

# TYPE-EXAMINATION CERTIFICATE

Acting under the Warenwetbesluit liften issued by Liftinstituut B.V.  
identification number Notified Body 0400,  
commissioned by Besluit no. A&G/W&P/03 56126 of October 15<sup>th</sup>, 2003

Certificate nr. : NL 09-400-1002-065-03 Revision nr.: -

Description of the product : Electronic overload control system for lifts

Trademark, type : Ametal Load Weighing System LWS 3F

Name and address of the manufacturer : Ametal Asansör San. Ve Tic. Ltd. Sti.  
Yukari Dudullu, Edep Sok. No: 42  
34775 – Ümraniye / Istanbul - Turkey

Name and address of the certificate holder : Ametal Asansör San. Ve Tic. Ltd. Sti.  
Yukari Dudullu, Edep Sok. No: 42  
34775 – Ümraniye / Istanbul - Turkey

Certificate issued on the basis of the following requirements : Lifts Directive 95/16/EC  
NEN – EN 81-1/2, par. 14.1.1 and 14.2.5

Test laboratory : Ametal Asansör premises

Date and number of the laboratory report : -

Date of EC type-examination: February 2009

Annexes with this certificate : Report belonging to the EC type-examination certificate  
nr.: NL 09-400-1002-065-03

Additional remarks : See annexed report

Conclusion : The Load Weighing System LWS 3F meets the requirements of  
the Lifts Directive 95/16/EC taking into account any additional  
remarks mentioned above



Issued in Amsterdam  
Date of issue : February 27, 2009

Liftinstituut B.V.  
Senior Officer Certification &  
Technology



## Report type-examination

Report belonging to type-examination : NL 09-400-1002-065-03  
certificate nr.  
Date of issue of original certificate : February 27, 2009  
Nr. and date of revision of certificate : -  
Nr. and date of revision of report : -  
Concerns : Lift component  
Revision x.y concerns : -  
Requirements : Lifts Directive 95/16/EC  
Standard(s): EN 81-1/2, EN 954-1  
Project no. : P090035-02

## 1. General specifications

Manufacturer : Ametal Asansör San. Ve Tic. Ltd. Sti.  
Yukari Dudullu, Edep Sok. No: 42  
34775 – Ümraniye / Istanbul  
Turkey

Description of lift component : Load Weighing System

Type : LWS 3F

Laboratory : Ametal premises

Data of examination : February 2009  
Examination performed by : P.J. Schaareman

## 2. Description lift component

The Ametal Load Weighing System LWS 3F is built up with a control unit, four load cells and a load cell connection box. The connection box is closed and connects the four sensors. The control unit is connected to the connection box and deals with the measuring and switching of the control interface relays.

The system can be used under or on the lift car and even at other suitable places (e.g. suspension). The sensors are split in pairs which has to be installed diagonally under the subject to weigh. When the total load exceeds 2000kg, additional load cells has to be placed to increase the weighing capacity. These extra cells are not electrically connected, they are only used to increase the capacity.

The load cell is mounted on a piece of metal (glued) and measures the bending of this metal which is related to the load in the car.

Inside the control unit there is a printed circuit board, some electronic components, a transformer and three relays. The control unit is connected to a supply voltage of 220 VAC, the electronic components work on 12 VDC and 5 VDC.

The overall dimensions of the control unit are 135x54x46mm (LWH), for the load cells 127x61x36mm and for the load cell connection box 80x52x18mm.

The system is electrically completely prewired to prevent resistance changes during installation. All connections on the control unit are made via connectors.

Three external signals are available to use in the lift control system, a minimal load, full load and overload situation. The signals are provided via potential free, normally open and closed, relay contacts.

On the control unit programming buttons and a four digit display are available to program the relevant weights for the relevant load situation.

The control unit is calibrated and sealed before sending to the customer.

