

PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

SITRANS Probe LU240 HART

Manufactured by:

Siemens AG

Siemens Canada Ltd
1954 Technology Drive
Peterborough ON,
Canada
K9J 6X7

has been assessed by Sira Certification Service
and for the conditions stated on this certificate complies with:

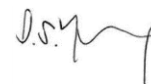
MCERTS Performance Standards for Continuous Water Monitoring Equipment – Part 3 Version 3 dated July 2018

The combined performance characteristic (U_c , the expanded uncertainty) is **0.27%** (Class2)

Certification Range:

0 to 2.75m

Project No.: 70212672
Certificate No: Sira MC190343/01
Initial Certification: 19 July 2019
This Certificate issued: 17 March 2021
Renewal Date: 18 July 2024



Andrew Young
Environmental Project Engineer

MCERTS is operated on behalf of the Environment Agency by

Sira Certification Service

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Approved Site Application

Any potential user should ensure, in consultation with the manufacturer, that the monitoring system is suitable for the intended application. For general guidance on monitoring techniques refer to the Environment Agency Monitoring Technical Guidance Notes available at www.mcerts.net

The product is suitable for use, where it is appropriate, for regulated applications such as abstraction, effluent discharge, ultraviolet disinfection and industrial processing.

The instrument has a blanking distance of 0.25m

Basis of Certification

This certification is based on the following Test Report(s) and on Sira's assessment and ongoing surveillance of the product and the manufacturing process:

CSA Group Evaluation Report 70212672 dated June 2019
WRc Report UC13618 dated February 2019
WRc Report UC13725 dated May 2019

Product Certified

The SITRANS Probe LUT240 HART measuring system consists of the following parts:

- SITRANS Probe LU240 ultrasonic level transmitter 7ML5110-xxx0x-4xxx
- Sunshade (unless permanently protected from direct solar radiation and/or at the discretion of the MCERTS Inspector).

This certificate applies to all instruments fitted with software version 1xx.xx (serial number PBD/KN096502) onwards.

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Certified Performance

The instrument was evaluated for use under the following conditions:

Ambient Temperature Range: -40°C to +55°C

Note: If the instrument is supplied with an enclosure, then the ambient temperature shall be monitored inside the enclosure to ensure that it stays within the above ambient temperature range.

The instrument meets MCERTS Class 2 requirements for the combined performance characteristic as specified in Table 7 of the MCERTS performance standard. Details of individual performance characteristics are summarised below:

Results are expressed as error % of certification range, unless otherwise stated.

Test	Results expressed as error % certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Protection against unauthorised access					PIN password protected	Clause 3.1.2
Units of measurement					The flowmeter records in metric units	Clause 3.1.6
Indicating device					The flowmeter displays volumetric flowrate	Clause 3.1.3
Combined performance characteristic					0.27	Table 7 ≤0.2% Class 1 ≤0.5% Class 2
Mean error	0.09					Clause 6.3.2 ±0.1% Class 1
Repeatability	0.07					Clause 6.3.2 0.05% Class 1 0.15% Class 2
Resolution	0.11				(3mm)	≤2mm Class 1 ≤5mm Class 2
Supply voltage 10.5VDC to 30VDC	0.01					Clause 6.3.3 0.025% Class 1
Output impedance 10Ω to 800Ω	0.00					Clause 6.3.4 0.025% Class 1
Ambient temperature -40°C to +55°C	0.11					Clause 6.3.6 0.025% Class 1 0.075% Class 2 0.25% Class 3
Relative humidity ≥95%RH	0.22					Clause 6.3.6 0.025% Class 1 0.075% Class 2 0.25% Class 3

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Test	Results expressed as error % certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Direct solar radiation	0.12					Clause 6.3.10 0.05% Class 1 0.15 Class 2
Accuracy of computation	0.01					Clause 6.3.11 0.025% Class 1
User defined equation	0.04					Clause 6.3.12 0.025% Class 1 0.075 Class 2
Response time					<26s	Clause 6.3.19 < 30 secs
Warm-up time					32s	Clause 6.1.2 To be reported
Error under field test conditions	Max error 0.16% Min error -0.43% Mean error 0.09% Proportion of errors $\leq 0.2\%$ = 29% Proportion of errors $\leq 0.5\%$ = 71% Proportion of errors $\leq 1.5\%$ = 100%					Clause 7.3 $\leq 0.2\%$ Class 1 $\leq 0.5\%$ Class 2 $\leq 1.5\%$ Class 3
Up time					100%	Clause 7.4 >95%
Maintenance					none	Clause 7.5 To be reported

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Description

The SITRANS Probe LU240 HART is an ultrasonic level transmitter with a range of up to 12m. The process connection is available as ETFE or PVDF.

The SITRANS Probe LU240 transmits a pulse signal to the transducer that is then emitted as ultrasonic pulses. The pulses echo off the water surface and are then sensed by the transducer. The time for a pulse to echo back from the water surface is temperature compensated and converted into a measurement of head. The SITRANS LUT440 uses an algorithm to convert the head measurement into a volumetric flowrate and provides an output via the 2-wire 4-20mA/HART interface and a local display.

General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this Certificate. The Manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management system shall be subject to regular surveillance according to 'Regulations Applicable to the Holders of Sira Certificates'. The design of the product certified is defined in the Sira Design Schedule V00 for certificate No. Sira MC190343/00
2. If certified product is found not to comply, Sira Certification Service should be notified immediately at the address shown on this certificate.
3. The Certification Marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of Sira Certificates'.
4. This document remains the property of Sira and shall be returned when requested by the company.

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