National Measurement Office

Member State of OIML
United Kingdom of Great Britain
and Northern Ireland

OIML Certificate No
R76/2006-GB1-12.05
Revision 1

OIML CERTIFICATE OF CONFORMITY

Issuing authority: **National Measurement Office**

Person responsible: **Paul Dixon – Product Certification Manager**

Applicant: **Avery Weigh-Tronix Ltd**
Foundry Lane
Smethwick
West Midlands B66 2LP
United Kingdom

Manufacturer: **The applicant**

Identification of the certified pattern: **ZQ375 Checkweigher**

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test report) with the requirements of the following Recommendation of the International Organisation of Legal Metrology (OIML):

OIML R 76 - Edition 2006(E) for **accuracy class**: [III]

This certificate relates only to the metrological and technical characteristics of the pattern of the instrument concerned, as covered by the relevant OIML International Recommendation.

This certificate does not bestow any form of legal international approval.

Important note: Apart from the mention of the certificates reference number and the name of the OIML Member State in which the certificate was issued, partial quotation of the certificate or of the associated test report is not permitted, though they may be reproduced in full.

This revision replaces earlier versions of the certificate.

Issue Date: **12 October 2012**
Reference No: **TS1201/0041**

Signatory: **P R Dixon**

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UKAS PRODUCT CERTIFICATION 0135

BIS Department for Business Innovation & Skills

The conformity was established by tests described in the associated pattern evaluation report P00936/1 which includes 13 pages.

Characteristics of the instrument:

Characteristics:

This family of instruments is designated the ZQ375 Checkweigher and comprises the Torsion base and Diamond base models. The instruments are Class III, mains or battery-powered, self-indicating, non-automatic weighing instruments, and are not designed for direct sales to the public.

Main features:

- ZQ375 Indicating Device (fully described in R76/2006-GB1-12.04)
- BSF / BSG Torsion or BS Diamond base stainless steel load receptor
- Stainless Steel Column
- Optional ZQ-BAT battery box
- Optional ZQ-OPTO interface box (with or without beacon assembly)

Devices:

- Semi-automatic zero setting (≤ 4% Max)
- Zero tracking (≤ 4% Max)
- Semi-automatic subtractive tare weighing
- Pre-set tare
- Recall of Gross indication when tare is active
- Determination of stability of equilibrium
- Indication of stability of equilibrium
- Checking of display
- Printing
- PLUs
- Alibi storage device
- Gravity compensation
- Real time clock
- Command via external device (PC)
- Simple checkweighing (Sim375)
- Mid-level checkweighing (Mid375)
- Advanced checkweighing (Adv375)
- Percentage checkweighing (Per375)
- Grading checkweighing (Grad375)
- Gross, Net, Tare, Preset tare, Print, Zero, Motion, Accumulation, Over/Under weight and Network indicators

Load cell:

Torsion Base (BSF Series):

The load cell is an HBM Stainless Steel Single Point Load cell, model PW15AHC3, capacities as per following table.

Torsion Base (BSG Series):

The load cell is a Vishay Stainless Steel Single Point Load cell, model 1130, capacities as per following table.

Diamond Base (BS Series):

The load cell is an Avery Weigh-Tronix Stainless Steel Single Point load cell, model FLS, capacities as per following table.

Any compatible load cell(s) may be used providing the following conditions are met:

- There is a respective OIML Certificate of Conformity (R60) issued for the load cell.
- The certificate contains the load cell types and the necessary load cell data required for the manufacturer's declaration of compatibility of modules, and any particular installation requirements. A load cell marked NH is allowed only if humidity testing to R76 has been conducted on this load cell.
- The compatibility of the load cells and indicator is established by the manufacturer by means of the compatibility of modules calculation at the time of verification.
- The load cell transmission conforms to a standard type.

Metrological characteristics

BSF Torsion base (with HBM PW15AHC3 load cell)

Base Model	BSF-99-3	BSF-99-6	BSF-1214-15	BSF-1214-30	BSF-1214-45
Load Cell Model	PW15AH C3/10kg	PW15AH C3/10kg	PW15AH C3/20kg	PW15AH C3/50kg	PW15AH C3/100kg
Max (kg)	3	6	15	30	45
Min (g)	20	40	100	200	300
e = (g)	1	2	5	10	20
T ≤ (kg)	3	6	15	30	45
E_{max} (kg)	10	10	20	50	100

BSG Torsion base (with Vishay 1130 load cell)

Base Model	BSG-99-6	BSG-1214-15	BSG-1214-30
Load Cell Model	1130-10kg	1130-20kg	1130-50kg
Max (kg)	6	15	30
Min (g)	40	100	200
e = (g)	2	5	10
T ≤ (kg)	6	15	30
E_{max} (kg)	10	20	50

Diamond base (with Avery Weigh-Tronix FLS load cell)

Base Model	BS-2020-45	BS-2424-90	BS-2424-200
Load Cell Model	FLS 125lb	FLS 250lb	FLS 1000lb
Max (kg)	45	90	200
Min (g)	200	400	1000
e = (g)	10	20	50
T ≤ (kg)	45	90	200
E_{max} (kg)	56.7	113	440

Technical characteristics:

Power supply	- ZM301-ADz*, ZM303-ADz*, ZM301-SPz*, ZM303-SPz: 12-36V DC via mains adaptor or external battery pack. - ZM301-SDz*, ZM303-SDz*, ZQ375-SD1: 110-240V AC(50/60Hz) * where z = display type
Maximum number of scale intervals	6000
Maximum Tare	-100% Max
Maximum Preset Tare	-100% Max
Load cell excitation voltage	5 VDC
Minimum load cell impedance	58.33 Ω
Maximum load cell impedance	1100 Ω
Minimum input voltage per scale interval	0.8 µV
Measuring range minimum voltage	0 mV
Measuring range maximum voltage	15 mV
Fraction of maximum permissible error	P_{ind} = 0.5
Operating temperature range	-10 °C to +40 °C
Load cell connection	4 or 6-core with braided outer screen, flexible PVC overall Jacket. 0.5 mm^2 per core Maximum length (6-wire) = 30m (60 m/mm^2)

Interfaces:

- Load cell 4-wire or 6-wire shielded connection
- Logic level inputs
- Open collector outputs
- Current Loop
- RS232/422/485
- 10/100 Ethernet
- USB Host
- Wireless LAN 802.11b/g
- ZQ-BAT Battery Pack
- ZQ-OPTO Interface box
- USB Device

Software:

The software is designated AWT30-500161 version 1.x.x.x (where x.x.x refers to the identification of non-legally relevant software, which may be modified by the manufacturer). The calibration and legally relevant parameters are protected via physical (jumper located on main board) or software means (password and incrementing counters).

Certificate History

ISSUE NO.	DATE	DESCRIPTION
R76/2006-GB1-12.05	27 April 2012	Certificate first issued
R76/2006-GB1-12.05 Rev 1	12 October 2012	USB Device added to the certificate.