OIML Certificate

Issuing authority	NMi Certin B.V. Person responsible: M.Ph.D. Schmidt
Applicant and Manufacturer	TÜM ELEKTRONİK MÜHENDİSLİK SAN. TİC. LTD. ŞTİ İstanbul Deri Organize Sanayi Bölgesi 1.Yol H7 Parsel Orhanlı 34956 TUZLA / İSTANBUL TURKEY
Identification of the certified type	A **shear beam load cell**, with strain gauges. Registered trade name : TEM Type : TMB
Characteristics	See next page

This OIML Certificate is issued under scheme A.

This Certificate attests the conformity of the above identified Type (represented by the sample(s) identified in the OIML Test Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 60-1:2021 for accuracy class C

This Certificate relates only to the metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML International Recommendation above-identified.
This Certificate does not bestow any form of legal international approval.

Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate was issued, partial quotation of the Certificate and of the associated OIML Test Report(s) is not permitted, although either may be reproduced in full.

Issuing Authority   **NMi Certin B.V., OIML Issuing Authority NL1**
3 October 2024

Certification Board

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The Netherlands

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The conformity was established by the results of tests and examinations provided in the associated reports:
- No. NMi-2481686-01 dated 16 April 2021 that includes 51 pages;
- No. NMi-2481686-02 dated 16 April 2021 that includes 46 pages.

Characteristics of the load cell:

Characterization of load cell capabilities	Analog-passive load cell	
Maximum capacity (E_{max})	220 kg up to 1100 kg	1100 kg up to and including 5000 kg
Minimum dead load	0 kg	
Accuracy Class	C	
Rated Output	2,0 mV/V ± 0,1 mV/V	
Maximum number of load cell intervals (n)	4000	3000
Ratio of minimum LC Verification interval $Y = E_{max} / v_{min}$	27000	
Ratio of minimum dead load output return $Z = E_{max} / (2 * DR)$	6000	
Input impedance	390 Ω ± 15 Ω	
Temperature range	-10 °C / + 40 °C	
Fraction p_{LC}	0,7	
Humidity Class	CH	
Safe overload	150 % of E_{max}	
Output impedance	350 Ω ± 5 Ω	
Recommended excitation	10 V DC	
Excitation maximum	15 V DC	
Transducer material	Alloy steel	
Atmospheric protection	Hermetically welded	

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

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

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The above identified Type (represented by the sample(s) identified in the OIML Test Report) have been found to comply with the additional national requirements established by the
United States of America (NIST Handbook 44 and NCWM Publication 14), included in the Utilizer Declaration:
- R 60 OIML-CS rev.2 Additional requirements from the United States Accuracy class III L;
- R 60 OIML-CS rev.2 Additional requirements from the United States Marking requirements.

Revision History

Revision	Date	Change(s)
0	2024-10-03	Initial issue.