Test certificate

Number **TC8128** revision 0
Project number SO12200135

Issued by	NMi Certin B.V.
In accordance with	Paragraph 8.1 of EN 45501:1992/AC:1993, WELMEC 2.1 Issue 4, WELMEC 7.2 Issue 3, OIML R76:2006.
Manufacturer	Hiweigh Technologies Ltd. No.2278, Zhaotai Road Puijang Town, Minhang District, Shanghai 201112 China
In respect of	The model of an **indicator,** tested as a part of a weighing instrument (for non-automatic weighing instruments class (III) and (IIII)). Manufacturer : Hiweigh Technologies Ltd. Type : X3AM X3M X5M X1M
Characteristics	Electronic, self-indicating device, with single-interval indication. The maximum number of verification scale intervals will be: $n \leq 3000$ for class (III) instruments or $n \leq 1000$ for class (IIII) instruments. Temperature range -10 °C / +40 °C Electromagnetic environment class E2 In the description number TC8128 revision 0 further characteristics are described.
Description and Documentation	The instrument is described in the description number TC8128 revision 0 and documented in the documentation folder number TC8128-1, appertaining to this test certificate.
Remarks	Summary of the test involved: see Appendix number TC8128 revision 0.

Issuing Authority

NMi Certin B.V. Notified Body number 0122
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INSPECTION
RvA I 122

1 General information about the indicator

All properties of the indicator, whether mentioned or not, may not be in conflict with the standard mentioned in the test certificate.

1.1 Essential parts

Description	Drawing number	Remarks
Exploded view X3AM	8128/0-01	
Exploded view X3M	8128/0-02	
Exploded view X5M	8128/0-03	
Exploded view X1M	8128/0-04	
System interface block diagram	8128/0-05	
Hardware block diagram	8128/0-06	
Mainboard X1..M Parts list	8128/0-07	 1 page

EMC protection measures:
- The A/D board is shielded with a metal cover.

1.2 Essential characteristics

List of devices:
- Determination stability of equilibrium;
- Zero indicator;
- Semi-automatic zero-setting;
- Initial zero-setting;
- Zero-tracking;
- Semi-automatic subtractive tare balancing;
- Indication of stable equilibrium;
- Calibration / set-up mode via a switch on the main board;
- Acting upon significant faults;
- Checking the display;
- Check weighing mode;
- Extended indicating, resolution 1/10 e during pressing a key;
- Indication of 1/10 e function active;

Connections:
- Power supply of 7,5 VDC by an AC/DC Adapter 100 - 240 V AC 50/60 Hz;
- The applied error fraction p_i is 0,5;
- The minimum value allowed for the signal voltage per verification scale interval is 1 µV;
- The excitation power supply for the load cell is 5 V DC;

- The minimum input impedance of the load cell is 87 Ω;
- The maximum input impedance of the load cell is 1050 Ω;
- "Remote-sensing" is used;
- No special cable length has to be provided for the connection between the indicator and the junction box or load cells.

Software:
- The software has the identification number: 50.0
- The identification number will be displayed at start-up.

1.3 Essential shapes

The indicator is built according to drawings:
- "Exploded view X3AM", drawing number 8128/0-01;
- "Exploded view X3M", drawing number 8128/0-02;
- "Exploded view X5M", drawing number 8128/0-03;
- "Exploded view X1M", drawing number 8128/0-04.

The data plate is secured against removal by sealing or will be destroyed when removed and contains the following information:
- This test certificate number TC8128;
- Manufacturers name or mark.

To secure components that may not be dismantled or adjusted by the user, the indicator has to be secured in a suitable manner on the locations indicated in the drawings:
- "Sealing X3AM", drawing number 8128/0-08;
- "Sealing X3M", drawing number 8128/0-09;
- "Sealing X5M", drawing number 8128/0-10;
- "Sealing X1M", drawing number 8128/0-11;

Inside the cabinet is a calibration lock, located on the main board.

1.4 Conditional parts

The interface section is located on the main board. The indicator may be equipped with one or more of the following protective interfaces that have not to be secured:
- RS232C;
- RS485.

1.5 Conditional characteristics.

Set points.

1.6 Non-essential parts

Display;
Keyboard;
AC/DC Adapter.

Appendix

Tests carried out for this test certificate:

Test	Type or version	Institute
Temperature effect on the sensitivity with minimum weighing range and input impedance of 87 Ω (20, 40, -10, 5 and 20 °C)	X3M	NMi Certin B.V.
Temperature effect on the no load indication with minimum weighing range and input impedance of 87 Ω (20, 40, -10, 5 and 20 °C)	X3M	NMi Certin B.V.
Damp heat, steady state	X3M	NMi Certin B.V.
Repeatability	X3M	NMi Certin B.V.
Warm-up time	X3M	NMi Certin B.V.
Span stability	X3M	NMi Certin B.V.
Stability of equilibrium	X3M	NMi Certin B.V.
Checklist EN45501 / R76-1:2006	X3M	NMi Certin B.V.
Cable length between the indicator and load cell	X3M	NMi Certin B.V.
EMC tests are performed with a load cell impedance of 350 Ω		
Power voltage variation	X3M X1M	NMi Certin B.V.
Short time power reduction D11 (E2)	X3M X1M	NMi Certin B.V.
Electrical bursts D11 (E2)	X3M X1M	NMi Certin B.V.
Surges D11 (E2)	X3M X1M	NMi Certin B.V.
Electrostatic discharges D11 (E2)	X3M X1M	NMi Certin B.V.
Radiated immunity D11 (E2)	X3M X1M	NMi Certin B.V.
Conducted immunity D11 (E2)	X3M X1M	NMi Certin B.V.