

EVALUATION CERTIFICATE

No. 0200-WL-07152

Object name DGT Series
Object type Weighing transmitter / indicator for an automatic gravimetric filling instrument
Issued by Force Certification A/S

Issued in accordance with the requirements in WELMEC Guide 8.8:2017 "Guide on General and Administrative Aspects of the Voluntary System of Modular Evaluation of Measuring instruments".

In accordance with OIML R61:2004, WELMEC Guide 2.1, 2.8 and 7.2, OIML D11:2004 sect. 12 & 13 with severity level 3

Issued to **Dini Argeo S.r.l.**
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41042 Spezzano di Fiorano (Mo)
Italy

Manufacturer **Dini Argeo S.r.l.**

In respect of A weighing indicator tested as a module for an automatic catchweigher / checkweigher instrument.

Characteristics The **DGT series** weighing transmitter / indicator have the following characteristics:
Number of VSIs: $n \leq 10,000$
Reference class Ref(0.1)
Verification scale interval: $d \geq 0.5$ g
The essential characteristics are described in the annex.

Description and documentation The weighing indicator is described and documented in the annex to this certificate.

Remarks The conformity was established by the reports listed in the annex.

This evaluation certificate cannot be quoted in an EU type examination certificate without permission of the holder of this certificate mentioned above.

The annex comprises 5 pages.

Issued on **2019-09-25**

Descriptive annex

1. Introduction

The family of indicating devices is designated the DGT Series. It is designed to be used in conjunction with a material feed device, a weighing unit with appropriate discharge devices and one or more controllers to form a gravimetric filling instrument.

2. Description

2.1 Construction

- ABS or stainless steel case
- LCD or LED display
- Alphanumerical keypad
- Optional multi-channel

2.2 Variants and designation

The instruments' designation is of the form DGT"Suffix", with the Suffix being alphanumeric characters used to identify different variants.

The variants include various keypads (5 to 20 keys), functional waterproof keypad, number or weighing channels, ABS, painted steel or stainless steel case in different sizes, communication ports (see section 4.1 for permitted interfaces).

Suffix examples:

1 - 19 = different number of load cell channels

20 - 100 = different display size

AN = analogue output

PB = profibus

F / S / Q / P / K = different mounting case and/or keyboards

Other letters/numbers may be associated to identify versions with other permitted interfaces

2.3 Devices

The indicator is provided with the following devices:

- Initial zero setting ($\leq 20\%$ Max)
- Semi-automatic zero setting ($\leq 4\%$ Max)
- Zero tracking ($\leq 4\%$ Max)
- Semi-automatic subtractive tare weighing
- Preset tare
- Recall of Gross indication, when tare is active
- Determination of stability of equilibrium
- Indication of stability of equilibrium
- Multi-range and multi-interval function
- Checking of display
- Printing
- Alibi memory (data storage device)

- Gravity compensation
- Real time clock
- Command via external device (PC)
- Accumulation
- Battery level indicator
- Remote control
- LCD / LED
- Gross, Net, Tare, Preset tare, Print, Zero, Motion, Accumulation, Over/Under weight and Network indicators

2.4 Operation

The DGT indicating devices are used as weight transmitters only and convert the load cell signal into a digital weight indication.

They shall be integrated as part of a system comprising a load receptor, feeding devices, and one or more PLC and associated software managing the weighing process (filling parameters, target weights, material feeding).

2.5 Software

2.5.1 Security

The software is held on the Flash Memory and cannot be modified by the user. The calibration and legally relevant parameters are protected via physical or software means.

A jumper located on the main board prevents all access to the legally relevant parameters.

Alternatively, software sealing may be used to protect the calibration and legally relevant parameters. Two non-editable counters, designated CAL and CONFIG, are incremented each time the calibration and legally relevant parameters respectively are modified, with access to these parameters being password-protected. The counters' values can be display via the user menu

2.5.2 Software identification

The software identification is fully described in the user manual and can be displayed at power up or via the software menu.

The legally relevant software is identified by two parts: **prefix / version**.

The **prefix** shows the instrument model and shall be 09.

The **version** shows the legally relevant software version shall be 01.

The prefix / version may be followed by a suffix indicating the software program version and other options installed, which may be freely modified.

Since the code may be longer than the digits available on the display, it is shown in two parts.

The software complies with Welmec Guide 7.2:2011, Risk class B, Type P, Extension L and T.

3. Technical data

3.1 Weighing transmitter /

Type:	DGT
Reference class:	Ref(0.1)
Weighing range:	Single-interval, multi-interval (up to 3 intervals), multi-range (up to 3 ranges)
Maximum capacity (Max _i):	= $n_i \times e_i$
Minimum fill (MinFil):	See tables in section 3.2
Excitation voltage:	5 VDC
Maximum number of Verification Scale Intervals (n):	≤ 10000 per interval
Verification scale interval (e):	≥ 0.5 g
Minimum input voltage per VSI:	0.3 μV
Maximum subtractive tare effect:	≤ -Max
Fractional factor (p _i):	0.5
Maximum time between aut. zero-setting:	66 minutes
Minimum input impedance:	20 ohm
Maximum input impedance per channel:	3000 ohm
Connecting cable to load cell(s):	6-wire
Electromagnetic class:	E2
Humidity:	Non-condensing
Supply voltage:	110-240 VAC, 50/60 Hz, or 110-240 VAC, 50/60 Hz using external adapter, or 12-24 VDC Internal rechargeable battery (optional).
Operating temperature range:	-10 °C / +40 °C
Peripheral interface(s):	See Section 4

3.1.1 Connecting cable between the indicator and the junction box for load cell(s), if any

3.1.1.1 4-wire system

Line:	4 wires, shielded
Maximum length:	the certified cable length of the load cell shall be connected directly to the transmitter/indicator.

3.1.1.2 6-wire system

Line:	6 wires, screened
Maximum length:	200 m/mm ²

3.2 Minimum filling (MinFill)

Minimum values of MinFill.

d-	X(0.1)		X(0.2)		X(0.5)		X(1)		X(2)	
	[g]	d	[kg]	d	[kg]	d	[kg]	d	[g]	d
0.5	2667	1.3335	667	0.3335	89	0.0445	45	22.5	23	11.5
1	2667	2.667	1334	1.334	178	0.178	45	45	23	23
2	2667	5.334	1334	2.668	534	1.068	89	178	23	46
5	2667	13.335	1334	6.670	534	2.670	267	1335	67	335
10	4000	40.00	1334	13.34	534	5.34	267	2670	134	1340
20	4000	80.00	2000	40.00	800	16.00	267	5340	134	2680
50	4000	200.00	2000	100.00	800	40.00	320	16000	134	6700
100	4000	400.0	2000	200.0	800	80.0	400	40000	200	20000
200	4000	800.0	2000	400.0	800	160.0	400	80000	200	40000
≥500	4000	-	2000	-	800	-	400	-	200	-

4. Interfaces and peripherals

4.1 Interfaces

The instrument may be fitted with the following protected interfaces:

- 4 or 6-wire load cell connection
- DC voltage input
- RS-232
- RS-485
- Control inputs/outputs
- USB
- Ethernet
- Bluetooth
- Opto-isolated inputs
- Photomosfet outputs
- SENOR (Digital in)
- RF (radio frequency)
- WiFi
- Analogue output and input
- Profibus
- Profinet
- DevicNet
- CANopen
- Ethercat

4.2 Peripheral devices

The following peripheral devices may be connected to the interfaces provided:

- Peripheral devices that have been issued with a Parts Certificate by a Notified Body responsible for type examination under Directive 2014/31/EU; or
- Peripheral devices without a Parts Certificate under the following conditions:
 - o it bears the CE marking for conformity to the EMC Directive;
 - o 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;
 - o it prints weighing results and other data as received from the weighing instrument without any modification or further processing;
 - o 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. Approval conditions

5.1 Compatibility of modules

For the composition of modules OIML R76-1:2006/EN45501:2015 annex F shall be satisfied.

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.

The composition of modules shall agree with Section 5.1.

7. Securing and sealing

7.1 Securing and sealing

Seals shall bear the verification mark of a notified body or alternative mark of the manufacturer or his representative according to ANNEX II, module F or D of Directive 2014/32/EU.

The inscription plate is located visible on the indicating device and is secured, either by sealing or by being of a form such that it is destroyed when removed.

Swapping of Flash Memory and access to the legally relevant parameters is prevented by sealing the jumper located on the main board by a tamper-evident label bearing a securing mark.

Components that may not be dismantled or adjusted by the user must be secured.

When software sealing is used, the CONFIG and CAL counters' values shall be written on a tamper-evident label on or near the rating plate.

8. Documentation

Test report

The test reports and the test performed are listed in evaluation report P01441

Technical file

Contents of the technical documentation held by the notified body in technical file 119-31728.

9. Pictures



Figure 1 DGT Series (ABS case, example)



Figure 2 DGT Series (stainless steel case, example)

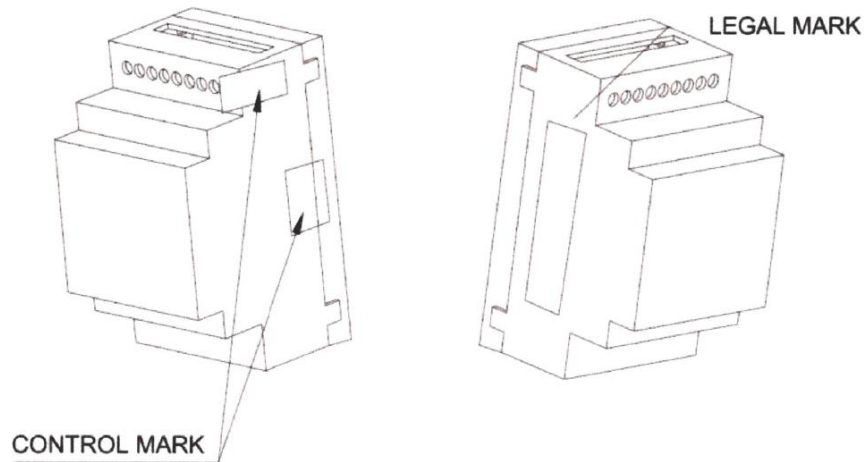


Figure 3 DGT sealing method (ABS case enclosure)

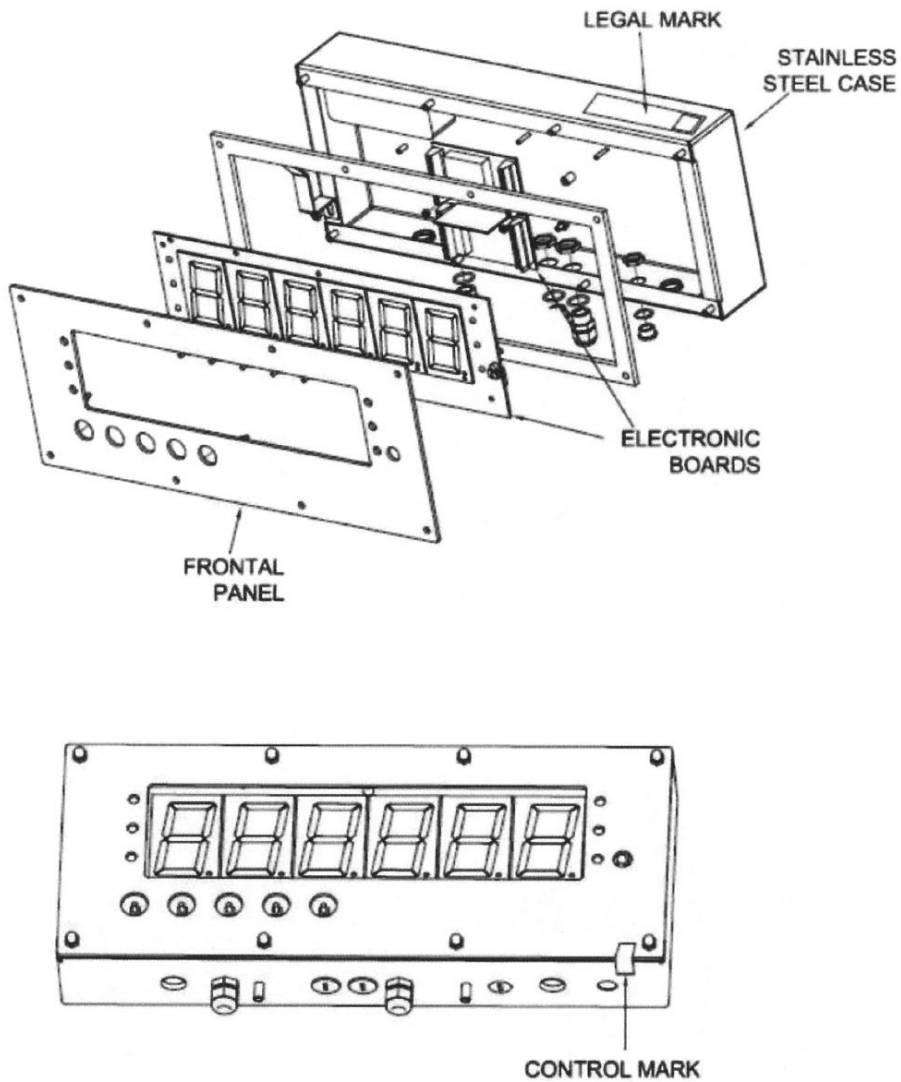


Figure 4 DGT sealing method (stainless steel enclosure)