

EU Type Examination Certificate

No. 0200-NAWI-06080 Revision 2

3590E / CPWE / DFW / DGT / KS

NON-AUTOMATIC WEIGHING INSTRUMENT

Issued by **FORCE Certification**
EU - Notified Body No. 0200

In accordance with the requirements in Directive 2014/31/EU of the European Parliament and Council.

Issued to **Dini Argeo S.r.l.**
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In respect of Non-automatic weighing instrument designated 3590E / CPWE / DFW / DGT / KS with variants of modules of load receptors, load cells and peripheral equipment.
Accuracy class: III and IIII
Maximum capacity: Up to 500 000 kg
Verification scale interval: $e_i = \text{Max}_i / n_i$
Maximum number of verification scale intervals: $n_i \leq 10000$ for single-interval / multi-range / multi-interval (however, dependent on environment and the composition of the modules).
Variants of modules and conditions for the composition of the modules are set out in the annex.

The conformity with the essential requirements in annex 1 of the Directive is met by the application of the European Standard EN 45501:2015 and OIML R76:2006.

The principal characteristics and conditions for certification are set out in the descriptive annex to this certificate.

The annex comprises 11 pages.

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Descriptive annex

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1. Name and type of instrument and modules

The weighing instrument is designated 3590E / CPWE / DFW / DGT / KS. It is a system of modules consisting of an electronic indicator connected to a separate load receptor and peripheral equipment such as printers or other devices, as appropriate. The instrument is a Class III or IIII, self-indicating weighing instrument with single-interval, multi-range or multi-interval.

The name of the instrument may be followed by alphanumeric characters for technical, legal or commercial characterization of the instrument.

The indicators consist of analogue to digital conversion circuitry, microprocessor control circuitry, power supply, keyboard, non-volatile memory for storage of calibration and setup data, and a weight display contained within a single enclosure.

The instrument may be used for direct sales to the public.

2. Description of the construction and function

2.1 Construction

2.1.1 Indicator

The indicators are fully described in Evaluation Certificate 0200-WL-5741.

2.1.2 Load receptors, load cells and load receptor support

Set out in Section 3.2.

2.1.3 Interfaces and peripheral equipment

Set out in Section 4.

3. Technical data

The weighing instruments are composed of separate modules, which are set out as follows:

3.1 Indicator

The technical data for the indicators is provided in Evaluation Certificate 0200-WL-05741.

3.2 Load receptors, load cells, and load receptor supports

The load receptor shall be non-critical according to WELMEC Guide 2.1:2001. Movable platforms shall be equipped with level indicators.

3.2.1 General acceptance of analogue load cells

Any analogue load cell(s) may be used for instruments under this certificate of type examination provided the following conditions are met:

- 1) There is a respective Part / Evaluation / Test Certificate (EN 45501) or an OIML Certificate of Conformity (R60:2000 or R60:2017) issued for the load cell by a Notified Body responsible for type examination under Directive 2014/31/EU
- 2) The certificate contains the load cell types and the necessary load cell data required for the manufacturer's declaration of compatibility of modules (WELMEC 2:2015), and any particular installation requirements). A load cell marked NH is allowed only if humidity testing to EN 45501 has been conducted on this load cell.
- 3) The compatibility of load cells and indicator is established by the manufacturer by means of the compatibility of modules form, contained in the above WELMEC 2 document, or the like, at the time of EC verification or declaration of EC conformity of type.
- 4) The load transmission must conform to one of the examples shown in the WELMEC 2.4 Guide for load cells.

3.2.2 Digital load cells

The digital load cells, which are listed below, are certified as modules in the weighing instrument.

Manufacturer	Load cell type	Cert. No.
Flintec	RC3D digital load cell *)	TC6586
HBM	C16i *)	D09-00.46
Scaime	CB50X-DL *)	TC7078
Dini Argeo	RCD *)	TC7547
Dini Argeo	RCPTD **)	TC8786
Utilcell / Dini Argeo	740D / RCUD **)	E-04.02.C06
Sensocar S.A.	SP-D **)	E-02.02.C02 5 th addition
Sensocar S.A.	CS-D **)	E-16.02.C01
Keli Sensing Technology	ZSF-D / ZSW-D *)	TC8339
Rice Lake Weighing Systems	RL5416D / RL5416DC **)	TC11637
Rice Lake Weighing Systems	RL5426D / RL5426DC **)	TC11699

*) up to 32 digital load cells may be connected to the indicator

**) up to 64 digital load cells may be connected to the indicator.

When digital load cells are used the number of verification scale intervals is limited to the number specified in the applicable Test or Parts Certificate.

