# Test Certificate
# Parts Certificate

Number **TC6981** revision 3
Project number 3000817


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|---|---|
| Issued by | NMi Certin B.V. |
| In accordance with | WELMEC 8.8 2017, WELMEC 2.4 2021, OIML R 60 (2000), EN 45501:2015. |
| Producer | ARPEGE MASTER K<br>Bât 6 – 15 rue du Dauphiné<br>CS40216<br>69808 Saint-Priest Cedex<br>FRANCE |
| Measuring instrument | A **single point compression load cell**, with strain gauges, equipped with electronics, tested as a part of a weighing instrument.<br><br>Registered trade name : ARPEGE MASTER K<br>Designation : DC 285, CPFN-A, CPFN-B<br><br>Further properties are described in the annexes:<br>- Description TC6981 revision 3;<br>- Documentation folder TC6981-3.<br><br>An overview of performed tests is given in the annex:<br>- Description TC6981 revision 3. |
| Remarks | This revision replaces the earlier versions, including its documentation folder. |

Issuing Authority

**NMi Certin B.V.**
1 December 2022

Certification Board

**NMi Certin B.V.**
Thijsseweg 11
2629 JA Delft
The Netherlands
T +31 88 6362332
certin@nmi.nl
www.nmi.nl

# Description



## 1 General information about the load cell

All properties of the load cell, whether mentioned or not, shall not be in conflict with the standards mentioned in this 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, an EC-type examination certificate, an EU-type examination certificate, or an approval that is valid in the country where the load cell is taken into service.

### 1.1 Essential parts

| Number | Pages | Description | Remark |
|---|---|---|---|
| 6981/0-01 | 2 | Digi cell 285 or CPFN-A 15 t / 30 t / 50 t / 75 t | Mechanical |
| 6981/0-02 | 1 | Full Bridge circuit type load cell Digi cell 285 | Electrical |
| 6981/0-03 | 4 | A/D board – CCC V2 | Layout and parts list |
| 6981/1-01 | 1 | Digi cell 285 or CPFN-A 15 t / 30 t / 50 t / 75 t | Mechanical |
| 6981/3-01 | 4 | A/D Board - CCC V3 | New version alternative up to C6 |

Cable:
The cable is shielded; the shield is connected to the load cell.

EMI protection measures:
- A/D board shielded with metal cover.

### 1.2 Essential characteristics

| | | |
|---|---|---|
| A/D board | - A/D board – CCCV2 (Drawing 6981/0-03)<br>- A/D Board - CCC V3 (Drawing 6981/3-01) | - A/D Board - CCC V3 (Drawing 6981/3-01) |
| Characterization of load cell capabilities | Digital load cell | |
| Maximum capacity ($E_{max}$) | 15 t up to and including 75 t | 25t up and including 75 t |
| Minimum dead load | 0 t | |
| Accuracy Class | C | |
| Maximum number of load cell intervals (n) (1) | 5000 | 6000 |
| Ratio of minimum LC Verification interval (1)<br>$Y = E_{max} / v_{min}$ | 15000 | |
| Ratio of minimum dead load output return (1)<br>$Z = E_{max} / (2 * DR)$ | 8000 | |
| Temperature range | -10 °C / + 40 °C | -10 °C / + 55 °C |
| Fraction $p_{LC}$ | 0,8 | |
| Humidity Class | CH | |
| Safe overload | 150 % of $E_{max}$ | |
| Recommended excitation | 6 - 16 V DC | 7 - 16 V DC |
| Excitation maximum | 16 V DC | |
| Transducer material | Stainless steel | |
| Atmospheric protection | Stainless steel welded IP68 - IP69K | |
| Electromagnetic environment class | E2 | |
| Number of counts for $E_{max}$ | $\geq Y * 5 / p_{LC}$ | |
| Software identification | Version number: VA.5, VA5, VS.0, VS0, V2.4, VA.7, VA7, VS.1 or VS1 | |

Remarks:
1. The characteristics for $n_{max}$, Y and Z can be reduced separately.

List of legally relevant functions:
- Digital filter;
- Adjustable sample frequency.

Software:
- The identification number will be displayed on the device that displays the primary indications;
- The load cell has embedded software (OIML R 76-1 (2006)).

Data transmission:

The load cell is equipped with one of the following protective interfaces that have not to be secured:
- RS485;
- CANbus

Adjustment procedure:
- The calibration procedure is depending on the used indicator.

### 1.3 Essential shapes

| Number | Pages | Description | Remark |
|---|---|---|---|
| 6981/0-01 | 2 | Digi cell 285 or CPFN-A 15 t / 30 t / 50 t / 75 t | Mechanical |
| 6981/1-01 | 1 | Digi cell 285 or CPFN-A 15 t / 30 t / 50 t / 75 t | Mechanical |

The descriptive markings plate is secured against removal by sealing or will be destroyed when removed and contains at least the information and markings as described in OIML R 60 (2017) and:
- This certificate number TC6981 (in the countries where it is mandatory);
- Producers name or mark.

## 2 Seals

This load cell can only be used in combination with an indicator that does not allow changing of the adjustment data of the load cell using any interface.

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

## 3 Conditions for conformity assessment

Each load cell produced is provided with an accompanying document with information about its characteristics.

The compatibility of load cells and indicator is established by the manufacturer by means of the compatibility of modules form, contained in EN45501:2015 clause F.5, at the time of putting into use.

Other parties may use this certificate without the written permission of the producer.

The load cell equipped with electronics must be powered from the power supply of an indicator or terminal. For the weighing instrument the voltage interruptions, short voltage reductions, voltage transients and surges on the power supply lines shall be considered.

## 4 Reports

An overview of performed tests is given in the evaluation report ER6981 revision 3a.