



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 04/20013 (E4) issued on 25 April 2014 which is hereby cancelled.

This certificate is issued to:

| | |
|------------------------|--|
| PRODUCER | WAGO Kontakttechnik GmbH & Co. KG Hansastraße 27 32423 Minden Germany |
| DESCRIPTION | Push-wire connectors |
| TYPES | 221 series 221-4x2, 221-4x3, 221-4x5 x = colour code, all colours covered 222 series 222-4x2, 222-4x3, 222-4x4, 222-4x5 x = colour code, all colours covered 224 series 224-101, -104, -112, -114, -201 243 series 243-144, -204, -208, -304, -308, -504, -508, -804, -808 273 series 273-100, -101, -102, -103, -104, -105, -108, -112, -153, -155, -158, -252, -253, -254, -255, -258, -403, -453 |
| Certificate No. | 04/20013 (E5) |
| Issue Date | 27 January 2017 |
| Expiry Date | 15 February 2019 |
| Sheet | 1 of 3 |

Lloyd's Register EMEA
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TYPES (continued)

2273 series
2273-2x2, 2273-2x3, 2273-2x4, 2273-2x5, 2273-2x8
x = colour code, all colours covered

773 series
773-102, -104, -106, -108, -112, -114, -116, -118, -202, -204, -206, -208,
-212, -214, -216, -218, -302, -304, -306, -308, -312, -314, -316, -318
-402, -404, -406, -408, -412, -414, -416, -418

APPLICATION

Marine, offshore and industrial applications for use in environmental categories ENV 1, ENV 2 and ENV 3 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1- 2002

STANDARD

IEC 60998-2-2:2002, EN 60998-1:2004
EN 60998-2-2:2004

RATINGS

| Series | Nominal voltage (V) | Nominal current (A) | Max. conductor size (mm ²) |
|---|---------------------|---------------------|--|
| 221-4x2, -4x3, 4x5 | 450 | 24 | 2.5 |
| 222-4x2, -4x3, -4x4, -4x5 | 400 | 32 | 2.5 / 2.5 / 4 (1) |
| 224-101, -104, -112, -114, -201 | 400 | 24 | 2.5 |
| 243-144, -204, -208, -304, -308, -504, -508, -804, -808 | 100 | 6 | 0.75 |
| 273-100, -101, -108, -153, -155, -158 | 400 | 18 | 1.5 |
| 273-102, -103, -104, -105, -112, -252, -253, -254, -255, -258 | 400 | 24 | 2.5 |

(1) Solid wire / strand wires / flexible wires

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RATINGS (CONTINUED)

| Series | Nominal voltage (V) | Nominal current (A) | Max. conductor size (mm ²) |
|---|---------------------|---------------------|--|
| 273-403, -453 | 400 | 24 | 2.5 |
| 2273-2x2, -2x3, -2x4, -2x5, -2x8 | 450 | 24 | 2.5 |
| 773-102, -104, -106, -108, -112, -114, -116, -118, -202, -204, -206, -208, -212, -214, -216, -218, -302, -304, -306, -308, -312, -314, -316, -318, -402, -404, -406, -408, -412, -414, -416, -418 | 400 | 24 | 2.5 |

PLACE OF PRODUCTION

Waldstrasse 1
99706 Sondershausen
Germany

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

If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

The Design Appraisal Document No. HTS/ETS 34710-17 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No. 04/20013 (E5)
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Design Appraisal Document

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Date
27 January 2017

Please quote this reference number on all future communications
HPC1562186/34710-17/MK/JB/KW

**THE LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2015
ISSUED TO: WAGO KONTAKTTECHNIK GMBH & CO. KG
FOR: PUSH-WIRE CONNECTORS
TYPES: 221-, 222-, 224-, 2273-, 243-, 273-, 773-SERIES
TYPE APPROVAL CERTIFICATE NO. 04/20013 (E5)**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register's Type Approval System Procedure TA14 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

| | | |
|------------------|---|------------|
| ETS 44124-15 | Application checklist | 17.05.2015 |
| ETS 44706-15 | Request for Marine Services Type Approval | 10.11.2015 |
| ETS 29601-14 | Design Appraisal Document of former certificate no. 04/20013(E4) | 25.04.2014 |
| 40029794 | Marks Approval acc. EN 60998-1/60998-2-2: 2004 by VDE for series 2273 | 14.11.2012 |
| HPC1562075 | Production Quality Assessment report of WAGO Kontakttechnik / Minden | 19.08.2015 |
| HPC1562075 | Production Quality Assessment report of WAGO Kontakttechnik / Sondershausen | 08.09.2015 |
| 12 100 16077 TMS | Certification ISO 9001:2008 issued by TÜV Süd | 09.09.2016 |
| EU-KE 221 | EU-Conformity Declaration for series 221 | 20.04.2016 |
| EU-KE 222 | EU-Conformity Declaration for series 222 | 20.04.2016 |
| EU-KE 224 | EU-Conformity Declaration for series 224 | 20.04.2016 |
| EU-KE 243 | EU-Conformity Declaration for series 243 | 20.04.2016 |
| EU-KE 273 | EU-Conformity Declaration for series 273 | 20.04.2016 |
| EU-KE 773 | EU-Conformity Declaration for series 773 | 20.04.2016 |
| KE-2273 | EU-Conformity Declaration for series 2273 | 09.02.2016 |

TEST REPORTS

| | | |
|------------|--|------------|
| 2168803.50 | Test report acc. EN 60998-2-2: 2004 for series 221 | 12.02.2014 |
| 25955 | Test report for series 221 | 11.05.2015 |

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

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Please quote this reference number on all future communications
HPC1562186/34710-17/MK/JB/KW

TEST REPORTS (continued)

| | | |
|------------|---|------------|
| 2191517.50 | Test report for series 2273 | 15.07.2016 |
| 19667 | Test report acc. IEC 60998-2-2: 2002 | 17.09.2009 |
| 28060 | Test report for series 2273 (cold, dry heat test) | 15.12.2016 |
| 28061 | Test report for series 221 (cold, dry heat test) | 19.12.2016 |

DRAWINGS

| | | |
|-------------|--|------------|
| 0221-0412_T | Mechanical drawing of connecting terminal block series 221 - Rev 001 | 31.01.2014 |
| 2273-0202_T | Mechanical drawing of push-wire connectors series 2273 - Rev 001 | 30.11.2010 |


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LR031.1.2016.06

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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.

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.

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

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Part 2

Terminals / Insulators

| Producer/ Licence No. | Type | Standard | Rating | | | | Category/ Additional Tests | Remarks | Cert. No. |
|---|---|---|----------------|----------------------------------|---------------------------|----------|----------------------------------|--|---------------|
| | | | Voltage | Continuous Current Amperes | Maximum Conductor Size | | | | |
| | | | | | mm ² | AWG | | | |
| WAGO Kontakttechnik GmbH & Co. KG Hansastraße 27 32423 Minden Germany | Push- wire connectors | IEC 60998-2-2:2002, EN 60998-1:2004 EN 60998-2-2:2004 | | | | | ENV1, ENV2, ENV3 (2002) | Expires: 15 February 2019 | 04/20013 (E5) |
| | 221 series 221-4x2, -4x3, -4x5 x = colour code, all colours covered | | 450 V | 24 | 2.5 | 12 | | Solid wire, strand wire, flexible wires | |
| | 222 Series 222-4x2, -4x3, -4x4, -4x5 x = colour code, all colours covered | | 400 V 400 V | 32 32 | 2.5 4 | 12 12 | | Solid wire, strand wire Flexible wire | |
| | 224 Series 224-101, -104, -112, -114, -201 | | 400 V | 24 | 2.5 | 12 | | Solid wires | |
| | 243 Series 243-144, -204, -208, -304 -308, -504, -508, -804, -808 | | 100 V | 6 | 0.75 | 20 | | Solid wires | |
| | 273 Series 273-100, -101, -108, -153, -155, -158 | | 400 V | 18 | 1.5 | 16 | | Solid wires | |
| | 273-102, -103, -104, -105, -112, -252, -253, -254, -255, -258 | | 400 V | 24 | 2.5 | 12 | | Solid wires | |
| | 273-403, -453 | | 400 V | 24 | 2.5 | 12 | | Solid wires | |
| | 2273 series 2273-2x2, -2x3, -2x4, -2x5, -2x8 x = colour code, all colours covered | | 450 | 24 | 2,5 | 12 | | Solid wires | |

Part 2

Terminals / Insulators

| Producer/ Licence No. | Type | Standard | Rating | | | | Category/ Additional Tests | Remarks | Cert. No. |
|--------------------------|--|----------|---------|----------------------------------|---------------------------|-----|-------------------------------|---------------------------|-----------|
| | | | Voltage | Continuous Current Amperes | Maximum Conductor Size | | | | |
| | | | | | mm ² | AWG | | | |
| | 773 Series 773-102, -104, -106, -108, -112, -114, -116, -118, -202, -204, -206, -208, -212, -214, -216, -218, -302, 304, -306, -308, -312, -314, -316, -318 -402, -404, -406, -408, -412, -414, -416, -418 | | 400V | 24 | 2.5 | 12 | | Solid wires, strand wires | |