



Marine & Offshore

Certificate number: 34077/C0 BV

File number: ACE14/917/3

Product code: 2601D

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

TYCO ELECTRONICS FRANCE SAS
CHASSIEU - FRANCE

for the type of product

TERMINAL BLOCKS (LOW VOLTAGE)
PI-Spring terminal blocks, SNK series

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships
IEC 60947-7-1 (2009), 60947-7-2 (2009), IEC 60947-7-3 (2009)

EC Code: 31

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 29 Nov 2028

For Bureau Veritas Marine & Offshore,

At BV LYON, on 29 Nov 2023,
Florian Aulen

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 5 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Screwless, PI-Spring terminal blocks - SNK series (including accessories).

1.1 - Approval's range:

Type	Voltage (V)	Cross-sect. (mm ²)	Current (A)	Remarks
ZK2.5	1000	2.5	24	Feed-through 2 connections
ZK2.5-3P	1000	2.5	24	Feed-through 3 connections
ZK2.5-4P	1000	2.5	24	Feed-through 4 connections
ZK2.5-S-4P	630	2.5	20	Disconnect with blade, 4 connections
ZK2.5-CH-4P-LR	630	2.5	1	Component holder, 4 connections
ZK2.5-CH-4P-RL	630	2.5	1	Component holder, 4 connections
ZK2.5-L-L-PE	500	2.5	22	Triple deck with 2 feed-through circuits and 1 Ground circuit
ZK2.5-L-N-PE	500	2.5	22	Triple deck with 2 feed-through circuits and 1 Ground circuit
ZK2.5-SP-4P	630	2.5	17	Disconnect with plug, 4 connections
ZK2.5-4P-R1	630	2.5	24	Feed-through 4 connections
ZK2.5-PE	-	2.5	-	Ground 2 connections
ZK2.5-PE-3P	-	2.5	-	Ground 3 connections
ZK2.5-PE-4P	-	2.5	-	Ground 4 connections
ZK2.5-D1	800	2.5	24	Double deck with 1 feed-through circuit
ZK2.5-D2	800	2.5	24	Double deck with 2 feed-through circuits
ZK2.5-D1-PE	-	2.5	-	Double deck with 1 ground circuit
ZK2.5-D2-PE	800	2.5	24	Double deck with 1 feed-through circuit & 1 ground circuit
ZK2.5-T1-PE	-	2.5	-	Triple deck with 1 ground circuit
ZK2.5-S	630	2.5	20	Disconnect with blade
ZK2.5-SP	630	2.5	17	Disconnect with plug
ZK2.5-SF	500	2.5	6.3	Fuse holder
ZK2.5-SF-R1	500 (1)	2.5	6.3	Fuse holder+blown fuse indicator 24/110V
ZK2.5-SF-R3	500 (2)	2.5	6.3	Fuse holder+blown fuse indicator 115/250V
ZK2.5-S-R1	630	2.5	20	Disconnect with blade
ZDK2.5-22	1000	2.5	24	Pluggable feed-through with 4 connections (2 fixed, 2 plugs)
ZK2.5-T1	500	2.5	22	Triple deck with 1 feed-through circuit
ZK2.5-T3	500	2.5	22	Triple deck with 3 feed-through circuits
ZD2.5-11	1000	2.5	22	Pluggable feed-through with 2 connections (2 plugs)
ZD2.5-22	1000	2.5	22	Pluggable feed-through with 4 connections (4 plugs)
ZDK2.5-11	1000	2.5	24	Pluggable feed-through with 2 connections (1 fixed & 1 plug)
ZDK2.5-21	1000	2.5	24	Pluggable feed-through with 3 connections (2 fixed & 1 plug)
ZDK2.5-D1	800	2.5	22	Pluggable double deck with 1 feed-through circuit & with 4 connections (2 fixed & 2 plugs)
ZDK2.5-D2	800	2.5	22	Pluggable double deck with 2 feed-through circuits & with 4 connections (2 fixed & 2 plugs)
ZD2.5-11-PE	-	2.5	-	Pluggable ground with 2 connections (2 plugs)
ZD2.5-22-PE	-	2.5	-	Pluggable ground with 4 connections (4 plugs)
ZDK2.5-11-PE	-	2.5	-	Pluggable ground with 2 connections (1 fixed & 1 plug)
ZDK2.5-22-PE	-	2.5	-	Pluggable ground with 4 connections (2 fixed & 2 plug)
ZDK2.5-D1-PE	-	2.5	-	Pluggable double deck with 1 ground circuit & with 4 connections (2 fixed & 2 plugs)
ZDK2.5-D2-PE	800	2.5	22	Pluggable double deck with 1 feed-through circuit & 1 ground circuit & with 4 connections (2 fixed & 2 plugs)

