Content

Title：	Directions Governing Type Approval of Electronic Non-automatic Weighing Instruments Ch
Date：	2014.07.14
Legislative：	1.9 clauses enacted and promulgated by the Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs on September 12, 2003 and effected on promulgated date. 2.9 clauses enacted and promulgated by the Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs on July 14, 2014 and effected on amended date.
Content：	1. These Directions are established for conducting type approval, series type approval and approbation of electronic non-automatic weighing instruments and other relevant activities. 2. To apply for type approval, series type approval or approbation, the applicant shall submit the following technical documents: (1) Two instruction manuals of operating (exempted for applicants for approbation); (2) Two lists of the matters of lead seals and stamps (exempted for applicants for approbation); (3) The original certificate of type approval (exempted for applicants for type approval); (4) Description of the difference caused by alteration (exempted for applicants for type approval). 3. To apply for type approval or series type approval, the applicant shall submit the following appearance photos (attached on A4 paper and bound into two volumes; the photos shall not be smaller than 12.7 x8.8 cm2): (1) Totally six photos of the upper, lower, left, right, front and back face of the instrument; and (2) Close-up photos of the marks, buttons and sealing. 4. An applicant for type approval shall submit the following technical documents to the designated Laboratory recognized by the designated dedicated weights and measures authority to apply for test: (1) Structural chart and 3D breakdown drawing (commonly called "exploded view") of the sample; (2) Instruction manual of operating functions; (3) Specification sheet of functions and devices (see the annexed table); (4) Circuit block diagram and circuit diagram; (5) List of the critical parts, at least including the detailed specifications of load cell, analog/digital converter and microcomputer processor; (6) Description of sealing and locking methods (including the location diagram of lead seals and the list of the matters of lead seals and stamps); (7) Description of pricing and weighing setting or adjusting methods (including calibration of weighing capacity); (8) Illustration of the labels, marks, and other information displayed on the weighing instrument; (9) Where the instrument has the pricing display function, flow chart explaining calculation of the amount payable (including the principle of rounding); (10) Other illustrations (briefly describing the rated current and voltage, usage, attentions in usage, and performance of the machine); (11) Photos of all circuit boards, load cells and important components.

5. Under any of the following circumstances, application for series type approval or approbation may be filed, directly without the need for test, for type-approved electronic non-automatic weighing instruments:
(1) Where the verification scale interval increases without changing the maximum weighing capacity;
(2) Where the ratio of the maximum weighing capacity to the rated capacity of load cell varies within 0.5～1.0, without exceeding the number of verification scale interval originally approved;
(3) Where the range of tare decreases;
(4) Where a weighing instrument is used with the same circuit board as that of a type-approved pricing weighing instrument but without the pricing element and the pricing display;
(5) Where the type, color or size of display tube or display component is changed, or the arrangement of the elements on the panel is changed, without changing the driving electronic circuit;
(6) Where the pattern of buttons or their arrangement on the panel is changed without changing the driving electronic circuit;
(7) Where any button operating function is added or reduced without changing the effect of weighing or pricing, nor changing the driving electronic circuit;
(8) Where the size of the load receptor is changed within 20% of the original size approved;
(9) Where any active or passive component is replaced by another with the same or higher performance (only applicable to the performance that is easy to confirm on the manual or specification sheet);
(10) Where the specification of battery is changed;
(11) Where an internal jump wire is added with changing the inter-crossing only;
(12) Where a few passive components are added to a non-weighing circuit or I/O circuit to prolong its service life;
(13) Where the appearance of the base is changed;
(14) Where the arrangement of external texts or marks is changed; or
(15) Where the foot pad of the instrument is changed.

6. Under any of the following circumstances, application for series type approval or approbation shall be filed, after complete the necessary performance tests listed as below, for type-approved electronic non-automatic weighing instruments:
(1) Where the number of verification scale interval is out of the original range approved, the weighing performance, discrimination, repeatability, eccentricity, zero return, creep, tilting, tare, temperature, endurance and other relevant items should be tested.
(2) Where the weighing circuit, the control program, or the control circuit of display is changed, the weighing performance, voltage variation, short time power reduction, electrical burst, electrostatic discharge, and immunity to radiated electromagnetic field and other relevant items should be tested.
(3) Where the load cell or the structural connector (aluminum reinforcement, aluminum tray) of load cell is changed, the weighing performance, discrimination, repeatability, eccentricity, zero return, creep, temperature, tilting, tare, endurance and other relevant items should be tested.
(4) Where the compensation method of power supply circuit is changed, the voltage variation, short time power reduction, electrical burst, and other relevant items should be tested.
(5) Where the size of load receptor is changed by more than ±20 % of the original size approved or
the shape of the support is changed, the weighing performance, eccentricity, tilting and other relevant items should be tested.

(6) Where the approved material of the structure or the load receptor changed, the electrical burst, electrostatic discharge, immunity to radiated electromagnetic field and other relevant items should be tested.
(7) Where the range of tare originally approved is increased, the tare test should be conducted.
(8) Where the load receptor to be higher or the connecting parts(aluminum reinforcement or aluminum receptor) of load cell changed eccentricity, tilting and other relevant items should be tested.
(9) Where the A/D converter and the circumference are changed without changing load cell, the weighing performance, temperature, damp heat, voltage variation, immunity to radiated electromagnetic field and other relevant items should be tested.
(10) Where the circuit layout is changed without relative with the electronic components mentioned in other items, the electrostatic discharge, immunity to radiated electromagnetic field and other relevant items should be tested.
(11) Where the type of display and the electronic circuit are changed, the electrical discharge, immunity to radiated electromagnetic field and other relevant items should be tested.
(12) Where the number of interface changed or enhance the feature of printer, the electrical discharge, immunity to radiated electromagnetic field, the stability of balancing and other relevant items should be tested.
When the amendments listed in preceding paragraph adopt the approved electronic modules or approved electronic components, the applicants may submit concerned testing reports issued by the designated laboratories, the some necessary test items might be exempted if the application is censored by the dedicated weighs and measures authorities, designated laboratories or the Type Approval Commission.

7. Under any of the following circumstances, application for type re-approval shall be filed for type-approved electronic non-automatic weighing instruments:
(1) Where the load conversion method or loading principle is changed;
(2) Where the ratio of the maximum weighing capacity and the rated capacity of load cell is changed out of the range of0.5 ～1.0;
(3) Where the lever ratio is changed more than 1:50.

8. For type-approved electronic non-automatic weighing instruments, in case of any alteration other than listed in Articles 5 to 7, the test items should be designated by the BSMI after the Type Approval Commission of the BSMI or the designated laboratory review the relevant technical documents submitted by the applicant.

9. To apply for extension of the validity period of a type approval certificate, the original applicant for type approval or the successor shall submit the following documents:
(1) Appearance photos as listed in 3;
(2) Declaration; and
(3) Technical documents as listed in 4.

Attachments： Annexed Table-Specification Sheet of Functions and Devices.pdf

Data Source：Ministry of Economic Affairs R.O.C.(Taiwan) Laws and Regulations Retrieving System