



Lloyd's
Register

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 supersedes certificate number 05/20052 (E4) issued on 09 September 2011 which is hereby cancelled.

This certificate is issued to:

PRODUCER	Bachofen AG
PLACE OF PRODUCTION	Ackerstrasse 42 CH 8610 Uster Switzerland
DESCRIPTION	Trimod Besta float operated liquid level switches and mounting accessories.
TYPES	A, B, C, DA, DB, DC, UA, UB, HA, HB, TDA, TDB, Z, X and P and combinations thereof, including flange modules to ANSI, DIN, BS, JIS and Besta standard and float modules.
APPLICATION	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – 2002.
RATINGS	Temperature ratings: A, B, XA, XB : 330 °C C : 150 °C DA, DB, DC : 120 °C UA, UB, XUA, XUB : 80 °C HA, HB : 400 °C Z : 145 °C P : 250 °C

Certificate No.	05/20052 (E5)
Issue Date	30 October 2015
Expiry Date	21 September 2020
Sheet	1 of 2



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ADDITIONAL TESTS

Enclosure tests:

Types A, B, C, HA and HB : IP 65
 Types DA, DB, TDA, TDB : IP 66 / IP 67
 Types DC : IP 67
 Types UA and UB : IP 68

DESIGN CODE

Manufacturer's specification

OTHER CONDITIONS


Z and X types have an ingress protection rating of IP 66 / IP 67 in general. Types Z, B and X are suitable for use in hazardous areas. Rating for application in hazardous areas are to be obtained from 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 32639-15 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No. 05/20052 (E5)
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Sheet 2 of 2

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 Hamburg Technical Support Office
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 LR031.1.2013.12

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Part 3
Switches - Level

Producer/Licence No.	Item Description	Technical Details	Category/Additional Tests	Remarks	Cert. No.
Bachofen AG Ackerstrasse 42 CH 8610 Uster Switzerland	Trimod Besta float operated liquid level switches and mounting accessories. A, B, C, DA, DB, DC, UA, UB, HA, HB, TDA, TDB, Z, X and P and combinations thereof, including flange modules to ANSI, DIN, BS, JIS and Besta standard and float modules.	Temperature ratings: A, B, XA, XB : 330 °C C : 150 °C DA, DB, DC : 120 °C UA, UB, XUA, XUB : 80 °C HA, HB : 400 °C Z : 145 °C P : 250 °C	ENV1 ENV2 ENV3 (2002) Enclosure tests: A, B, C, HA and HB : IP65 DA, DB, TDA, TDB : IP66/IP67 DC : IP67 UA and UB : IP68 Z and X (in general) : IP66/IP67	Expires: 21 September 2020 Types Z, B and X are suitable for use in hazardous areas. Rating for application in hazardous areas are to be obtained from applicable Ex Certificates.	05/20052 (E5)