Type	Voltage (V)	Cross-sect. (mm ²)	Current (A)	Remarks
ZDK2.5-11-D3000	1000	14AWG	20	Pluggable feed-through with 2 connections (1 fixed & 1 plug)
ZDK2.5-22-D3000	1000	14AWG	20	Pluggable feed-through with 4 connections (2fixed, 2 plugs)
ZK4	1000	4	32	Feed-through 2 connections
ZDK4-22	1000	4	30	Pluggable feed-through with 4 connections (2fixed, 2 plugs)
ZK4-3P	1000	4	32	Feed-through 3 connections
ZK4-4P	1000	4	32	Feed-through 4 connections
ZK4-PE	-	4	-	Ground 2 connections
ZK4-PE-3P	-	4	-	Ground 3 connections
ZK4-PE-4P	-	4	-	Ground 4 connections
ZK4-D1	800	4	32	Double Deck with 1 feed-through circuit
ZK4-D2	800	4	29	Double Deck with 2 feed-through circuits
ZK4-D1-PE	800	4	-	Double Deck with 1 ground circuit
ZK4-D2-PE	800	4	-	Double Deck with 1 feed-through circuit and 1 ground circuit
ZK4-SF1	800	4	6.3	Fuse holder
ZK4-SF1-R1	800 (1)	4	6.3	Fuse holder + blown fuse indicator 24/110V
ZK4-SF1-R3	800 (2)	4	6.3	Fuse holder + blown fuse indicator 115/250V
ZK6	1000	6	41	Feed-through 2 connections
ZK6-3P	1000	6	41	Feed-through 3 connections
ZK6-PE	-	6	-	Ground 2 connections
ZK6-PE-3P	-	6	-	Ground 3 connections
ZK10	1000	10	57	Feed-through 2 connections
ZK10-3P	1000VAC 1250V DC	10	57	Feed-through 3 connections
ZK10-PE	-	10	-	Ground 2 connections
ZK10-PE-3P	-	10	-	Ground 3 connections
ZK16	1000	16	76	Feed-through 2 connections
ZK16-3P	1000VAC 1250V DC	16	76	Feed-through 3 connections
ZK16-PE	-	16	-	Ground 2 connections
ZK16-PE-3P	-	16	-	Ground 3 connections
CDK2.5	1000	2.5	24	Female plug
CDK2.5-E	1000	2.5	24	Female plug without outer nubs
CDK2.5-J	800	2.5	24	Female plug with 1 jumper
CDK2.5-J-E	800	2.5	24	Female plug with 1 jumper & without outer nubs
CDK2.5-2P-J	500	2.5	24	Female plug with 2 connections & 1 jumper
CDK2.5-2P-J-E	500	2.5	24	Female plug with 2 connections & 1 jumper & without outer nubs
CDK2.5-PE	-	2.5	-	Ground female plug
CDK2.5-PE-E	-	2.5	-	Ground female plug without outer nubs
CDK2.5-2P-J-PE	-	2.5	-	Ground female plug with 2 connections & 1 jumper
CDK2.5-2P-J-PE-E	-	2.5	-	Ground female plug with 2 connections & 1 jumper & without outer nubs
CDK2.5-J-PE	-	2.5	-	Ground female plug with 1 jumper
CDK2.5-J-PE-E	-	2.5	-	Ground female plug with 1 jumper & without outer nubs
CDK4	1000	4	30	Feed-through female plug with 1 connection
CDK4-E	1000	4	30	Female plug without outer nubs
CD-D3000	1000	14AWG	20	Female plug housing
CD-D3000-E	1000	14AWG	20	Female plug housingwithout outer nubs

(1): Operating voltage limited to 110V due to fuse indicator circuit, rated 24-110V.

(2): Operating voltage limited to 250V due to fuse indicator circuit, rated 115-250V.

