OIML Certificate

OIML Member State
The Netherlands

Number R85/2008-A-NL1-20.04 revision 1
Project number 2458123

Issuing authority Person responsible:	NMi Certin B.V. M.Ph.D. Schmidt
Applicant and Manufacturer	Enraf B.V. Delftechpark 39 2628 XJ Delft The Netherlands
Identification of the	An **automatic level gauge (ALG)**
certified type	Type: SmartRadar FlexLine XP and SmartRadar FlexLine HP, with the antennas F06, F08, W06, H04, S06, S08, S10 and S12 with indicating device SmartView, and / or indicating device HART SmartView with field interface 880 CIU-Prime and / or 880 CIU-Plus and / or CIU 880 with remote calculating and indicating system EntisPro with indicating and memory device ENTIS
Characteristics	See page 2 and further

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 Type Evaluation Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

R 85-1 & 2 (2008) "Automatic level gauges for measuring the level of liquid in stationary storage tanks"

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

This certificate and supporting reports comply with the requirements of OIML-CS-PD-07 clause 6.2.

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 Type Evaluation Report(s) is not permitted, although either may be reproduced in full.

Issuing Authority

NMi Certin B.V., OIML Issuing Authority NL1
8 June 2021

Certification Board

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INSPECTION RvA I 122

The conformity was established by the results of tests and examinations provided in the associated reports:

- R85/1998-NL1-07.02 that includes 100 pages;
- CPC/9200376 that includes 20 pages;
- NMi-10200994 that includes 15 pages;
- NMi-12200691 that includes 13 pages;
- NMi-13200623 that includes 14 pages;
- NMi-14200253-1 that includes 21 pages;
- NMi-16200400-01 that includes 21 pages;
- NMi-16200400-02 that includes 21 pages;
- R85-2008-NL1-12.04 dated 10 December 2012 that includes 49 pages;
- NMi-13200623 dated 15 October 2013 that includes 14 pages;
- NMi-1900750-02 dated 24 March 2017 that includes 26 pages.
- NMi-2391640-01 dated 25 September 2019 that includes 30 pages;
- NMi-2406967-01 dated 7 November 2019 that includes 27 pages;
- NMi-2458123-01 dated 26 April that includes 17 pages.

The automatic level gauge (ALG) is produced at the following production locations:

- Enraf B.V., Delftechpark 39, 2628 XJ Delft, The Netherlands.
- Honeywell International (India) Private Ltd., Plot No.2, Gat No.181, Village Fulgaon, Tal-Haveli, PUNE-412216, India

Characteristics of the measuring instrument
In Table 1 the general characteristics of the measuring instrument are presented.
The construction of the measuring instrument is recorded in the Documentation folder no. T7316-10.

Table 1 General characteristics

Measuring range	See table 2
Ambient temperature range	-25 – +70 °C; condensing humidity
Power supply voltage	65 – 264 Vac (-15% / + 10%); 50/60 Hz 24 – 65 Vdc
Software identification	See table 4

Table 2 General characteristics of the family of instruments

Type	**Range**	**Minimum and maximum values for liquid pressure, for liquid temperature and for liquid properties.**	**Minimum and maximum values for vapour pressure, for vapour temperature and for vapour properties.**
Stilling well	20 m	The manufacturer shall specify these values for each application.	The manufacturer shall specify these values for each application.

Type	Range	Minimum and maximum values for liquid pressure, for liquid temperature and for liquid properties.	Minimum and maximum values for vapour pressure, for vapour temperature and for vapour properties.
Free space	35 m	The manufacturer shall specify these values for each application.	The manufacturer shall specify these values for each application.

Table 3 Antennas

Type	Application	Documentation
F06	free space	7314/7-01
F08	free space	7314/5-24
W06	free space	7314/5-25
S06	on a stilling well with an inner diameter of 6”	7314/5-26
S08	on a stilling well with an inner diameter of 8”	7314/5-26
S10	on a stilling well with an inner diameter of 10”	7314/5-26
S12	on a stilling well with an inner diameter of 12”	7314/5-26
H04	on a stilling well with an inner diameter of 4”	7314/5-27

Table 4 Software identification

Part	Type	Version	Checksum
sensor processor in combination with sensor ART2A	TII-XR (also indicated as CAN Xband board) with ART2A	A10xxx	0
		DSP A10 xxx	
		A11xxx	
		DSP A11 xxx	
		A12xxx	
		DSP A12 xxx	
		A1300	38676
		DSP A1300	
		A1301	11461
		DSP A1301	
sensor processor in combination with sensor ART2B	TII-XR (also indicated as CAN Xband board) with ART2B	A10xxx	0
		DSP A10 xxx	
		A11xxx	

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Part	Type	Version	Checksum
		DSP A11 xxx	
		A1204	64095 (=0xFA5F)
		DSP A12 xxx	
		A1300	38676
		DSP A1300	
		A1301	11461
		DSP A1301	
display communication board	HMI-TSI / FII-SMV	A10xxx (up to A1006)	0
		A1006	03170 (=0x0C62)
		A1007	22441
	FCI-HRT	A1006T	38785 (=0x9781)
		A1007	12537
		A1008	54556
		A1009	26293
		A1010	49336
		A1011	31984
communication board	CAN-BPM/HCI-BPM	A10xxx (up to A1007)	0
		A1007	37556 (=0x92B4)
		A2000	3260
		A2001	0243
		A2003	50556
		A2004	57365
	CAN-TRL2/HCI-TRL2	A1001	12361030 (=0x00BC9D46)
		A1012	3112553898 (=0xB985CDAA)
		A2000	34966
		A2001	33304
interface board	CAN-RS/HCI-GPU	A10xxx	0

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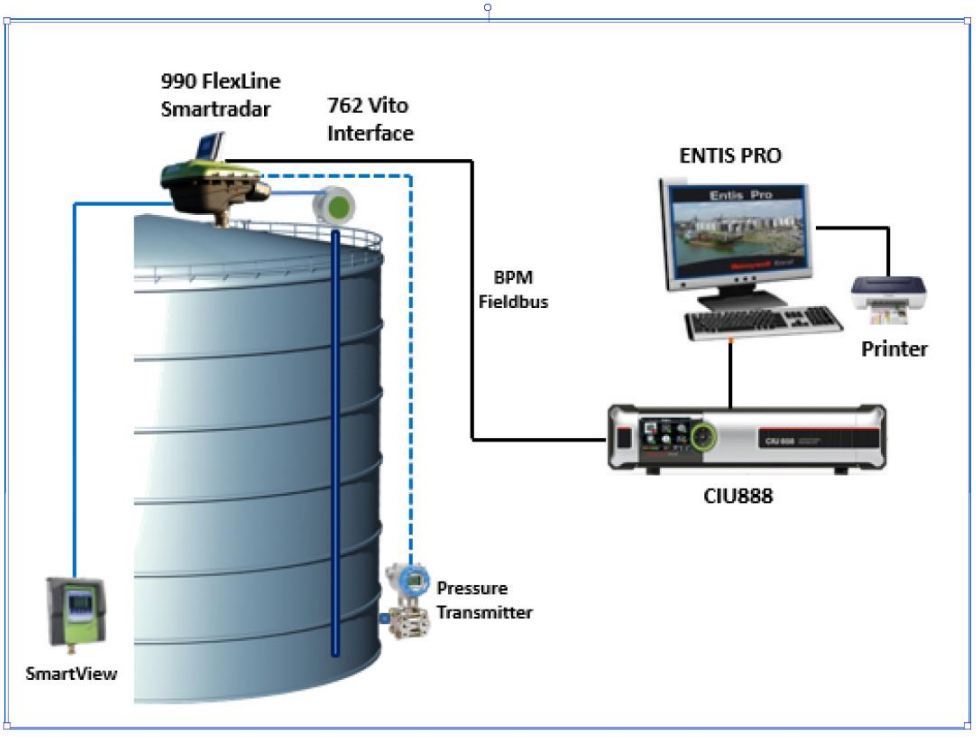
Part	Type	Version	Checksum
1 WL main board	CAN-HCI-1WL	A10xxx	0
		A3013	22685
		A3017	16395
		A3018	11607
		A3020	37576
		A3021	9433

Certificate history:
This revision replaces the previous version.

Revision	Date	Description of the modification
Initial	15 February 2021	-
1	8 June 2021	Addition of software version and production location



Design of a Tank Gauging System - Overview