



Type Approval Certificate

[Flow Transmitter]

Initial Approval 21 March 2024
Applicant IFM Electronic GmbH
 Friedrichstraße 1, 45128 Essen, Germany

Product Description Flow Transmitter (Type : SDxxxx)

* Manufacturing Place
 - IFM prover GmbH
 (Address : Waldesch 9, 88069 Tettnang, Germany)

" See Appendix 1 "

Approval Condition " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 20 March 2029

Issued at Busan, Korea on 21 March 2024



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME24013265812) and certificate No.(HMB49547-AE001).



KOREAN REGISTER

*General Manager of
Marine & Ocean Equipment Team*

Note : 1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 21 March 2024

A. Product Description

1. Product Specification

- 1) Product Description (Type : SDxxxx)
- Power Supply : 18 ~ 30 VDC (SELV / PELV)
 - Outputs : Switching Signal (Switch 150mA)
Analogue Signal (4 ~ 20mA)
Pulse Signal
IO-Link
 - Electrical Connection : M12 Connector
 - Display : colour display 1,44", 128 x 128 pixels
2 x LED, Yellow

Model	Accuracy	Function OUT1	Function OUT2	Measuring Range
SD5500	$\pm (2\% \text{ MW} + 1\% \text{ MEW})$	Switch 150mA Impulse IO-Link	Switch 150mA 4 ~ 20mA Impulse Counter Reset	0.8 ~ 250 l/min
SD5600	$\pm (6\% \text{ MW} + 0.6\% \text{ MEW})$	Switch 150mA Impulse IO-Link	Switch 150mA 4 ~ 20mA Impulse Counter Reset	0.8 ~ 250 l/min
SD6020	$\pm (15\% \text{ MW} + 1.5\% \text{ MEW})$	Switch 150mA Impulse IO-Link	Switch 150mA 4 ~ 20mA Impulse Counter Reset	4 ~ 1250 l/min
SD6500 SD6501	$\pm (2\% \text{ MW} + 1\% \text{ MEW})$	Switch 150mA Impulse IO-Link	Switch 150mA 4 ~ 20mA Impulse Counter Reset	4 ~ 1250 l/min
SD6600 SD6601	$\pm (6\% \text{ MW} + 0.6\% \text{ MEW})$	Switch 150mA Impulse IO-Link	Switch 150mA 4 ~ 20mA Impulse Counter Reset	4 ~ 1250 l/min
SD8500 SD8501	$\pm (2\% \text{ MW} + 1\% \text{ MEW})$	Switch 150mA Impulse IO-Link	Switch 150mA 4 ~ 20mA Impulse Counter Reset	14 ~ 3750 l/min
SD8600 SD8601	$\pm (6\% \text{ MW} + 0.6\% \text{ MEW})$	Switch 150mA Impulse IO-Link	Switch 150mA 4 ~ 20mA Impulse Counter Reset	14 ~ 3750 l/min
SD9500	$\pm (2\% \text{ MW} + 1\% \text{ MEW})$	Switch 150mA Impulse IO-Link	Switch 150mA 4 ~ 20mA Impulse Counter Reset	20 ~ 6830 l/min
SD2500 SD2501	$\pm (2\% \text{ MW} + 1\% \text{ MEW})$	Switch 150mA Impulse IO-Link	Switch 150mA 4 ~ 20mA Impulse Counter Reset	40 ~ 11670 l/min

* Note

- 1) MW : Measured Value
2) MEW : Final Value of the measuring range

Product Description and/or Approval Condition

Date of Issue : 21 March 2024

2. Approved Drawings and Documents

- 1) Approved Drawings
 - Data Sheets SDxxxx_DE

3. Test Reports, etc.

- 1) Test Report
 - Test Report No. 154491-337, dated 2023-08-22
 - Test Report No. 23-0054RP30-003, dated 2023-08-25
 - Test Report No. 142-23 Issue 2, dated 2023-07-19
 - Test Report No. 22-17718, dated 2022-10-20
- 2) Etc.
 - Operating instructions SD6020, No. 80282583, dated 2023-03-01
 - Operating instructions SD25xx, SD55xx, SD56xx, SD58xx, SD65xx, SD66xx, SD68xx, SD85xx, SD86xx, SD95xx, No. 80291853, dated 2020-09-01

B. Approval Condition

1. Application & Limitation

- 1) This approval is granted on the basis of the test reports and the approved documentation.
- 2) Degree of protection is to be complied with Rule Pt.6 Ch.1 Sec.2 201.2. (5).
- 3) The manufacturer is to inform this Society of all kinds of revisions of the equipment including the major changes of software. If the changes are recognized to affect functionality of the approved equipment, type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.

2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual product certification is not required.

3. Marking

- 1) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.

4. Others

- 1) Test condition (IACS UR E10 Rev.8 basis)

Test	Condition	Remark
EMC	All locations excluding the bridge and deck zone	-
Temperature	5 ~ +70°C	-
Vibration	Acceleration $\pm 0.7g$	-

< End of Certificate >