2. DOCUMENTS AND DRAWINGS:

- N°000101240-0100 Rev. A, dated 05.02.2013.
- N°000101240-0400 Rev. A, dated 05.02.2013.
- N°000101241-0200 Rev. A, dated 06.02.2013.
- N°000101241-0300 Rev. A, dated 06.02.2013.
- N°000101241-0100 Rev. A, dated 06.02.2013.
- N°000101184-0100 Rev. A, dated 26.12.2012.
- N°000101183-0100 Rev. A, dated 26.12.2012.
- N°000100947-0100 Rev. A, dated 28.12.2012.
- N°000100950-0100 Rev. A, dated 02.01.2013.
- N°000101000-0100 Rev. A, dated 21.12.2012.
- N°000100961-0100 Rev. A, dated 28.12.2012.
- N°000101182-0100 Rev. A, dated 31.12.2012.
- N°000100962-0100 Rev. A, dated 31.12.2012.
- N°000101181-0100 Rev. A, dated 25.12.2012.
- N°000100945-0100 Rev. A, dated 26.12.2012.
- N°000100944-0100 Rev. A, dated 31.12.2012.
- N°000100943-0100 Rev. A, dated 25.12.2012.
- N°000100941-0100 Rev. A, dated 26.12.2012.
- N°000100960-0100 Rev. A, dated 25.12.2012.
- N°000101180-0100 Rev. A, dated 27.12.2012.
- N°000102004-0000 Rev. A, dated 20.03.2013.
- N°000102005-0000 Rev. A, dated 20.03.2013.
- N°000102001-0100 Rev. A, dated 20.03.2013.
- N°1SNP201289-0100 Rev.A, dated 15.03.2018.
- N°1SNP200744-0100 Rev.A, dated 26.09.2016.
- N°1SNP200752-0100 Rev.A, dated 26.09.2016.
- N°1SNP109490-0100 Rev.A, dated 23.09.2016.
- N°1SNP200551-0100 Rev.A, dated 23.09.2016.
- N°1SNP200550-0200 Rev.A, dated 23.09.2016.
- N°1SNP200550-0100 Rev.A, dated 23.09.2016.
- N°175195, dated 17.06.2020.
- N°1SNP105480-0200 Rev.2, dated 10.08.2021.
- N°1SNP300130-0100 Rev.2, dated 11.05.2021.
- N°1SNP201521-0100 Rev.A, dated 24.05.2019.
- N°1SNP300017-0100 Rev.1, dated 08.02.2022.
- N°1SNP300017-0300 Rev.1, dated 08.02.2022.
- N°1SNP300017-0100 Rev.2, dated 07.06.2022.
- N°1SNP300017-0300 Rev.2, dated 07.06.2022.
- N°000100946-0100 Rev. A, dated 31.12.2012.
- N°000102000-0100 Rev. A, dated 20.03.2013.
- N°000101242-0100 Rev. A, dated 25.01.2013.
- N°000101242-0300 Rev. A, dated 25.01.2013.
- N°000101243-0100 Rev. A, dated 25.01.2013.
- N°000101243-0101 Rev. A, dated 25.01.2013.
- N°000101240-0500 Rev. A, dated 21.05.2013.
- N°000101240-0100 Rev. A, dated 05.02.2013.
- N°000101000-0100 Rev. A, dated 21.12.2012.
- N°1SNP200111-0200, dated 07.05.2015.
- N°1SNP200111-0500, dated 07.05.2015.
- N°1SNP200111-0300, dated 07.05.2015.
- N°1SNP200111-0400, dated 07.05.2015.
- N°1SNP200785-0100 Rev.C, dated 18.01.2018.
- N°1SNP200783-0100 Rev.C, dated 18.01.2018.
- N°1SNP200785-0200 Rev.C, dated 18.01.2018.
- N°1SNP200783-0200 Rev.C, dated 18.01.2018.
- N°1SNP200729-0100 Rev.C, dated 09.01.2018.
- N°1SNP200767-0100 Rev.C, dated 11.01.2018.
- N°1SNP200729-0200 Rev.A, dated 11.01.2018.
- N°1SNP200767-0200 Rev.A, dated 11.01.2018.
- N°1SNP105301-0200 Rev.A, dated 01.02.2017.
- N°1SNP105302-0200 Rev.A, dated 01.02.2017.
- N°1SNP201289-0103 Rev.A, dated 15-03-2018.
- N°1SNP200930-0100 Rev.A, dated 09.12.2016.
- N°1SNP200934-0100 Rev.A, dated 19.12.2016.
- N°1SNP200776-0100 Rev.A, dated 26.09.2016.
- N°1SNP200793-0100 Rev.A, dated 27.09.2016.
- N°1SNP200742-0100 Rev.A, dated 26.09.2016.
- N°1SNP200742-0200 Rev.A, dated 26.09.2016.
- N°1SNP109490-0200 Rev.2, dated 10.08.2021.
- N°1SNP300130-0000_BB00, dated 13.01.2022.
- N°1SNP201521-0200 Rev.A, dated 24.05.2019.
- N°1SNP201521-0102 Rev.A, dated 24.05.2019.
- N°1SNP300017-0200 Rev.2, dated 07.03.2022.
- N°1SNP300017-0400 Rev.1, dated 08.02.2022.
- N°1SNP300017-0200 Rev.3, dated 07.06.2022.
- N°1SNP300017-0400 Rev.1, dated 08.02.2022.

