



National  
Measurement &  
Regulation Office



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

OIML Certificate No  
R76/2006-GB1-12.04  
Revision 3

## OIML CERTIFICATE OF CONFORMITY

Issuing authority: **National Measurement and Regulation Office**  
Person responsible: **Paul Dixon – Director, Certification Services**  
Applicant: **Avery Weigh-Tronix  
Foundry Lane  
Smethwick  
West Midlands B66 2LP  
United Kingdom**  
Manufacturer: **The applicant**

Identification of the  
certified pattern: **ZM301, ZM303, ZM305 and ZQ375 Series**

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] and [IIII]**

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 previous versions of the certificate.

Issue Date: **30 September 2015**  
Reference No: **TS1201/0041**

**G Stones**  
**Technical Manager - Certification Services**

National Measurement and Regulation Office | Stanton Avenue | Teddington | TW11 0JZ | United Kingdom  
Tel +44 (0) 20 8943 7272 | Fax +44 (0) 20 8943 7270 | Web [www.gov.uk/nmro](http://www.gov.uk/nmro)  
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The conformity was established by tests described in the associated pattern evaluation report P01332 which includes 13 pages.

### **Characteristics of the instrument:**

#### Characteristics:

The family of indicating devices are designated the Avery Weigh-Tronix ZM301 / ZM303 / ZM305 / ZQ375 Series. The indicators are self-indicating, mains, DC or battery-powered, and are designed to be used as part of a Class III or IIII, Non-Automatic Weighing Instrument.

#### Construction:

The indicator construction is dependent on the model number, the designation follows the following format: "Prefix-XYZ", with

- Model Number Prefix:  
ZM301, ZM303 or ZM305 = Standard Indicator  
ZQ375 = Check-weighing Indicator
- First Digit X – Enclosure material  
S = Stainless enclosure  
A=Alloy Enclosure
- Second Digit Y – Mounting orientation  
D = Desktop  
G = Desktop, with GTN Inbound – Outbound software & keypad variant  
P = Panel Mount
- Third Digit Z – Display Type  
1 = IBN – Black background with Green Digits  
2 = TN – Green Background with Black Digits

The ZM301 features 6 operational keys, whereas the ZM303 and ZM305 overlays are fitted with 24 operational keys, including a numeric keypad. The ZM305-SG1 overlay includes keys for Inbound / Outbound weighing operation, while the ZQ375 is specifically designed for Check Weighing applications, and is fitted with 10 operational keys.

#### Devices:

- Semi-automatic zero setting ( $\leq 4\%$  Max)
- Zero tracking ( $\leq 4\%$  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
- Checkweighing
- Real time clock
- Counting
- Weigh labelling
- Command via external device (PC)
- Accumulation

- Target Weighing
- Batching
- Peak Hold
- Simple checkweighing (Sim375), ZQ375 models only
- Mid-level checkweighing (Mid375), ZQ375 models only
- Advanced checkweighing (Adv375), ZQ375 models only
- Percentage checkweighing (Per375), ZQ375 models only
- Grading checkweighing (Grad375), ZQ375 models only
- GTN Inbound – Outbound, ZM305-SG1 model only (with V2.x.x.x software)
- Gross, Net, Tare, Preset tare, Print, Zero, Motion, Accumulation, Over/Under weight and Network indicators

Technical data:

Power supply	- ZM301-ADz*, ZM303-ADz*, ZM301-SPz*, ZM303-SPz: 12-36 V DC via mains adaptor or external battery pack. - ZM301-SDz*, ZM303-SDz*, ZM305-SD1, ZM305-SG1, ZQ375-SD1: 110-240 V AC (50/60 Hz) * where z = display type	
	ZM301, ZM303, ZQ375	ZM305
Maximum number of scale intervals	6 000	10 000
Maximum Tare	-100 % Max	
Maximum Preset Tare	-100 % Max	
Load cell excitation voltage	5 V DC	10 V DC
Minimum load cell impedance	58.33 Ω	21.87 Ω
Maximum load cell impedance	1 100 Ω	
Minimum input voltage per scale interval	0.8 μV	0.5 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.	
	Maximum length (6-wire) = 196 m/mm <sup>2</sup> (limited to 30 m)	Maximum length (6-wire) = 211 m/mm <sup>2</sup>

Interfaces:

- Load cell 4-wire or 6-wire shielded connection
- 3 x logic level inputs
- 3 x open collector outputs
- 2 x RS232 serial ports
- 10/100 Ethernet
- USB Host

Optional Interface & PCBs:

- Analogue output card, providing 0-10 V DC and 4-20 mA outputs
- Current loop card, providing 4-20 mA loop and RS485 / RS422
- Internal Wireless LAN card, providing an 802.11 b/g wireless link
- USB Device card, providing USB interface to PC

Optional Modules (ZQ375 only):

- ZQ-BAT Battery pack
- ZQ-OPTO Interface box (with or without beacon assembly)

Software:

The software is designated AWT30-500161 version 1.x.x.x or 2.x.x.x\* (where x.x.x refers to the identification of non-legally relevant software, which may be modified by the manufacturer).

*\* Version 1.x.x.x software may not be fitted to the ZM305 series for which version 2.x.x.x or higher is required.*

The calibration and legally relevant parameters are protected via physical (jumper located on main board) or software means (password and incrementing counters).

**Certificate History**

<b>Issue №.</b>	<b>Date</b>	<b>Description</b>
R76/2006-GB1-12.04	27 April 2012	Certificate first issued
R76/2006-GB1-12.04 Rev 1	12 October 2012	USB Device card added to the certificate.
R76/2006-GB1-12.04 Rev 2	22 August 2014	Company name changed from Avery Weigh-Tronix Ltd. to Avery Weigh-Tronix. Addition of ZM305 Series and Version 2.x.x.x software.
R76/2006-GB1-12.04 Rev 3	30 September 2015	Load cell connection data in technical data section corrected.