

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER	BD SENSORS GmbH
PLACE OF PRODUCTION	BD-Sensors-Str. 1 95199 Thierstein GERMANY
DESCRIPTION	Pressure transmitter
TYPES	DX14A-DMK456, DMK 458*, DX14A-DMK458, DMK 457*, DX19-DMK 457*, DMP 457*, DX19-DMP 457*, 17.457G, 18.457G, 26.457G and 30.457G
APPLICATION	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2, ENV4 and ENV3 (types marked with "**") and as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - 2002.
STANDARD	Manufacturer's specification
OTHER CONDITIONS	Ratings for application in hazardous areas are to be obtained from the applicable Ex Certificates.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. HTS/ETS 29021-13 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No.	13/20055
Issue Date	26 November 2013
Expiry Date	25 November 2018
Sheet	1 of 1



Thorsten Wolff
Hamburg Technical Support Office
Lloyd's Register EMEA

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Marine Design Appraisal Document

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Date
26 November 2013

Please quote this reference number on all future communications
HPC1320143/29021-13/TW/LK

THE LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 2002

ISSUED TO: **BD|SENSORS GMBH, THIERSTEIN**
FOR: **PRESSURE TRANSMITTER**
TYPE APPROVAL CERTIFICATE NO. **13/20055**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register's Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Form LR2571	Application for Type Approval	22.04.2013
HPC 1320143	Initial Inspection Report	06.09.2013
08 100 982136	DIN EN ISO 9001 Certificate	10.09.2010
MP-506/09	Verfahrensanweisung Softwareerstellung und Softwareprüfung	28.01.2009
F-EK 05	Softwarekonventionen	24.04.2009
Unnumbered	Software releases ELI 38 / ELI 25 for DSK 701 C	23.06.2008
DMU Schiff_E	Operating Manual DMK 457, DMK 458 and DMP 457	06.12.2012
DMU Schiff_Ex_E	Operating Manual DMK 456, DMK 457, DMK 458 and DMP 457	06.12.2012
TÜV 10 ATEX 382477 Q	Production Quality Assessment Notification	09.09.2013
17.457G_E	OEM pressure transmitter marine	12.01.2012
18.457G_E	OEM pressure transmitter marine	12.01.2012
26.457G_E	OEM pressure transmitter marine	12.01.2012
30.457G_E	OEM pressure transmitter marine	13.01.2012
DMK456_E	Pressure transmitter with stainless steel field housing	01.06.2013
DMK457_E	Pressure transmitter for shipbuilding and offshore	15.09.2013
DMK458_E	Pressure transmitter for marine and offshore	01.06.2013
DMP457_E	Pressure transmitter for shipbuilding and offshore	15.09.2013
Unnumbered	Datasheet DSK 511Z	18.09.2013
Unnumbered	Datasheet DSK 611 Z	18.09.2013

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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APPROVAL DOCUMENTATION continued

Unnumbered	Datasheet DSP 410 Z	18.09.2013
Unnumbered	Datasheet DSP 411 Z	18.09.2013
Unnumbered	Datasheet DSP 412 Z	18.09.2013
IBExU05ATEX1070 X	EC-Type Examination Certificate	14.07.2005
IBExU07ATEX1180 X	EC-Type Examination Certificate	14.01.2008
IBExU10ATEX1186 X	EC-Type Examination Certificate	21.12.2010
IBExU10ATEX1068 X	EC-Type Examination Certificate	31.08.2010

DRAWINGS

17.657.002/01	G1/2" EN 837 with connector Pg11, Version 01	22.11.2011
18.657.002/01	G1/2" EN837 with DSP410 and connector Pg11, Version 01	22.11.2011
26.657.002/A	G1/2" EN 837 with connector Pg11, Version A	10.11.2011
UP.610.400	Pressure transmitter EP 500 – G ¼" – EN 837 – version 500, Index B	30.06.2010
59,450,030	Assembly drawing DMK 457_KRO	25.08.2011
59,600,000	Assembly drawing DMK 457	29.06.2006
59,605,000	Assembly drawing DMK 457	24.10.2003
59.625.000 / 01	Assembly drawing DX19-DMK 457	22.07.2011
59.635.000 /01	Assembly drawing DX19-DMK 457	26.05.2011
59,670,000	Assembly drawing DMK 458	17.11.2008
59,680,030	Assembly drawing DMK 457_KRO	26.08.2010
59,692,000	Assembly drawing DX19-DMK 457	25.07.2011
59,695,000	Assembly drawing DX19-DMK 457	24.01.2011
59,695,010	Assembly drawing DX19-DMK 457	24.01.2011
60,600,000	Assembly drawing DMP 457	30.03.2003
60,600,002	Assembly drawing DMP 457	24.10.2003
60,600,004	Assembly drawing DMP 457	24.10.2003
60,600,202	Assembly drawing DMP 457	24.10.2003
60,615,000	Assembly drawing DMP 457	10.04.2003
60,615,010	Assembly drawing DX19-DMP 457	22.07.2011
60,619,000	Assembly drawing DMP 457	01.04.2003

