

Issued by NMI Certin B.V.

In accordance with WELMEC 8.8 Issue 2, EN 45501:2015, WELMEC 2.1 Issue 4, OIML R 76-1 (2006).

Producer Mettler-Toledo (Changzhou) Measurement Technology Ltd.
111 West Taihu Road
Xinbei District, Changzhou
Jiangsu 213125
Peoples Republic of China

Measuring instrument An **Indicator**, tested as a part of a weighing instrument.

Brand : Mettler-Toledo
Designation : IND141 or ACT350

Further properties are described in the annexes:

- Description TC8790 revision 0;
- Documentation folder TC8790-1.

An overview of performed tests is given in the annex:

- Description TC8790 revision 0.

Issuing Authority

NMI Certin B.V.

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C. Oosterman
Head Certification Board

NMI Certin B.V.
Hugo de Grootplein 1
3314 EG Dordrecht
The Netherlands
T +31 78 6332332
certin@nmi.nl
www.nmi.nl

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Description

Number **TC8790** revision 0
Project number 15200562
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1 General information about the indicator

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

This certificate is the positive result of the applied voluntary, modular approach, for a component of a measuring instrument, as described in WELMEC 8.8. The complete measuring system must be covered by an EC type-approval certificate.

1.1 Essential parts

| Number | Pages | Description | Remarks |
|-----------|-------|---|----------------------|
| 8790/0-01 | 7 | Main board | including parts list |
| 8790/0-02 | 6 | Main board with RS232/485 and digital I/O | including parts list |
| 8790/0-03 | 7 | Main board with DP | including parts list |
| 8790/0-04 | 3 | AD / Power board | including parts list |
| 8790/0-05 | 3 | AD / Power board | including parts list |

EMI protection measures:

- The A/D board is shielded with a metal cover;
- Ferrite on the cable of the load cell, at the side of the indicator.

1.2 Essential characteristics

| | | |
|---|--------|---|
| Accuracy class | | Ⓐ and Ⓑ |
| Maximum number of verification scale intervals | | 6000 |
| Load cell excitation voltage | | 5 V DC |
| Minimum input voltage per verification scale interval | | 0,5 µV |
| Minimum load cell resistance | | 43,5 Ω |
| Maximum load cell resistance | | 1241 Ω |
| Fraction of the maximum permissible error | | 0,5 |
| Load cell connection | | 6-wire (remote sensing) |
| Maximum value of the cable length per cross wire section between the indicator and the junction box or load cells | | 435,5 m/mm ² |
| Weighing range(s) | | Single interval |
| Temperature range | | -10 °C / +40 °C |
| Power supply voltage | | 12 - 30 V DC |
| Software identification | IND141 | Version number: 0.xx.xxxx. (x is a number between 0 and 9) |
| | ACT350 | Version number: 1.xx.xxxx. (x is a number between 0 and 9) |

Software:

- The identification number will be displayed at start-up;
- The indicator has embedded software.

List of legally relevant functions:

- Determination stability of equilibrium;
- Zero indicating;
- Semi-automatic zero-setting;
- Initial zero-setting;
- Semi-automatic subtractive tare weighing;
- Gravity compensation;
- Adjustment / set-up mode via a switch on the main board;
- Acting upon significant faults;
- Checking the display;
- Set points;
- Weight unit selection (kg, g);



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- Extended indicating, resolution 1/10 e for a period not exceeding 5 seconds after a manual command.
- Preset tare, only available when the indicator is connected to a printer.

1.3 Essential shapes

The indicator is built according to drawings

| Number | Pages | Description | Remarks |
|-----------|-------|---------------------------------------|---------|
| 8790/0-06 | 2 | Exploded view and dimensional drawing | - |

The descriptive markings plate is secured against removal by sealing or will be destroyed when removed and contains at least the following information:

- This certificate number TC8790;
- Producers name or mark.

Inside the cabinet is an adjustment lock, located on the main board.

1.4 Conditional parts

The indicator may be equipped with one or more of the following protective interfaces that have not to be secured:

- RS232;
- RS485;
- Digital I/O;
- PROFIBUS;
- PROFINET;
- Ethernet/IP.

1.5 Non-essential parts

Display;
Keyboard.



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2 Seals

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:

| Number | Pages | Description | Remarks |
|-----------|-------|-----------------|---------|
| 8790/0-07 | 1 | Sealing drawing | - |

The connecting cable of the load cell or the junction box is provided with possibility to seal.

3 Conditions for conformity assessment

The compatibility of load cells and indicator is established by the manufacturer by means of the compatibility of modules form, contained in WELMEC 2 Issue 5 Section 11, at the time of putting into use.

Other parties may use this Evaluation Certificate only with the written permission of the producer.

4 Reports

An overview of performed tests is given in the reports:

- No. NMI-15200562-01 dated 5 February 2016 that includes 46 pages;
- No. NMI-15200562-02 dated 5 February 2016 that includes 7 pages;
- No. NMI-15200562-03 dated 5 February 2016 that includes 7 pages.

A report can be a test report, an evaluation report, a type evaluation report and/or a pattern evaluation report.