

**OIML Member State**  
The Netherlands

Number R85/2008-A-NL1-20.04 revision 2  
Project number 2573841  
Page 1 of 6

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  
certified type: An **automatic level gauge (ALG)**  
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**  
30 August 2021

#### Certification Board

**NMI Certin B.V.**  
Thijssseweg 11  
2629 JA Delft  
The Netherlands  
T +31 88 636 2332  
[certin@nmi.nl](mailto:certin@nmi.nl)  
[www.nmi.nl](http://www.nmi.nl)

This document is issued under the provision that no liability is accepted and that the applicant shall indemnify third-party liability.

The notification of NMI Certin B.V. as Issuing Authority can be verified at [www.oiml.org](http://www.oiml.org)

This document is digitally signed and sealed. The digital signature can be verified in the blue ribbon at the top of the electronic version of this certificate.



**OIML Member State**  
The Netherlands

Number R85/2008-A-NL1-20.04 revision 2  
Project number 2573841  
Page 2 of 6

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	11461
		A1301	
		DSP A1301	
		A1302	60856
		DSP A1302	
		A10xxx	0

Part	Type	Version	Checksum
sensor processor in combination with sensor ART2B	TII-XR (also indicated as CAN Xband board) with ART2B	DSP A10 xxx	
		A11xxx	
		DSP A11 xxx	
		A1204	64095 (=0xFA5F)
		DSP A12 xxx	
		A1300	38676
		DSP A1300	
		A1301	11461
		DSP A1301	
		A1302	60856
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
		A10xxx (up to A1007)	0
communication board	CAN-BPM/HCI-BPM	A1007	37556 (=0x92B4)
		A2000	3260
		A2001	0243
		A2003	50556
		A2004	57365
		CAN-TRL2/HCI-TRL2	A1001

Part	Type	Version	Checksum
		A1012	3112553898 (=0xB985CD AA)
		A2000	34966
		A2001	33304
interface board	CAN-RS/HCI-GPU	A10xxx	0
1 WL main board	CAN-HCI-1WL	A10xxx	0
		A3013	22685
		A3017	16395
		A3018	11607
		A3020	37576
		A3021	9433

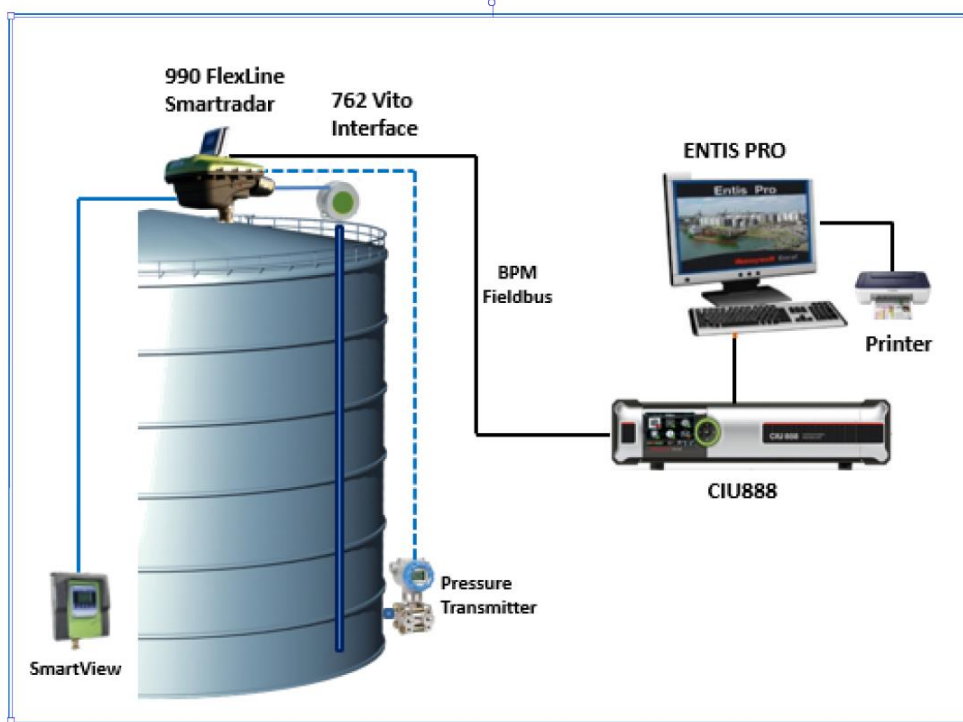
**Certificate history:**

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
2	30 Augustus 2021	Addition of software version

**OIML Member State**  
The Netherlands

Number R85/2008-A-NL1-20.04 revision 2  
Project number 2573841  
Page 6 of 6



**Design of a Tank Gauging System - Overview**