



CERTIFICATE NUMBER	21-2186093-PDA
EFFECTIVE DATE	14-Dec-2021
EXPIRY DATE	13-Dec-2026
ABS TECHNICAL OFFICE	Houston ESD - Electrical

# CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

## **BD SENSORS GMBH**

located at

**BD-SENSORS-STR. 1, D-95199 THIERSTEIN, Germany**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

**Product:** Pressure Transmitter  
**Model:** 17.457 G, 18.457 G, 26.457 G, 30.457 G, DMK 456, DMK 457, DMK 458, DMP 457, LMK 458, LMK 458H  
**Endorsements:**  
**Tier:** 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 13/Dec/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping
<i>Soheni Haque</i>
Soheni Haque, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

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**Product:** Pressure Transmitter  
**Model:** 17.457 G, 18.457 G, 26.457 G, 30.457 G, DMK 456, DMK 457, DMK 458, DMP 457, LMK 458, LMK 458H

**Endorsements:****Intended Service:**

Pressure control, alarm and monitoring functions for Marine and Offshore Applications.

**Description:**

Housing made of material 1.4301, 1.4404 (option: CuNi10Fe1Mn).

Diaphragm: ceramics AL2O3 96% (99%) or Stainless Steel.

**Rating:**

Pressure ranges (bar): from -1 ... 0 up to 400 bar, 0 ... 100 mbar/ 0 ... 400 mbar up to 0 ... 600 bar.

Supply voltage: nominal 24 V DC.

Output: 4...20 mA.

Ambient temperature: -40°C to 85°C.

Degree of protection: IP 65 (with DIN connector), IP 65/67 (with M12 connector), IP68 / IP67 (pre-assembled cable)

(Ex) types: Certified II 1G Ex ia IIC T6 -20° C &lt; Ta &lt; 60° C (IBExU07ATEX1180 X), II 1G Ex ia IIB T4, II 1D Ex iaD 20 T85° C (IBExU10ATEX1186 X), II 1G Ex ia IIC T4 Ga, II 1G Ex ia IIB T4 Ga (IBExU10ATEX1068 X)

**Service Restriction:**

Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

ATEX certified equipment is not to be installed in hazardous areas on U.S. vessels unless it can be proven to have been tested to the applicable IEC 60079 series standards by an independent laboratory accepted by the U.S. Coast Guard.

**Comments:**

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

**Notes/Drawing/Documentation:**

1. EMC Test Report. 073011.173.21 V1.0 Revision:1, Pages:33
2. EMC Test Report Date: 10.09.2021
3. Test Laboratory Location: The tests were carried out at MeßTechnikNord GmbH, EMC-Centre Industriestrasse 29, 22880 Wedel, Germany
4. Drawing No. 03-3210-3\_DMK 457\_201103, Test Report, EMC, Revision: -, Pages: 1
5. Drawing No. 07-1481, Test Report, Vibration and Climatic, Revision: -, Pages: 1
6. Drawing No. 07-1481x, Test Report, EMC, Revision: -, Pages: 1
7. Drawing No. 07-1590, Test Report, Salt Mist, Revision: -, Pages: 1
8. Drawing No. 07-1590-1\_Salznebel\_LMK 457 DMP 457 DMK 457\_261007, Test Report, Salt Mist, Revision: -, Pages: 1
9. Drawing No. 07-7047-3, Test Report, EMC, Revision: -, Pages: 1
10. Drawing No. 07-7047-4, Test Report, EMC, Revision: -, Pages: 1
11. Drawing No. 09/8152-1-1, Test Report, EMC, Revision: -, Pages: 1
12. Drawing No. 09/8152-2-1, Test Report, EMC, Revision: -, Pages: 1
13. Drawing No. 09/9036-1, Test Report, EMC, Revision: -, Pages: 1
14. Drawing No. 09/9036-2-1, Test Report, EMC, Revision: -, Pages: 1
15. Drawing No. 09/9036-2-1v, Test Report, EMC, Revision: -, Pages: 1
16. Drawing No. 09/9036-2-2, Test Report, EMC, Revision: -, Pages: 1
17. Drawing No. 09/9036-3, Test Report, EMC, Revision: -, Pages: 1

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18. Drawing No. 09/9036-4, Test Report, EMC, Revision: -, Pages: 1
19. Drawing No. 10/1068-1, Test Report, EMC, Revision: -, Pages: 1
20. Drawing No. 10/1068-3, Test Report, EMC, Revision: -, Pages: 1
21. Drawing No. 10/1068-4, Test Report, EMC, Revision: -, Pages: 1
22. Drawing No. 10/9036-3-1, Test Report, EMC, Revision: -, Pages: 1
23. Drawing No. 1158-10-GG-10-PP001, Test Report, Degree of Protection, Revision: -, Pages: 1
24. Drawing No. 17657, Drawings, Revision: -, Pages: 1
25. Drawing No. 186570xx, Drawings, Revision: -, Pages: 1
26. Drawing No. 26657, Drawings, Revision: -, Pages: 1
27. Drawing No. 56xxx, Drawings, Revision: -, Pages: 1
28. Drawing No. 59625, Drawings, Revision: -, Pages: 1
29. Drawing No. 60x, Drawings, Revision: -, Pages: 1
30. Drawing No. 6196/07, Test Report, Environmental, Revision: -, Pages: 1
31. Drawing No. 76xxx, Drawings, Revision: -, Pages: 1
32. Drawing No. BA\_DMU\_Schiff\_EX\_E, Operating Manual, Revision: -, Pages: 1
33. Drawing No. BA\_DMU\_Schiff\_E, Operating Manual, Revision: -, Pages: 1
34. Drawing No. BA\_FS\_Schiff\_E, Operating Manual, Revision: -, Pages: 1
35. Drawing No. BA\_FS\_Schiff\_EX\_E, Operating Manual, Revision: -, Pages: 1
36. Drawing No. BDS GmbH DX14A\_IBExU07ATEX1180X\_E, Atex Certificate, DX14A, Revision: -, Pages: 1
37. Drawing No. BDS GmbH DX14\_IBExU05ATEX1070X\_E, Atex Certificate, DX14, Revision: -, Pages: 1
38. Drawing No. BDS GmbH DX15A\_IBExU10ATEX1186X\_E, Atex Certificate, DX15A, Revision: -, Pages: 1
39. Drawing No. BDS GmbH DX19\_IBExU10ATEX1068X\_E, Atex Certificate, DX19, Revision: -, Pages: 1
40. Drawing No. Correspondence, Request Form and Asbestos Free Declaration, Revision: -, Pages: 1
41. Drawing No. DB\_17457G\_E, Data Sheet, Revision: -, Pages: 1
42. Drawing No. DB\_18457G\_E, Data Sheet, Revision: -, Pages: 1
43. Drawing No. DB\_26457G\_E, Data Sheet, Revision: -, Pages: 1
44. Drawing No. DB\_30457G\_E, Data Sheet, Revision: -, Pages: 1
45. Drawing No. DB\_DMK456\_E, Data Sheet, Revision: -, Pages: 1
46. Drawing No. DB\_DMK457\_E, Data Sheet, Revision: -, Pages: 1
47. Drawing No. DB\_DMK458\_E, Data Sheet, Revision: -, Pages: 1
48. Drawing No. DB\_DMP457\_E, Data Sheet, Revision: -, Pages: 1
49. Drawing No. DB\_LMK458H\_E, Data Sheet, Revision: -, Pages: 1
50. Drawing No. DB\_LMK458\_E, Data Sheet, Revision: -, Pages: 1
51. Drawing No. DSK701C\_e\_I1, Data Sheet, Revision: -, Pages: 1
52. Drawing No. ELV34, Drawings, Revision: -, Pages: 1
53. Drawing No. ELV58, Drawings, Revision: -, Pages: 1
54. Drawing No. ELV66, Drawings, Revision: -, Pages: 1
55. Drawing No. ELV68, Drawings, Revision: -, Pages: 1
56. Drawing No. EMV 44 ST670, Drawings, Revision: -, Pages: 1
57. Drawing No. EMV 45, Drawings, Revision: -, Pages: 1
58. Drawing No. EMV43, Drawings, Revision: -, Pages: 1
59. Drawing No. EMV51, Drawings, Revision: -, Pages: 1
60. Drawing No. Eli25, Drawings, Revision: -, Pages: 1
61. Drawing No. Eli25x, Drawings, Revision: -, Pages: 1
62. Drawing No. Eli28, Drawings, Revision: -, Pages: 1
63. Drawing No. Eli28x, Drawings, Revision: -, Pages: 1
64. Drawing No. Emv13, Drawings, Revision: -, Pages: 1
65. Drawing No. Emv26, Drawings, Revision: -, Pages: 1
66. Drawing No. P05-0030, Test Report, Degree of Protection, Revision: -, Pages: 1
67. Drawing No. P05-0030x, Test Report, Degree of Protection, Revision: -, Pages: 1
68. Drawing No. UB 6817/09, Test Report, Vibration, Revision: -, Pages: 1
69. Drawing No. UB 6873-09, Test Report, Vibration, Revision: -, Pages: 1
70. Document No. 073011.173.21 V1.0, Test Report, Electromagnetic Compatibility, Rev. 1, Pages: 33

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**STANDARDS****ABS Rules:**

Rules for Conditions of Classification, Part 1 – 2021 Marine Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Marine Vessel Rules (2021): 4-6-2/9.11.2, 4-6-2/9.11.3, 4-8-3/1.7, 4-8-3/1.11, 4-8-3/1.17, 4-8-3/13.1, 4-9-9/13

Rules for Conditions of Classification, Part 1 – 2021 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Mobile Offshore Units (2021): 4-2-1/11.27.2, 4-3-1/11, 4-3-1/15, 4-3-1/17, 4-3-3/9

**National:**

NA

**International:**

NA

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA