NOTIFICATION OF TEST RESULTS

Issued to:	Wago GmbH & Co. KG Hansastraβe 27, 32423 Minden/Westfalen, Germany
For the product:	Terminal blocks for copper conductors
Trade name:	WAGO
Type/Model:	TOPJOB S 2004
Manufactured by:	Wago GmbH & Co. KG Hansastrasse 27, 32423 Minden/Westfalen, Germany
Ratings:	800 V, 8 kV, 4 mm² / 6 mm², 32 A / 41 A
Additional information:	This NTR replaces NTR NL-7591 issued on 30 January 2017, due to the fact factory locations are added. See annex for factory locations Partly tested by E-CTF3

A sample of the product has been tested and found to be in conformity with the current HD/EN and equivalent national standard
EN 60947-7-1:2009, EN 60947-7-2:2009

As shown in the Test Report
2266648.59, 2266648.60

This Notification of Test Results is the result of testing a sample of the product submitted, in accordance with the provisions of the relevant specific standard.

This Notification of Test Results has been established by a body, which participates in the CENELEC Certification Agreement (CCA) of 11th September 1973 as amended on 29th March 1983. Any other body participating in the CCA will take this Notification as a basis for granting a national mark of conformity or a national approval as specified in the CCA, as long as the standard referred to above is still in force in the country of that body.

Arnhem, 20 July 2023 Number: NTR NL-7964

DEKRA Certification B.V.

H.R.M. Barends
Certification Manager

© Integral publication of this attestation and adjoining reports is allowed

CCA
CENELEC CERTIFICATION AGREEMENT
ACCORD DE CERTIFICATION DU CENELEC

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Annex

CCA
CENELEC CERTIFICATION AGREEMENT
ACCORD DE CERTIFICATION DU CELENEC

Manufactured at (name and location)

Wago Elwag sp.z.o.o.
ul. Piekna 58 a
50-506, Wroclaw
Poland

Wago Elwag
Innowacyjna 2
55-330 Wroblowice
Poland

WAGO Private Limited
Block No. 94, National Highway-8
Village Vadsala – Varnama, Vadodara, Gujarat-391243
India

Wago Electronic (Tianjin) Co. Ltd.
No. 5 Quanhui Road
Wu Qing Development Area
301700 Tianjin
China

WAGO GmbH & Co. KG
Hansastrasse 27, 32423 Minden/Westfalen
Germany

WAGO GmbH & Co. KG, Werk Sondershausen
Waldstrasse 1, 99706, Sondershausen
Germany

WAGO Contact S.A.
Route de l'Industrie 19, CP 168, 1564, Domdidier
Switzerland

WAGO GmbH & Co. KG
Cammer Str. 17,
32423 Minden
Germany

Annex

CCA
CENELEC CERTIFICATION AGREEMENT
ACCORD DE CERTIFICATION DU CELENEC

Product data

product	:	terminal block for copper conductors
trade name(s)	:	WAGO
type(s)	:	TOPJOB S 2004
material	:	thermoplastic material.
rated cross-section	:	4 mm² 6 mm²
rated connecting capacity	:	0,5 mm² - 6 mm² rigid and flexible
method of mounting	:	top hat rail 35 mm
types	:	2004 with suffixes -1201, -1202, -1203, -1204, -1205, -1206 -1208, -1209
rated insulation voltage	:	800 V
rated impulse withstand voltage	:	8 kV
conventional free air thermal current	:	32 A (4 mm²) 41 A (6 mm²)
description	:	two-conductor through terminal block, with screwless-type clamping units, 1-pole
type	:	2004-1207
description	:	two conductor earth terminal block, with screwless-type clamping units, 1-pole
types	:	2004 with suffixes -1301, -1302, -1303, 1304, -1305, -1306, -1308, -1309
rated insulation voltage	:	800 V
rated impulse withstand voltage	:	8 kV
conventional free air thermal current	:	32 A (4 mm²) 41 A (6 mm²)
description	:	three conductor through terminal block, with screwless-type clamping units, 1-pole
type	:	2004-1307
description	:	three conductor earth terminal block, with screwless-type clamping units, 1-pole
types	:	2004 with suffixes -1401, -1402, -1403, -1404, 1405, -1406, -1408, -1409
rated insulation voltage	:	800 V
rated impulse withstand voltage	:	8 kV
conventional free air thermal current	:	32 A (4 mm²) 41 A (6 mm²)
description	:	four conductor through terminal block, with screwless-type clamping units, 1-pole
type	:	2004-1407
description	:	four conductor earth terminal block, with screwless-type clamping units, 1-pole

Test Report issued under the responsibility of:

TEST REPORT
IEC 60947-7-1
Low-voltage switchgear and controlgear
Part 7: Ancillary equipment
Section One: Terminal blocks for copper conductors

Report Number. .....:	**2266648.59**
Date of issue .....:	**2023-06-16**
Total number of pages.....	**32**
Name of Testing Laboratory preparing the Report.....:	**DEKRA Certification B.V.** **Meander 1051, 6825 MJ Arnhem, The Netherlands**
Applicant's name.....:	**WAGO GmbH & Co. KG**
Address .....:	**Hansastrasse 27, 32423 Minden/Westfalen, Germany**
Test specification:	
Standard .....:	IEC 60947-7-1:2009 (Third Edition) in conjunction with IEC 60947-1 (Fifth Edition) + A1:2012 + A2:2014
Test procedure.....:	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60947_7_1B
Test Report Form(s) Originator.....:	DEKRA Certification B.V.
Master TRF .....:	Dated 2015-10

