

**TYPE APPROVAL CERTIFICATE**

This is to certify:

That the Flow Sensor

with type designation(s)  
SI 0521, SI 0557

Issued to  
**IFM Electronic GmbH**  
Essen, Germany

is found to comply with  
DNV GL 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 GL.

Location classes:

|             |   |
|-------------|---|
| Temperature | D |
| Humidity    | B |
| Vibration   | B |
| EMC         | A |
| Enclosure   | C |

Issued at Hamburg on 2018-04-17

for DNV GL

This Certificate is valid until 2023-04-16.

DNV GL local station: Augsburg

Approval Engineer: Dariusz Lesniewski

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.



Job Id: 262.1-027764-1  
Certificate No: TAA00001T7  
Revision No: 1

## Product description

Application: liquids  
Medium temperature: - 15°C...70°C  
Power supply: 24V DC (18..32 VDC)  
Output: 2x switching outputs (PNP)  
SI0521: 2x no / nc (programmable)  
SI0557: 1x no, 1x nc (programmable)  
Measuring and setting range: 3...300 cm/s  
Switch point accuracy: +-10cm/s  
HMI: display 10 LED (three-colour), push-buttons  
Process connection: internal thread M18x1.5 for adapter  
Probe length: 45mm  
Electrical connection: M12 connector  
Degree of protection: IP 56, IP 67

## Place of manufacture

ifm prover gmbh  
Waldesch 9  
88069 Tett nang, GERMANY

## Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

## Type Approval documentation

Test Report: ifm prover internal 'project no. 810250' dated 26.11.2012  
Test Report: TÜV NORD CERT No. 12/12173-1  
Test Report: ZAMM No. 418-0313  
Test Report: Aucoteam No. 9436.01/12 (08-10-2012)  
Test Report: TREO No. 097-18 (2018-03-28)  
Data sheets: SI0521(Ed. 23-11-2012), SI0557 (Ed. 23-11-2012)  
Wiring diagrams  
Type approval renewal assessment report issued at Augsburg on 2018-03-14

## Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

## Marking of product

The products to be marked with:

- manufacturer name
- model name
- production code
- 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

Job Id: 262.1-027764-1  
Certificate No: TAA00001T7  
Revision No: 1

- ☐ 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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE