



OIML Member State
Denmark

OIML Certificate No.
R139/2018-B-DK2-2020.02

OIML CERTIFICATE ISSUED UNDER SCHEME B

OIML Issuing Authority

Name: FORCE Certification A/S
Address: Park Allé 345, 2605 Brøndby Denmark
Person responsible: Kurt Rasmussen

Applicant

Name: Heinrichs Messtechnik GmbH
Address: Robert-Perthel-Strasse 9, D 50739 Köln

Manufacturer

Name: Heinrichs Messtechnik GmbH
Address: Robert-Perthel-Strasse 9, D 50739 Köln

Identification of the certified type *(the detailed characteristics will be defined in the additional pages)*

A Coriolis meter Type TMU-W004 with a transmitter type UMC4 or UMC4-RM

Designation of the module *(if applicable)*

Coriolis measuring device for measurement of Hydrogen to be used in a hydrogen refuelling dispenser.

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

OIML R 139-1, Edition (year): 2018

For accuracy class (if applicable): 2

This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report:

No. 120-25992.01.02_1 that includes 59 pages

The technical documentation relating to the identified type is contained in documentation file:

Task no. 120-25992

OIML Certificate History

Revision No.	Date	Description of the modification
Revision 0	17-12-2020	Original certificate

Identification, signature and stamp

The OIML Issuing Authority

Date: 17-12-2020.


Michael Møller Nielsen
Certification manager

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

Descriptive annex

Flow tests is done according to OIML R139:2018-2 table 9 for meters which do not include determination of the actual flowrate range but the dispensed mass. Therefore, the actual flowrate is not determined and verified.

All flow tests are done with the meter installed in an HRS at a stable temperature of -40°C.

Essential parts:

Flow sensor:	Manufacture:	Heinrichs messtechnik GmbH
	Type:	TMU-W004
	Report:	120-25992.01.02_1
	Gas:	Hydrogen
	Maximum capacity, Qmax:	240 [kg/h]
	Minimum capacity, Qmin:	8 [kg/h]
	Environmental class:	M2
	Ambient temperature:	-40...+55 °C
	Gas temperature:	-40...+55 °C
	Maximum pressure:	105 MPa
Flow transmitter:	Manufacture:	Heinrichs messtechnik GmbH
	Type:	UMC4
	Report:	120-25992.01.02_1
	Environmental class:	M2
	Ambient temperature:	-40...+55 °C
	Mains DC voltage:	19-36 VDC
	Software version:	5.241
	CRC Checksum:	D2D5
	Output:	Pulses

Or:

Flow transmitter:	Manufacture:	Heinrichs messtechnik GmbH
	Type:	UMC4-RM
	Report:	120-25992.01.02_1
	Environmental class:	M2
	Ambient temperature:	-40...+55 °C
	Mains DC voltage:	19-36 VDC
	Software version:	5.241
	CRC Checksum:	D2D5
	Output:	Pulses

Sealing:

The flow sensor and the transmitter are sealed by a physical seal according to manufacture sealing plan.

Sealing of the transmitter UMC4:

Sealing after commissioning:



Sealing with sticker



Sealing with wire and lead

Sealing of the transmitter UMC4-RM:



Rack mounted enclosure



Sealing of the rack mounted transmitter

Sealing of the "custody stamp" Switch:



Sealing with sticker

or sealing with wire and lead

Sealing of the connector cable



Identification plate:

The sensor and transmitter, shall bear a permanent, non-transferable, and easily readable identification plate or label giving the following information:

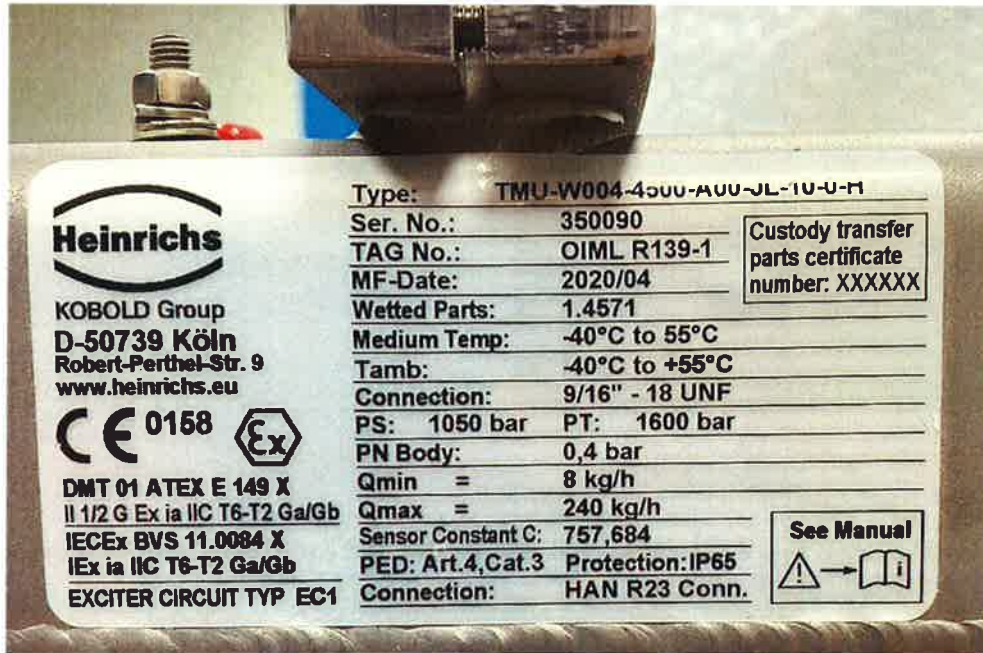
- manufacturer's trade mark/corporate name;
- year of manufacture;
- type designation / model number;
- type approval number and (area allowed for) verification marks, according to national legislation;

The following metrological and technical characteristics, where applicable, shall be provided either on the identification plate, or may be visible either permanently, or on demand on the indicating device, as appropriate:

- measuring range (minimum flow rate, Q_{min} , and maximum flow rate, Q_{max});
- maximum pressure of the gas, P_{max} ;
- type of the gas be measured (hydrogen);
- maximum temperature of the gas, T_{max} ;
- minimum temperature of the gas, T_{min} .
- ambient temperature range;
- the applicable environmental class M2.

Example of an identification plate(s).

Sensor TMU-W004



Transmitter UMC4-RM

