



Certificate No:
TAA00003B5

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Flow Transmitter

with type designation(s)
SDxxxx

Issued to

ifm electronic gmbh
Essen, Germany

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Location classes:

Temperature	A
Humidity	B
Vibration	A
EMC	A
Enclosure	B

Issued at **Hamburg** on **2023-09-19**

This Certificate is valid until **2028-09-18**.

DNV local unit: **Essen**

for **DNV**

Approval Engineer: **Dariusz Lesniewski**

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Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2022-12

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Product description

Compressed air counter, industrial gas counter

Model	Accuracy (in the measuring range)	Function OUT1	Function OUT2	Process connection	Measuring range
SD5500	$\pm (2 \% \text{ MW} + 1 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection G 1/4 DN8	0.8...250 l/min
SD5600	$\pm (6 \% \text{ MW} + 0,6 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection G 1/4 DN8	0.8...250 l/min
SD6020	$\pm (15 \% \text{ MW} + 1,5 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection R 1/2 DN15	4...1250 l/min
SD6500	$\pm (2 \% \text{ MW} + 1 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection R 1/2 DN15	4...1250 l/min
SD6501	$\pm (2 \% \text{ MW} + 1 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection 1/2" NPT DN15	4...1250 l/min
SD6600	$\pm (6 \% \text{ MW} + 0,6 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection R 1/2 DN15	4...1250 l/min
SD6601	$\pm (6 \% \text{ MW} + 0,6 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection 1/2" NPT DN15	4...1250 l/min
SD8500	$\pm (2 \% \text{ MW} + 1 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection R 1 DN25	14...3750 l/min
SD8501	$\pm (2 \% \text{ MW} + 1 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection 1" NPT DN25	14...3750 l/min
SD8600	$\pm (6 \% \text{ MW} + 0,6 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection R 1 DN25	14...3750 l/min
SD8601	$\pm (6 \% \text{ MW} + 0,6 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection 1" NPT DN25	14...3750 l/min
SD9500	$\pm (2 \% \text{ MW} + 1 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection R 1 1/2 DN40	20...6830 l/min
SD2500	$\pm (2 \% \text{ MW} + 1 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection R 2 DN50	40...11670 l/min
SD2501	$\pm (2 \% \text{ MW} + 1 \% \text{ MEW})$	Switch 150mA Imps IO-Link	Switch 150mA 4...20 mA Imps InD	threaded connection 2" NPT DN50	40...11670 l/min

Common main technical data:

Media (depending on model): Argon (Ar), carbon dioxide (CO₂), nitrogen (N₂) or compressed air

Power supply: 18...30 V DC (SELV/PELV)*

Electrical connection: M12 connector

Outputs: switching signal (Switch 150mA); analogue signal (4...20mA); pulse signal (Imps); IO-Link; (configurable)

Input: current reset (InD)

Display: colour display: 1,44", 128 x 128 pixels
2 x LED, yellow

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

*The operating voltage of the sensor must be protected against surge.

Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE