

## 375 IP69K CHECKWEIGHER

Checkweighing solutions for food processing and beyond.

Technical Specification



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

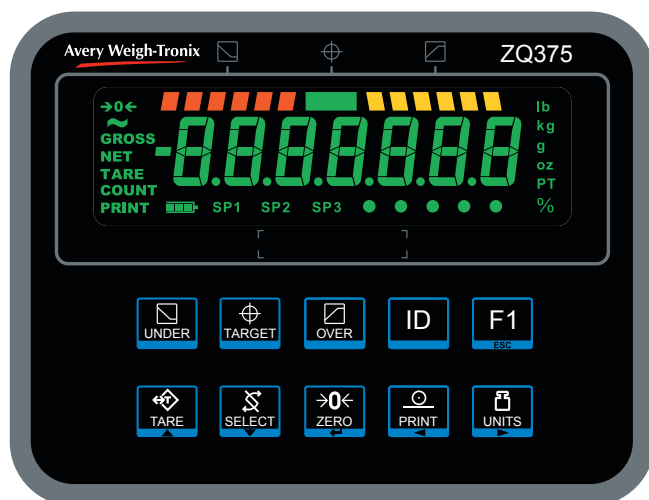
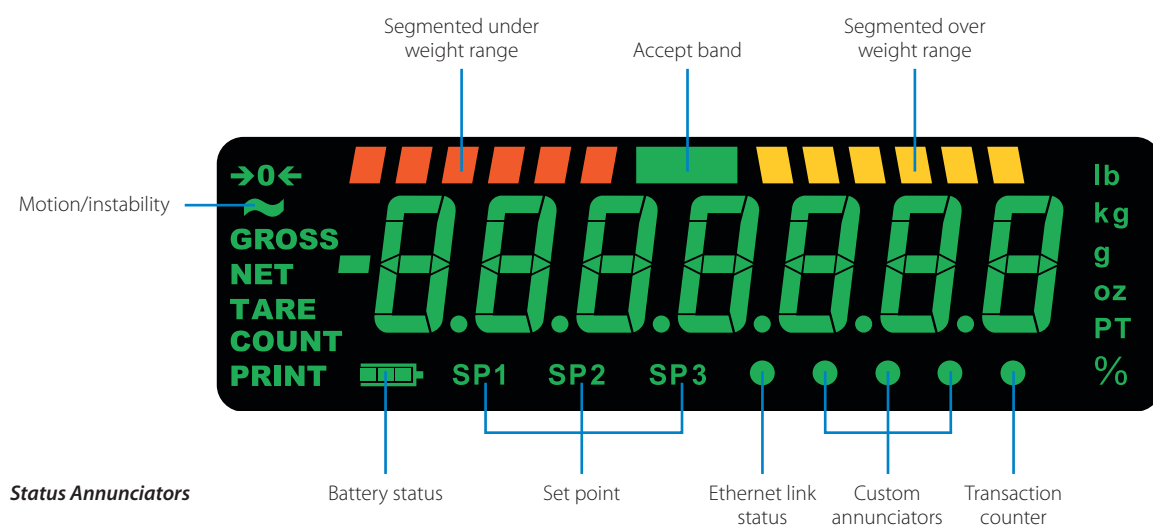
<b>Quick Check Application</b>	± Target check mode with adjustable 6 segmented red under, orange over and large green accept bar.
<b>Gross/Net Checkweighing Application</b>	Gross/net checkweighing mode with adjustable segmented red under, orange over and green accept bar. Built in transaction counter. Pack run. Configurable standard deviation and Xbar R.
<b>Advanced Checkweighing Application</b>	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.
<b>Percentage Checkweighing Application</b>	A fast and simple way to monitor and record percentage weight gain seen in meats when brine water injection machines are used.
<b>Grading Application</b>	Up to 10 easy-to-set grading bands

## GENERAL

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

## USER INTERFACE

<b>Keypad</b>	Ten button knife and chemical resistant with audible keypress feedback
<b>Operational Keys</b>	Zero, Tare, Print, Select, Units, Under, Target, Over, ID, F1 Function
<b>Status Annunciators</b>	Zero, Motion, Gross, Net, Tare, Count, Battery Status, Set Point 1/2/3, Over/Under/Accept bar graph, lb, kg, gram, oz, Preset Tare, Percentage, Active Ethernet connection
<b>Display</b>	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.
<b>Display Rate</b>	Selectable (1,2,5,10) times per second



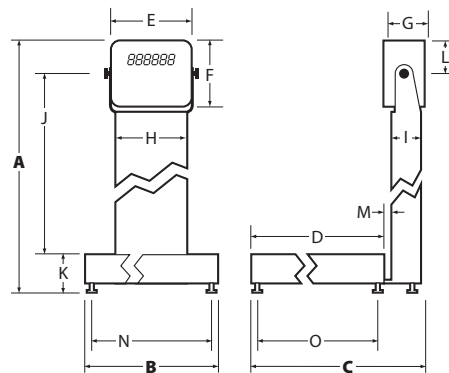
Keypad - 10 keys

## PHYSICAL

<b>Enclosures</b>	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.
<b>Operating Temperature</b>	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
<b>Humidity</b>	10% to 90% relative, non-condensing
<b>Base Construction</b>	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.
<b>Overload Protection</b>	Torsion base: 500% Diamond base: 150%
<b>Corner Loading</b>	100%
<b>IP Protection</b>	<i>Torsion BSG 3000d base: IP69K</i> <i>Torsion BSF 5000d base: IP69K</i> <i>Diamond 5000d BS base: IP69K</i>
<b>Approved Accuracy</b>	<i>Torsion Base BSG: 3000d NTEP (3000d UK/EC/OIML)</i> <i>Torsion Base BSF: 5000d NTEP and Measurement Canada (3000d UK/EC/OIML)</i> <i>Diamond Base BS: 5000d NTEP and Measurement Canada (5000d UK/EC/OIML)</i>

## BASE CAPACITY/RESOLUTION

	Base size	US Resolution	Resolution (Europe)
<b>BSG 3000d Torsion base</b> IP69K	8.75" x 8.75" (220mm x 220mm)	6 x 0.002 lb (3 x 0.001 kg) 12 x 0.005 lb (6 x 0.002 kg)	3 x 0.001 kg 6 x 0.002 kg
	12" x 14" (310mm x 350mm)	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)	15 x 0.005 kg 30 x 0.01 kg
<b>BSF 5000d Torsion base</b> IP69K	8.75" x 8.75" (220mm x 220mm)	5 x 0.001 lb (2.5 x 0.0005 kg) 10 x 0.002 lb (5 x 0.001 kg)	
	12" x 14" (310mm x 350mm)	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)	
<b>BS 5000d Diamond base</b> IP69K	20" x 20" (510mm x 510mm)	100 x 0.02 lb (50 x 0.01 kg) 200 x 0.05 lb (100 x 0.02 kg)	45 x 0.01 kg N/A
	24" x 24" (610mm x 610mm)	200 x 0.05 lb (100 x 0.02 kg) 500 x 0.1 lb (220 x 0.05 kg)	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
<b>8.75" x 8.75"</b>	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
<b>12" x 14"</b>	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
<b>20" x 20"</b>	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
<b>24" x 24"</b>	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
<b>220mm x 220mm</b>	468	208	301	223	210	165	95	172	66	294	94	76	20	168	170
<b>310mm x 350mm</b>	468	349	389	311	210	165	95	172	66	279	110	76	20	292	254
<b>510mm x 510mm</b>	904	504	685	504	210	165	95	172	80	743	125	76	100	476	476
<b>610mm x 610mm</b>	904	606	785	606	210	165	95	172	80	743	125	76	70	572	572

## INPUT/OUTPUT

<b>Remote Inputs</b>	Three logic level inputs for Zero, Print, Tare, Units or F1
<b>Standard Outputs</b>	Three set point outputs, open collector design
<b>Serial Ports</b>	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
<b>USB Host</b>	Printer input or USB flash memory
<b>Ethernet</b>	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
<b>Wireless</b>	Optional internal 802.11b/g

## ELECTRICAL

<b>Power Requirements</b>	<i>Line voltage:</i> 90-264 VAC (110-240 VAC nominal), frequency 50 or 60 Hz or 12 to 36 VDC <i>Power consumption:</i> estimated at 200 mA at 12 VDC for one weight sensor and 250 mA at 12 VDC for six weight sensors.
<b>Excitation</b>	5 VDC, short circuit protected; Supports up to six 350 ohm weight sensors; four or six conductors with sense leads
<b>Analog Signal Input Range</b>	-1 mV/V to 5 mV/V
<b>Analog Signal Sensitivity</b>	0.1 $\mu$ V/V/divisions minimum 0.5 $\mu$ V/V/divisions recommended
<b>Circuitry Protection</b>	RFI, EMI and ESD protection

## OPTIONS

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

## APPROVALS

<b>Patent</b>	US Patent 672,262
<b>Agencies</b>	<p>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</p>



# Avery Weigh-Tronix

[www.averyweigh-tronix.com](http://www.averyweigh-tronix.com)

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