

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Inductive Sensors**with type designation(s)  
**DW series**

Issued to

**Contrinex AG**  
**Corminboeuf, Switzerland**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.**

<b>Temperature</b>	<b>D</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>B</b>
<b>EMC</b>	<b>See page 2</b>
<b>Enclosure</b>	<b>D (IP69K/IP68)</b>

Issued at **Hamburg** on **2018-04-17**This Certificate is valid until **2023-04-16**.DNV GL local station: **Augsburg**Approval Engineer: **Jens Dietrich**Digitally Signed By: Rinkel, Marco  
for **DNV GL**

Location: Hamburg, on behalf of

**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.



## Product description

Article Number	Product Designation	EMC location class
320-420-749	DW-MD-703-P12G	A
320-420-750	DW-MS-703-M12	A
320-420-751	DW-MD-703-M12	A
320-420-752	DW-MS-703-M18-002	A
320-420-753	DW-MD-703-M18	A
320-420-754	DW-MS-703-M30-002	A
320-420-755	DW-MD-703-M30	A
320-420-748	DW-MS-703-P12G	A
320-620-050	DW-AD-603-M10E-637	B
320-620-049	DW-AD-603-M10E-620	B
320-420-756	DW-MD-703-C23	A
320-420-757	DW-MV-703-C23-276	A

Designation pos. (excl. dashes)	Designation letter	Description
1 and 2	DW	Inductive sensors
3	M	Maritime
4	D/S/V	Cable/Connector/Cable+Connector
5	7 /6	Full inox (can be V2A or V4A) / Basic (with ceramic front)
6	0	Flush mounting
7	3 (1)	3 = PNP NO output, 1 = NPN NO
8 - 10	M## P12 C23	M## Housing diameter – metric screw thread P12 M12 housing diameter, can withstand high pressures C23 Cubic shape housing 20x32x8mm
11	E / G	Tight / Grove
Suffix	002	M18 or M30 sensor with M12 connector
Suffix	620	Cable 235 mm PUR
Suffix	637	Cable 140 mm PUR
Suffix	276	Cable 0.2m

Supply voltage range 10...30V DC  
 Output current ≤200 mA, short-circuit protected  
 Load resistance for output signal  $R_L > 150 \Omega$ .

Job Id: **262.1-021943-1**  
Certificate No: **TAA00001SS**

## Places of production

Contrinex Electronic Technology (Shanghai) Co., Ltd.,  
Building 5, No.42 Dongfu Road, SIP Suzhou, 215123,  
CHINA, PRC.

Contrinex Elektronikai Kft.  
1044 Budapest, Oradna u.7.

Contrinex Ceylon (PVT) Ltd.  
Wattala, Sri Lanka

## Application/Limitation

The Type Approval covers hardware listed under Product description related to Places of Production. 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 RU SHIP Pt.4, Ch.9, Sec.1.

Technical data sheet to be observed for the respective application. Proper adjustment taking into account ambient operating temperatures and the expansion coefficients for the respective mounting fixture is to be done.

## Type Approval documentation

TREO Laboratory Test Report no. 281-17, issue 4, dated 2018-03-09;  
Data sheet Contrinex DW-AD-603-M10E-xxx\_Rev 0\_23.02.18\_MB; DW\_Mx\_703\_C23-xxx\_Rev 0\_23.02.18\_MB; DW-Mx-703-M12\_Rev0\_23.02.18\_MB; DW-Mx-703-M18-xxx\_Rev 0\_23.02.18\_MB; DW-Mx-703-M30-xxx\_Rev 0\_23.02.18\_MB; DW-Mx-703-P12G\_Rev 0\_23.02.18\_MB.  
Type Approval Assessment Report Contrinex Electronic Technology, Suzhou, China, dated 2018-02-05;  
Type Approval Assessment Report Contrinex Elektronikai Kft. & SSC Kft. Hungary, dated 2018-02-15;  
Type Approval Assessment Report Contrinex Ceylon (PVT) Ltd., Sri Lanka, dated 2018-03-07.

## Tests carried out

Applicable tests according to DNV GL CG-0339, Edition Nov. 2016.

## Marking of product

Laser engraved: Manufacturer name, Type designation, Batch no.

## 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 this certificate.



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END OF CERTIFICATE