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DRAWINGS continued

60.622.F00	Assembly drawing	DX19-DMP 457	22.07.2011
60,625,000	Assembly drawing	DX19-DMP 457	26.05.2011
60,635,000	Assembly drawing	DX19-DMP 457	24.11.2010
60,645,000	Assembly drawing	DX19-DMP 457	26.05.2011
60,695,000	Assembly drawing	DX19-DMP 457	24.01.2011
60,695,010	Assembly drawing	DX19-DMP 457	24.01.2011
EI.060.004	Assembly drawing	ELI25_4o	24.01.2008
EI.060.002	Circuit diagram	ELI25_4s	04.12.2007
EI.060.004	Layout	ELI25_4t	24.01.2008
EI.090.002	Circuit diagram	ELI28_1s	03.04.2008
EI.090.005	Layout	ELI28_1t	12.12.2007
EI.090.004	Assembly drawing	ELI28o	03.12.2007
EI.090.005	Layout	ELI28t	03.12.2007
EI.870.004	Assembly drawing	ELI34, Rev. 2.11	27.01.2009
EI.870.002	Circuit diagram	ELV34, Rev. 2.11	12.09.2008
Unnumbered	Parts list	ELV34, Index 4	05.05.2008
EV.180.004	Assembly drawing	ELV58o v1.0	30.10.2008
EV.180.002	Circuit diagram	ELV58s v1.0	24.07.2008
EV.260.004	Assembly drawing	ELV66o	30.03.2009
EV.260.002	Circuit diagram	ELV66s	23.03.2009
EV.280.002	Assembly drawing	ELV68o v1.0	26.05.2009
EV.280.004	Circuit diagram	ELV68s v1.0	11.08.2009
EL.631.068 / 02	Layout	EL.631.068	11.05.2011
ST.490.004	Assembly drawing	Emv26_1o	22.12.2009
ST.490.002	Circuit diagram	Emv26_1s	16.02.2004
ST.680.002	Circuit diagram	EMV 45 - DMK 456 GL	05.11.2007
ST.680.004	Assembly drawing	EMV 45 Placeplan	05.11.2007
ST.680.005	Layout	EMV 45 Layout	05.11.2007
ST.740.002	Circuit diagram	EMV51s	06.02.2009
ST.740.004	Assembly drawing	EMV51o	05.03.2009
ST.740.005	Layout	EMV51t	05.03.2009

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TEST REPORTS

Unnumbered	Überdruckprüfungen	04.10.2013
10 / 1068-3	TÜV Nord test report	26.08.2010
10 / 1068-4	TÜV Nord test report	15.12.2010
1158-10-GG-10-PP001	SLG test report	28.04.2010
09 / 8152-1-1	EMV Services test report	12.01.2009
09 / 9036-2-1	EMV Services test report	02.11.2009
09 / 9036-3	EMV Services test report	23.11.2009
10 / 9036-3-1	EMV Services test report	31.03.2010
09 / 9036-4	EMV Services test report	30.11.2009
UB 6873 / 09	BFSV test report	16.04.2010
P-5-0030	Carsynergies test report	02.03.2005
03 / 3210-3	EMV Services test report	20.11.2003
07-1481	paconsult test report	21.03.2007
07-1590	paconsult test report	26.10.2007

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

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Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.



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Part 3

Transmitters/Transducers

Producer/Licence No.	Item Description	Technical Details	Category/Additional Tests	Remarks	Cert. No.
BD SENSORS GmbH BD-Sensors-Str. 1 95199 Thierstein GERMANY	Pressure transmitter DX14A-DMK456 DMK 458* DX14A-DMK458 DMK 457* DX19-DMK 457* DMP 457* DX19-DMP 457* 17.457G 18.457G 26.457G 30.457G	Power supply Vdc: 24 Output (mA): 4-20 Pressure range (bar): 0-0.04 to 0-20 0-0.04 to 0-20 0-0.04 to 0-20 0-0.4 to 0-160 0-0.4 to 0-160 0-0.1 to 0-600 0-0.1 to 0-600 0-6 to 0-600 0-0.1 to 0-6 0-1 to 0-160 0-1.6 to 0-250	ENVI, ENV2, ENV3("**"), ENV4 (2002)	Expires: 25 November 2018 Ratings for application in hazardous areas are to be obtained from the applicable Ex Certificates.	13/20055

17 Nov. 11. 2013