3.2.3 Weight transmitters

Weight transmitters (analogue data processing devices) with an Evaluation Certificate or Part Certificate, issued by a notified body responsible for type examination under Directive 2014/31/EU, may be connected to the indicator as a module for the weighing instrument

3.2.4 Combined multi-platform weighing system

The following weighing system is assembled by using a series of approved digital platforms/load cells and weight repeaters connected to form a single weighing instrument. The indicator/display receives the weight information from the digital platforms/load cells via a hard-wired connection or by utilising RF transmission. The indicator/display can be used in a fixed position or it can be used as a portable device staying within the permitted RF range of up to 100 m (according to environment conditions).

The weighing system can be configured to use up to 32 digital platforms/load cells which are all connected to the digital indicator/display. The indicator/display receives the weight data from each digital platform/load cell, with the total weight value displayed on the primary digital indicator/display. If any of the other platforms within this weighing instrument has its own weight display, then these must be disabled when used in this configuration.

When configuring/calibrating/verifying/using the instrument in this configuration the digital platforms/load cells are to be treated as a single load receptor with the load applied simultaneously to all platforms/load cells.

3.3 Composition of modules

For the composition of modules EN 45501:2015 Annex F shall be satisfied.

3.4 Documents

The documents filed at FORCE Technology (reference No.119-22344) are valid for the weighing instruments described here.

4. Interfaces and peripheral equipment

4.1 Load cell interface

The indicator may have the following load cell interfaces.

- 4 or 6 wire analogue load cell interface (1-4 interfaces)
- Serial interface for connection to digital load cell(s)
- Serial interface for connection to weight transmitter

4.2 Interfaces

The instrument may have the following protected interfaces:

- RS-232
- RS-485
- USB
- Ethernet
- DC voltage input
- Control inputs/outputs
- RF (radio frequency)

- Bluetooth
- WiFi
- Profibus
- Profinet
- DeviceNet
- CANopen
- Ethercat

4.3 Remote display

The indicator may be connected via RS485 to a secondary display. The secondary display repeats the weighing result and any other primary indication, and provides further, non-metrological information.

4.4 Peripheral equipment

The instrument may be connected to any peripheral device that has been issued with a Parts (Test) Certificate by a Notified Body responsible for type examination under Directive 2014/31/EU and bears the CE marking of conformity to the relevant directives; or

A peripheral device without a Parts (Test) certificate may be connected under the following conditions:

- it bears the CE marking for conformity to the EMC Directive;
- it is not capable of transmitting any data or instruction into the weighing instrument, other than to release a printout, checking for correct data transmission or validation;
- it prints weighing results and other data as received from the weighing instrument without any modification or further processing; and
- it complies with the applicable requirements of EN:45501, i.e. 4.2, 4.4, 4.6 and 4.7.

A printing device may print additional information such as date or number to identify the printed weighing result(s) or sets of weighing results.

5. Conditions for certification

5.1 Measurement functions other than non-automatic functions

Measurement functions that will enable the use of the instrument as an automatic weighing instrument are not covered by this type examination.

5.2 Counting operation is not approved for NAWI

The count shown as result of the counting function is not a legal value.

5.3 Compatibility of modules

Composition of modules, EN 45501:2015, Annex F shall be satisfied. If more than one platform it shall be satisfied for each platform/scale.

6. Special conditions for verification

6.1 Composition of modules

The environmental conditions should be taken into consideration by the composition of modules for a complete weighing instrument, for example instruments with load receptors placed outdoors and having no special protection against the weather.

7. Securing and location of seals and verification marks

7.1 Securing and sealing

Seals shall bear the verification mark of a notified body or alternative mark of the manufacturer according to ANNEX II, section 2 or 4 of the Directive 2014/31/EU.

The indicator based non-automatic weighing instrument shall be secured, if securing is used, and sealed according to the instructions in Evaluation Certificate 0200-WL-05741.

The inscription plate shall be sealed, unless it is of a form that is destroyed when removed.

The peripheral interfaces are “protective”; it neither allows manipulation with weighing data or legal setup, nor change of the performance of the weighing instrument in any way that would alter the legality of the weighing.

8. Location of CE mark of conformity and inscriptions

8.1 Indicator

8.1.1 CE mark

CE mark and supplementary metrological marking shall be applied to the indicator according to article 16 of Directive 2014/31/EU

8.1.2 Inscriptions

The instrument shall bear the following inscriptions on or near the display:

- Max_i , Min_i , $e_i =$, and $d_i =$ (if $d_i < e_i$)

On the inscription plate:

- Manufacturer's name and/or logo
- Postal address of manufacturer
- Model no.
- Serial no.,
- Maximum subtractive tare (if applicable)
- Maximum additive tare (if applicable)
- Type examination certificate no.
- Accuracy class

9. Pictures



Figure 1 3590E family of indicators – enclosure example.



Figure 2 CPWE family of indicators – model CPWET.



Figure 3 DFW family of indicators – model DFWL.

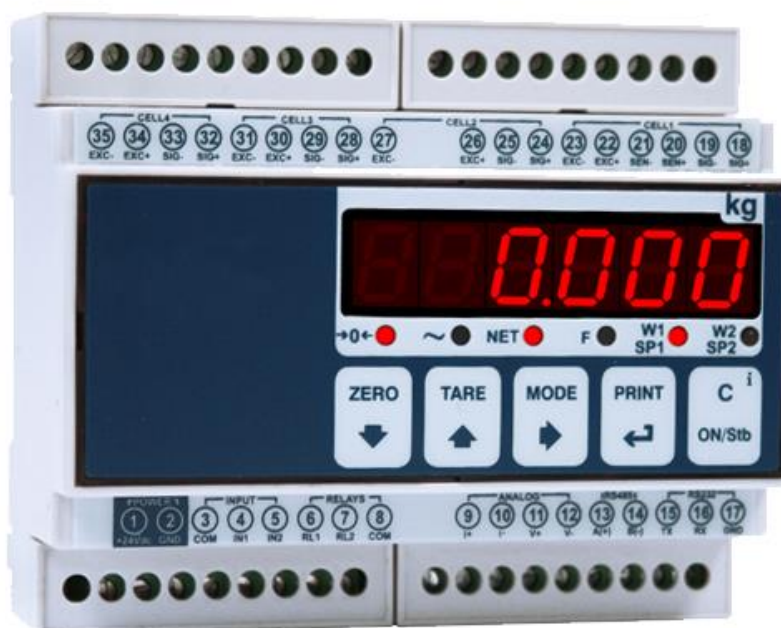


Figure 4 DGT family of indicators – model DGT4.



Figure 5 GLR100 secondary display.

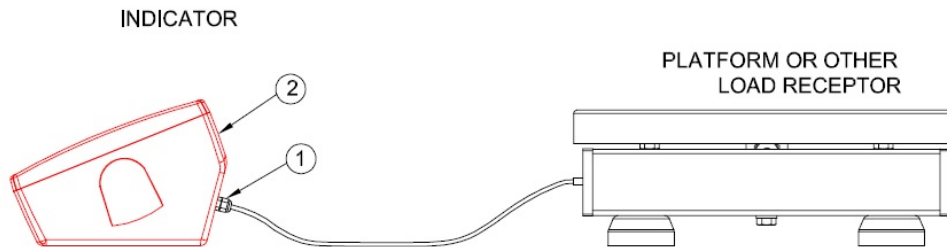


Figure 6 DGT60 secondary display.



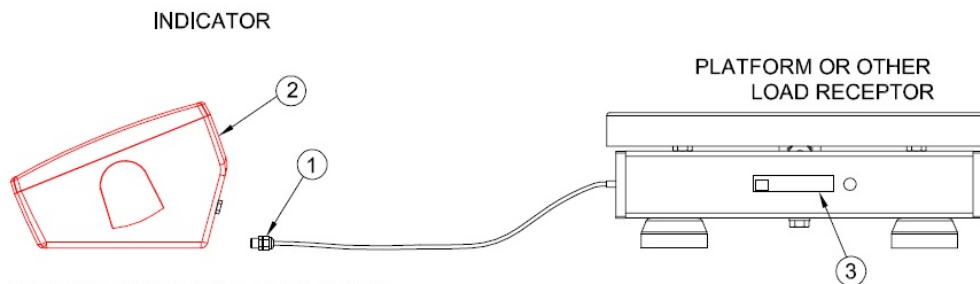
Figure 7 DGT100 secondary display.

A) CONSTRAINED CONNECTIONS

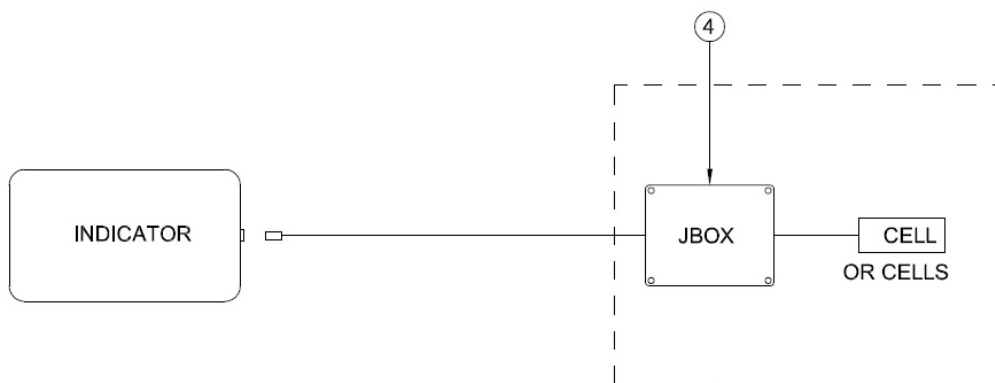


- ① CONNECTION WITH COSTRAINT
- ② LEGISLATION LABEL AND PROTECTION SEAL ON THE INDICATOR

B) UNCONSTRAINED CONNECTION



- ① CONNECTION WITHOUT COSTRAINT
- ② LEGISLATION LABEL AND PROTECTION SEAL ON THE INDICATOR
- ③ LABEL WITH IDENTIFYNG MARK IF THE LINKED INDICATOR
- ④ EVENTUAL CONSTRAINED JUNCTION OR DISTRIBUTION BOX



