg 6 x 0.002 kg 15 x 0.005 kg 30 x 0.01 kg
BSF 5000d Torsion base IP69K	8.75"x 8.75" (220mm x 220mm) 12"x 14" (310mm x 350mm)	5 x 0.001 lb (2.5 x 0.0005 kg) 10 x 0.002 lb (5 x 0.001 kg) 25 x 0.005 lb (12.5 x 0.002 kg) 50 x 0.01 lb (25 x 0.005 kg) 100 x 0.02 lb (50 x 0.01 kg)	
BS 5000d Diamond base IP69K	20"x 20" (510mm x 510mm) 24"x 24" (610 mm x 610mm)	100 x 0.02 lb (50 x 0.01 kg) 200 x 0.05 lb (100 x 0.02 kg) 200 x 0.05 lb (100 x 0.02 kg) 500 x 0.1 lb (220 x 0.05 kg)	45 x 0.01 kg N/A 90 x 0.02 kg 200 x 0.05 kg



DIMENSIONS (inches)

Base Size	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
8.75" x 8.75"	18.4	8.75	11.83	8.75	8.25	6.5	3.72	6.77	2.58	11.58	3.70	3.00	0.72	6.63	6.67
12" x 14"	18.4	13.75	15.33	12.25	8.25	6.5	3.72	6.77	2.58	10.96	4.31	3.00	0.78	11.50	10.00
20" x 20"	35.59	19.85	26.97	19.85	8.25	6.5	3.72	6.77	3.15	29.25	5.00	3.00	3.94	18.73	18.75
24" x 24"	35.59	23.85	30.90	23.85	8.25	6.5	3.72	6.77	3.15	29.25	5.00	3.00	2.76	22.25	22.50

DIMENSIONS (mm)

Base Size	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
220mm x 220mm	468	208	301	223	210	165	95	172	66	294	94	76	20	168	170
310mm x 350mm	468	349	389	311	210	165	95	172	66	279	110	76	20	292	254
510mm x 510mm	904	504	685	504	210	165	95	172	80	743	125	76	100	476	476
610mm x 610mm	904	606	785	606	210	165	95	172	80	743	125	76	70	572	572

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INPUT/OUTPUT

Remote Inputs	Three logic level inputs for Zero, Print, Tare, Units or F1
Standard Outputs	Three set point outputs, open collector design
Serial Ports	Two serial ports: - Comm 1 RS232 full duplex - Comm 2 RS232 full duplex Or - Comm 1 RS232 full duplex with handshaking - Comm 2 Not available Programmable serial response to ASCII input SMA protocol, broadcast, enquire
USB Host	Printer input or USB flash memory
Ethernet	The Ethernet port can be configured to support 5 independent devices. It supports DHCP, UDP Sockets, TCP/IP (client or server), SMTP(email), SMA, NCI, FTP, ENQ(Enquire Mode) and Broadcast. Fieldbus Ethernet/IP™ and Modbus-TCP
Wireless	Optional internal 802.11b/g

ELECTRICAL

Power Requirements	*Line voltage:* 90-264 VAC (110-240 VAC nominal), frequency 50 or 60 Hz or 12 to 36 VDC *Power consumption:* estimated at 200 mA at 12 VDC for one weight sensor and 250 mA at 12 VDC for six weight sensors.
Excitation	5 VDC, short circuit protected; Supports up to six 350 ohm weight sensors; 4 or 6 conductors with sense leads
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

OPTIONS

PC Card (choose one)	*USB device card:* Provides USB interface to PC *Wireless internal card:* 802.11b/g wireless data communications, 200ft (60m) distance between receivers subject to working environments *Current loop card:* Current Loop and RS485/RS422
Watertight Gland	*Choose one:* USB or Ethernet rubberized and sealed with 6" lead
External Relay Box (column mounted)	IP69K easy to clean external relay box to be housed in the rear of column and to hold up to 3 OPTO22 relays for running trips alarms or external light stacks
Light Stack (column mounted)	Light stack quickly connects to side of indicator enclosure to enhance the under over accept visibility
External Battery (column mounted)	External IP69K removable battery pack with dry area external recharger. 16 hours operation between charges (charge time 8 hours).
Stand Kit	For wall mounting indicator

APPROVALS

Patent	US Patent 672,262
Agencies **pending*	NTEP (US) Class III/IIIL 5,000 d (CC#11-096, CC#88-104, CC#12-035, CC#03-067) OIML / EC Class III 3,000 d Measurement Canada (AM5841C, AM5846, S.WA3094) Australia (NMI S570, NMI6/4C/277) New Zealand (MCA 2100, MCA 2101) India South Africa* CE (European and UK) cUL North America / Canada Certified by NSF to NSF/ANSI Standard 3-A 14159-1 -2010 IP69K NSF

Measurement Canada Approved AM-5841C

Australian Government National Measurement Institute

Ministry of Business, Innovation & Employment

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