



National
Measurement &
Regulation Office



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

OIML Certificate No
R50/2014-GB1-15.02

OIML CERTIFICATE OF CONFORMITY

Issuing authority: **National Measurement and Regulation Office**

Person responsible: **Paul Dixon – Director, Technical Services**

Applicant: **Saimo Electric Co., Ltd.
No. 2, Luoshan Road
Economic Development Zone
Xuzhou, Jiangsu
PR China**

Manufacturer: **The applicant**

Identification of the
certified pattern: **ICS-FH 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 50 - Edition 2014(E) for accuracy classes: ≥ 0.2

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.

Issue Date: **03 December 2015**
Reference No: **TS0102/0004**

G Stones
Technical Services Manager
For and on behalf of the Chief Executive



0135

The conformity was established by tests and evaluation described in the associated pattern evaluation report P01399 which includes 19 pages.

Characteristics of the instrument:

This pattern of a fixed speed, automatic continuous totaliser (beltweigher), designed to weigh large quantities of loose material from bulk to bulk, is designated the ICS-FH Series. It comprises:

- 6000 integrator (panel mount or field mount)
- 6301D digitiser, with 4 weighing channels
- Weighing platform
- Speed sensor (any compatible speed sensor may be used)
- Junction box(es)

The weighing platform comprises up to 8 weighing units installed in succession. A weighing unit consists of two weighing idlers installed on a load receptor supported by two load cells.

The instrument is designated the ICS-FH-x, with x the number of weighing idlers (2, 4, 8 or 16).

The digitiser converts the analogue signal from the load cells into a digital signal. The integrator, which acts as the control and display unit, processes the digital signal from the digitiser and the signal from the speed sensor to calculate the flowrate and totalised weight.

Load cells:

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.
- The load cell minimum scale interval (v_{\min}) shall fulfil $v_{\min} \leq \text{Max} / (S \times R / \sqrt{N})$, where:
 - S = 15,000 for class 0.2
 - S = 6,000 for class 0.5
 - S = 3,000 for class 1
 - S = 1,500 for class 2R is the reduction ratio of the load receptor
N is the number of load cells

Devices:

- General totalisation indicating device (non-resettable)
- Semi-automatic zero-setting device ($\leq 4\%$ Max)
- Automatic zero-setting device ($\leq 4\%$ Max)
- Indication of the flowrate
- Indication of the belt speed
- Error messages and alarms
- Printing of batch data

Interfaces:

- Load cell connection (digitiser)
- Speed sensor (integrator)
- RS485 (digitiser to integrator)
- Digital I/O (integrator)

Technical characteristics:

Power supply	220 VAC, 50 Hz
Totalisation scale interval	≥ 0.001 t
Q_{\max}	Dependent upon application
Q_{\min}	$\geq 20\%$ Q_{\max}
Σ_{\min}	Dependent upon application
Operating speed	0.5 to 3.5 m/s
Weigh length	Dependent upon application
Load cells excitation voltage	5 VDC
Minimum load cell impedance	87.5 Ω (per channel)
Maximum load cell impedance	1100 Ω (per channel)
Minimum input voltage per verification scale interval	2.5 μ V (per channel)
Minimum dead load voltage	1 mV (per channel)
Measuring range minimum voltage	5 mV (per channel)
Climatic environment	-10 °C to 40 °C Non-condensing (closed)
Accuracy classes	≥ 0.2
Load cell cable	4-wire and shield

Software:

The software for the digitiser is held on the digitiser's PCB. Download of software requires access to the PCB. There is no non-legally relevant software. The software identification shall be as follows: 1029.

The software for the integrator is held on the integrator's PCB. Download of software requires access to the PCB. The legally relevant software is protected by a CRC16 checksum. The checksum value shall be 015D.

The legally relevant parameters held on the integrator's PCB and are password-protected. Any changes to these parameters are recorded in a non-editable event counter.

Sealing measures:

The following parts shall be sealed using a tamper-evident solution bearing an identification mark:

- Weighing platform (top and side plates of all weighing units, preventing access to the load cells)
- Junction box(es)
- Digitiser enclosure
- Panel mount integrator: enclosure, digitiser and speed sensor connections, 3 pins allocated to prevent the deletion of batch data before it is printed and to prevent the resetting of the general totalisation device
- Field mount integrator: internal enclosure

Markings:

The instrument bears the following indelible markings, on a secured plate located on the instrument (clearly visible to the user):

- Identification mark of the manufacturer
- Serial number and type designation of the instrument
- The inscription: “Zero-setting shall involve at least revolutions” (the number of belt revolutions shall be such as the zero load test does not exceed the MPE)
- Mains voltage V
- Mains frequency Hz
- Designation of type(s) of product to be weighed
- Weigh length, W_L m
- Type approval sign
- Maximum capacity, Max kg or t
- Temperature range °C / °C, (if applicable)
- Accuracy class
- Totalisation scale interval, d = kg or t
- Nominal speed(s) of the belt v = m/s
- Maximum flowrate, Q_{max} = kg/h or t/h
- Minimum flowrate, Q_{min} = kg/h or t/h
- Minimum totalized load, Σ_{min} = kg or t
- Supplementary markings (if applicable)

Certificate History

ISSUE NO.	DATE	DESCRIPTION
R50/2014-GB1-15.02	03 December 2015	Certificate first issued
-	-	No revisions have been issued.