WITHOUT JBOX THE LOAD CELL WILL BE COSTRAINED TO LOAD RECEPTOR

Figure 8 Examples of connections between indicators and junction box / load cell(s)

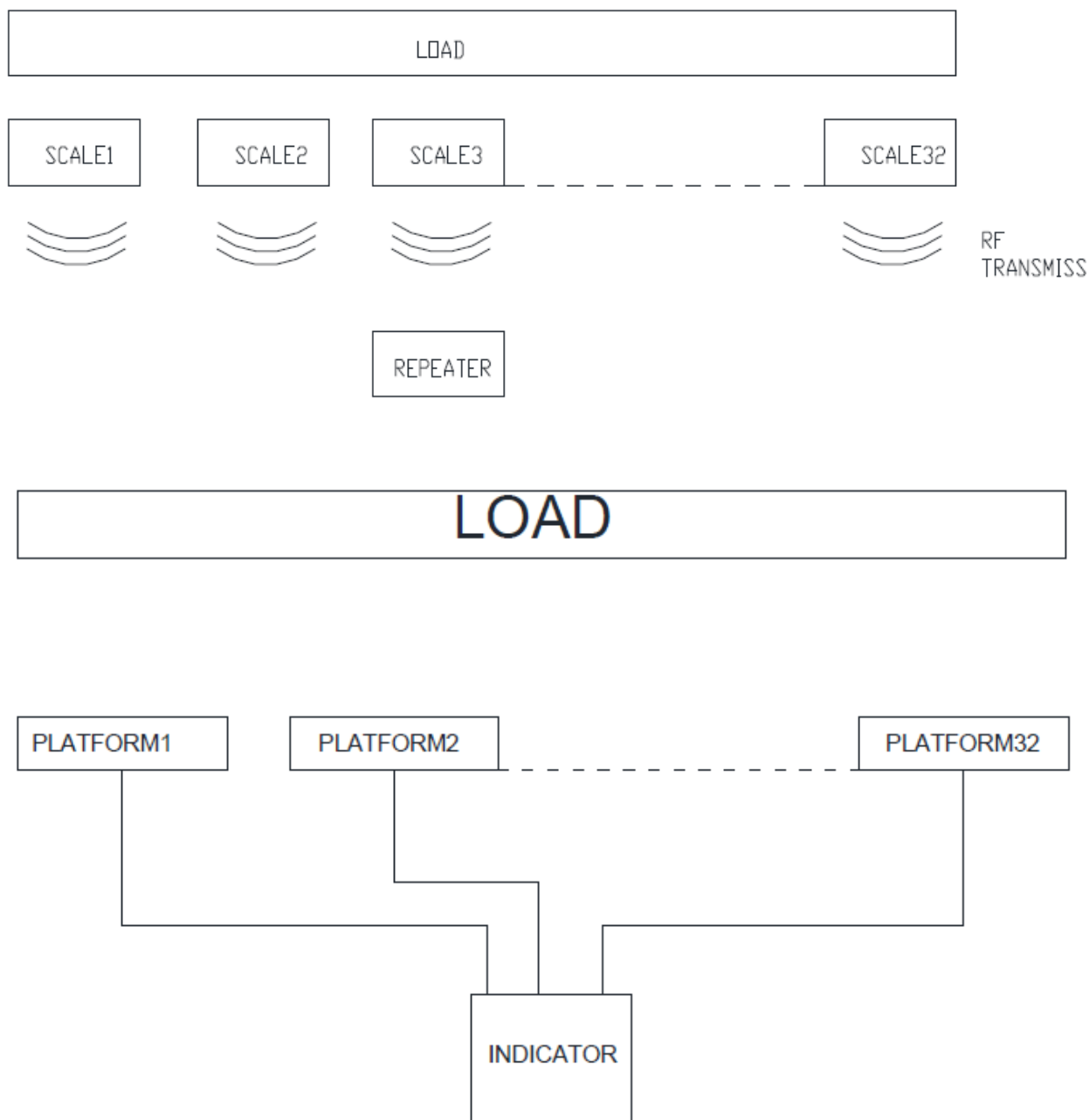


Figure 9 Examples of combined multi-platform weighing system