3. TEST REPORTS:**IECEE CB Scheme:**

- Certificate N°FR 637901A, dated 2013.10.18.
- Certificate N°FR 641211, dated 2013.07.10.
- Certificate N°FR 641213, dated 2013.07.23.
- Certificate N°FR 637901B, dated 2013.10.25.
- Certificate N°FR_647448/M1, dated 26.01.2023.
- Certificate N°FR 663429, dated 22.01.2015.
- Certificate N°FR 662256A, dated 05.03.2015.
- Certificate N°FR 662256B, dated 11.03.2015.
- Certificate N°FR 692228, dated 07.11.2016.
- Certificate N°FR 692229, dated 24.11.2016.
- Certificate N°FR 692231, dated 24.11.2016.
- Certificate N°FR 703217, dated 13.06.2018.
- Certificate N°FR 703222, dated 14.06.2018.
- Certificate N°FR_715662/M1, dated 26.01.2023.
- Certificate N°FR_641211/A3, dated 05.05.2023.

ABB

- Tests report N°20130111, dated 19.04.2013.
- Tests reports N°20130081 and 20130110, dated 18.04.2013.
- Tests report N°20130265, dated 05.07.2013.
- Tests report N°20130266, dated 16.09.2013.
- Tests report N°20130348, dated 17.09.2013.
- Tests report N°20130307, dated 14.10.2013.
- Tests report N°20140602, dated 19.01.2015.
- Tests report N°20140317, dated 01.10.2014.
- Tests report N°20130307, dated 14.10.2013.
- Tests report N°20130081, dated 18.04.2013.
- Environmental tests report ref. 20160596, dated 14.11.2016.
- Environmental tests report N°20180193, dated 17.06.2018.
- Environmental tests report N°20180193-1, dated 08.06.2018.

TYCO ELECTRONICS FRANCE SAS:

- Tests report N°20210088-M, dated 05.04.2022.
- Tests report N°20210088-1-EN, dated 07.04.2022.
- Tests report N°20220043-1, dated 27.09.2022.
- Tests report N°20220043, dated 04.10.2022.
- Tests report N°20220042, dated 26.08.2022.
- Tests report N°20220042-1, dated 29.09.2022.

LCIE-Laboratoire Central des Industries Electriques:

- Tests report N°123229-647448, dated 18.10.2013.
- Tests report N°123229-647449A, dated 23.10.2013.
- Tests report N°123229-647449B, dated 23.10.2013.
- Tests report N°12990527-773579/A1, dated 03.06.2022.
- Tests report N°14416682-776796C, dated 27.10.2022.
- Tests report N°14416682-776796A rev02, dated 31.10.2022.
- Tests report N°14416682-776796B rev02, dated 31.10.2022.
- Tests report N°14658244-777937, dated 03.04.2023.

4. APPLICATION / LIMITATION:

4.1 - BV Rules for the Classification of Steel Ships.

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**

4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31**

4.4 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev 8.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **TYCO ELECTRONICS FRANCE SAS** in accordance with the type described in this certificate.

5.2 - This type of product is within the category DBV of Bureau Veritas Rule Note NR320.

6. MARKING OF PRODUCT:

6.1 - According to IEC 60947 specification.

6.2 - Trade Mark: TE or entrelec

7. OTHERS:

7.1 - It is **TYCO ELECTRONICS FRANCE SAS** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 34077/B3 BV issued on 26 Jun 2023 by the Society.

*** END OF CERTIFICATE ***