System	Load Weighing System LWS 3F
Control box	PCB Ametal Overload control V2.0 09/08
Load cell con.box	PCB Loadcell con.box V1.0 36/08
Load cell (4 pieces)	Linear Strain Gage 1-LA11K3/350_E, EP310S glue
Power supply	220 VAC 50Hz
Capacity system	2000kg, (4000kg with four extra load cells)
Sensitivity [kg]	± 2%
Working temperature	-10°C / 50°C
Fuse	50mA
Weight	0.6kg/cell, 2.64kg total
Relay	Tianbo HJR-3FF
Contact form	1Z
Contact rating	7A 240VAC / 10A 120VAC
Max. switching voltage	250VAC, 30VDC
Max. switching current	15A
Max. switching power	2770VA / 240W
Technical File	February 2009

### 3. Examinations and tests

The examination is meant to check whether compliance with the Lifts Directive and EN 81-1/2 is met. The examination of the system is based on the EN 81-1/2 (August 1998).



The examination includes a check of the technical file, the witness of procedures and tests at Ametal premises Turkey and risk analysis according to EN 81-1/2, par. 14.1.1 and 14.2.5.

Compliance with the Directive for Electro Magnetic Compatibility is not examined by the Liftinstituut and is not part of this examination.

The Ametal Load Weighing System control box is equipped with three interface relays, each relay has a change over contact ( NO/NC-contact ). According to par. 14.2.5 the following functions are required in case overload of the car takes place :

- normal starting ( excluding re-levelling ) is prevented
- detecting overload when the rated load is exceeded 10%, with a minimum of 75 kg
- passengers shall be informed by an audible and/or visible signal in the car
- automatic power operated doors shall be brought into fully open position
- manually operated doors shall remain unlocked.

The Load Weighing System LWS 3F is connected to different control systems, not manufactured by Ametal.

There are enough output signals available ( NO/NC-contacts relays ) to fulfil the overload functions mentioned above.

Connection in a right way of the Load Weighing System to the control system is **not** the responsibility of Ametal.

The control system PCB (Overload Control V2.0 09/08) does not have safety related components or terminals. According the Harmonised Standard EN 81-1 there are no requirements needed for these PCB's. Distances between tracks/islands of the relay contacts on the PCB do not fulfil in all circumstances the requirements of Module H for 250VAC, the Load Weighing System shall therefore not be directly used in safety circuits.

No special measures for safety are required for the Load Weighing System. In case a single fault/defect occurs it can lead to the loss of the overload detection function. However, the Load Weighing System shall, as a minimum, be designed and constructed in such a way that it can withstand the normal operating stresses and external influences.

The electric circuit is protected against short-circuit by a fuse, mounted on the printed circuit board (50 mA).

## 4. Results

After the final examination the installation and the technical file were found in accordance with the requirements. The functional tests passed without remarks.

## 5. Conditions

On the type-examination certificate the following conditions apply:

- Installation shall be done according instructions provided by Ametal and applicable requirements (e.g. EN 81-1/2, National regulation...)
- The Load Weighing System shall not be used directly in the safety circuit
- Connection of the Load Weighing System in the lift control system shall be done in such a way that the functions required by EN 81-1/2 par. 14.2.5 are fulfilled (normal start prevented at 110% nom. load (min. 75 kg), passengers audible/ visible informed, automatic doors open position, manual doors unlocked...).

## 6. Conclusions

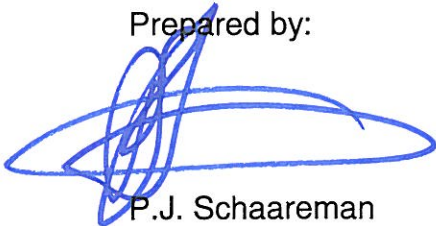
Based upon the results of the type-examination Liftinstituut B.V. issues a type-examination certificate.

The type-examination certificate is only valid for products which are in conformity with the same specifications as the type certified product. Products deviating of these specifications need additional examination by Liftinstituut in order to determine whether a new type-examination certificate is necessary. Additional examination shall be requested by the certificate holder.

## 7. CE marking and EC Declaration of conformity

Every component placed on the market by Ametal, type designation DODE 2010 that is in complete conformity with the examined type must be provided with a CE marking according to annex III of the Directive under consideration if conformity with the EMC Directive and eventually other applicable Directives is proven. (This was no part of this examination !).

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## Annexes

### Annex 1 : Ametal Load Weighing System LWS 3F





Annex 2 : Overview of previous revisions of certificate(s) and report(s)

## REVISIONS OF CERTIFICATE

Rev.:	Date	Summary of revision

## REVISIONS OF REPORT, BELONGING TO THE CERTIFICATE

Rev.:	Date	Summary of revision