Test certificate

Number **TC6827** revision 4
Project number 11200699

Issued by	NMi Certin B.V. Hugo de Grootplein 1 3314 EG Dordrecht The Netherlands
In accordance with	Paragraph 8.1 of the European Standard on Metrological aspects of non-automatic weighing instruments EN 45501:1992/AC:1993 and by application of the OIML International Recommendation R 60 (Edition 2000).
Manufacturer	Keli Electric Manufacturing (Ningbo) Co., Ltd. 199 Changxing Road, Jiangbei District, Ningbo City, P.R. China
In respect of	A **compression load cell**, with strain gauges, tested as a part of a weighing instrument. Manufacturer : Keli Electric Manufacturing (Ningbo) Co., Ltd. Type : ZSF-A-….., ZSFY-A-….. and ZSFYB-A
Characteristics	E_{max} : 10.000 kg up to and including 50.000 kg Accuracy class : C In the description number TC6827 revision 4 further characteristics are described.
Description and documentation	The load cell is described in the description number TC6827 revision 4 and documented in the documentation folder TC6827-3, appertaining to this test certificate.
Remarks	Summary of the test involved: see Appendix number TC6827 revision 4 This revision test certificate replaces the earlier versions, excluding its documentation folder.

Issuing Authority

NMi Certin B.V. Notified Body number 0122
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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

INSPECTION
RvA I 122

1 General information about the load cell

All properties of the load cell, whether mentioned or not, may not be in conflict with the standard mentioned in the test certificate.

1.1 Essential parts

Description	Drawing number	Rev.	Remarks
ZSF(Y)-A Load cell, 10tf	507729 001	--	Mechanical
ZSFYB-A10t~50t	6827/3-01	--	Mechanical
Electrical diagram of the ZSF(Y)-A load cell	507729 002	--	Electrical (4 wire)
Electric diagram of the ZSFY load cell	700145 001	--	Electrical (6 wire)

Cable:
- The load cell is provided with a 4-wire system;
- The cable length has to be approximately 15 meters;
- The cable length shall not be modified;
- The load cell is provided with a 6-wire system (=“Remote-sensing”);
- The cable length is not limited;
- The cable should be a shielded cable, the shield is not connected to the load cell;

1.2 Essential characteristics

Fraction P_i	:	0,7
Maximum capacity (E_{max})	:	10.000 kg up to and including 50.000 kg
Humidity Class	:	CH
Temperature range	:	-10 °C / +40 °C
Accuracy Class	:	C
Maximum number of load cell intervals (n)	:	3000
Ratio of minimum LC Verification interval $Y = E_{max} / V_{min}$	:	10.000
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	:	3000

The characteristics for $\mathbf{n_{max}}$ and **Y** can be reduced separately. **Z** is proportional or equal to $\mathbf{n_{max}}$

Each produced load cell is supplied with information about its characteristics.

Minimum dead load	:	0 kg
Safe overload	:	150 % of E_{max}
Rated Output	:	2 mV/V ± 0,002 mV/V
Output impedance	:	352 Ω ± 2 Ω for the Model ZSF-A-….. 705 Ω ± 5 Ω for the Model ZSFY-A-….. 1005 Ω ± 5 Ω for the Model ZSFYB-A….
Input impedance	:	400 Ω ± 20 Ω for the Model ZSF-A-….. 730 Ω ± 30 Ω for the Model ZSFY-A….. 1100 Ω ± 10 Ω for the Model ZSFYB-A…..
Recommended excitation	:	10 / 12 V DC
Excitation maximum	:	15 V DC
Transducer material	:	Alloy steel
Atmospheric protection	:	Welded steel cover

1.3 Essential shapes

The load cell is built according to drawing:
- ZSF(Y)-A Load cell, 10tf, drawing number 507729 001;
- ZSFYB-A10t~50t, drawing number 6827/3-01.

The data plate is secured against removal by sealing or will be destroyed when removed. The data plate mentions at least the information and markings as described in the OIML R60 document. In the countries where it is mandatory the load cell should bear this test certificate number: TC6827.

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

Appendix

Tests performed for this test certificate:

Test	Institute	type, version, remarks
Temperature test and repeatability (20, 40, -10 and 20 °C)	NMi Certin B.V.	ZSFY-A10t C3 and ZSF-A10t C3
Temperature effect on minimum dead load output (20, 40, -10 and 20 °C)	NMi Certin B.V.	ZSFY-A10t C3 and ZSF-A10t C3
Creep (20, 40 and –10 °C)	NMi Certin B.V.	ZSFY-A10t C3 and ZSF-A10t C3
Minimum dead load output return (20, 40 and –10 °C)	NMi Certin B.V.	ZSFY-A10t C3 and ZSF-A10t C3
Barometric pressure effects at room temperature	NMi Certin B.V.	ZSFY-A10t C3
Damp heat, cyclic: marked CH (or not marked)	NMi Certin B.V.	ZSFY-A10t C3