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Test item description ..... :	**Terminal blocks for copper conductors**
Trade Mark ..... :	
Manufacturer ..... :	**WAGO GmbH & Co. KG**
Model/Type reference ..... :	**TOPJOB S 2004**
Ratings ..... :	**800 V, 8 kV, 4 mm² / 6 mm², 32 A / 41 A**

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒ **CB Testing Laboratory:**	**DEKRA Certification B.V.**	
Testing location/ address .....:	**Meander 1051, 6825 MJ Arnhem, The Netherlands**	
☐ **Associated CB Testing Laboratory:**		
Testing location/ address .....:		
Tested by (name, function, signature).....:	**B. Veenvliet** (Technician Industrial Safety)	
Approved by (name, function, signature)..:	**F. Fu** (Project Manager Industrial Safety)	
☐ **Testing procedure: CTF Stage 1:**		
Testing location/ address .....:		
Tested by (name, function, signature).....:		
Approved by (name, function, signature)..:		
☐ **Testing procedure: CTF Stage 2:**		
Testing location/ address .....:		
Tested by (name + signature).....:		
Witnessed by (name, function, signature).:		
Approved by (name, function, signature)..:		
☒ **Testing procedure: CTF Stage 3:**		
☐ **Testing procedure: CTF Stage 4:**		
Testing location/ address .....:	**WAGO GmbH & Co. KG, Electrotechnical Laboratory, Hansastrasse 27, 32423 Minden/Westfalen, Germany**	
Tested by (name, function, signature).....:	**A. Bultmann** (Test Engineer)	
Witnessed by (name, function, signature).:	**H.L. Schendstok** (Project Manager Industrial Safety)	
Approved by (name, function, signature)..:	**Chr. Stendel** (Head of Electrotechnical laboratory)	
Supervised by (name, function, signature) .....:	**F.Fu** (Project Manager Industrial Safety)	

List of Attachments (including a total number of pages in each attachment): N/A

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
<u>Project 2089139.52:</u> **Complete examination** **All tests are carried out on 2004-1401 unless otherwise stated.**	**DEKRA Certification B.V.** **Meander 1051, 6825 MJ Arnhem** **The Netherlands**
<u>Project 2213768.50</u>: **This Test Report replaces Test Report 2089139.52 issued on 23 June 2006 and test Report 2160584.64 issued on 6 March 2013 due to the fact mounting feet is modified.**	
The following tests are additional performed: **Attachment of the terminal block on its support (clause 8.3.2 of IEC 60947-7-1).**	**DEKRA Certification B.V.** **Meander 1051, 6825 MJ Arnhem** **The Netherlands**
<u>Project 2266648.59</u> **This test report replaces test report 2213768.50 issued on 2017-01-30, due to the fact that new factory locations were added and construction check is done with spot checking.** **The following tests are carried out at type 2004-1401**	
- Clause 8.4.3 Dielectric strength **- Clause 8.4.5 Temperature-rise test 4 mm²**	**DEKRA Certification B.V.** **Meander 1051, 6825 MJ Arnhem** **The Netherlands**
The following test are carried out under CTF3 **- Clause 8.4.5 Temperature-rise test 6 mm²**	**WAGO GmbH & Co. KG,** **Hansastrasse 27, 32423 Minden/Westfalen, Germany**

Summary of compliance with National Differences (List of countries addressed): N/A

☒ **The product fulfils the requirements of EN 60947-7-1: 2009.**

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Test item particulars .....:	
Classification of installation and use .....:	**For use in circuits of a rated voltage not exceeding 800 Vac**
Supply Connection.....:	**N/A**
Particulars: test item vs. test requirements	
- method of fixing .....:	**top hat rail 35 mm**
- number of poles .....:	**1 pole**
- type of clamping units .....:	**screwless-type clamping units**
- ability to receive conductors .....:	**unprepared conductors, flexible or rigid**
- number of terminals on terminal assembly .....:	**2, 3, or 4**
- rated cross-section (mm²).....:	**4 mm² or 6 mm²**
- rated connecting capacity (mm²) .....:	**0,5 mm² - 6 mm² rigid and flexible**
- rated insulation voltage (U_i) .....:	**800 V**
- rated impulse withstand voltage (U_{imp}) .....:	**8 kV**
- Conventional free air thermal current (I_{th}).....:	**32 A, 41 A**
Possible test case verdicts:	
- test case does not apply to the test object ..... :	N/A
- test object does meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)

Testing ..... :	
Date of receipt of test item ..... :	**05-2022**
Date (s) of performance of tests ..... :	**06-2022**

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Projects performed under the IECEE CB-Scheme CTF procedure, are fully in line with the procedures and requirements of the IECEE CB-Scheme, but do not fall under DEKRA Netherland's laboratory accreditation, according to ISO/IEC 17025, by the Dutch Accreditation Council.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	☒ **Yes** ☐ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies).....:	**Wago Elwag sp.z.o.o.** **ul. Piekna 58 a** **50-506, Wroclaw, Poland** **Wago Elwag** **Innowacyjna 2** **55-330 Wroblowice, Poland** **WAGO Private Limited** **Block No. 94, National Highway-8** **Village Vadsala – Varnama, Vadodara,** **Gujarat-391243, India** **Wago Electronic (Tianjin) Co. Ltd.** **No. 5 Quanhui Road** **Wu Qing Development Area** **301700 Tianjin, China** **WAGO GmbH & Co. KG** **Hansastrasse 27, 32423 Minden/Westfalen** **Germany** **WAGO GmbH & Co. KG, Werk Sondershausen** **Waldstrasse 1, 99706, Sondershausen** **Germany** **WAGO Contact S.A.** **Route de l'Industrie 19, CP 168, 1564,** **Domdidier, Switzerland** **WAGO GmbH & Co. KG** **Cammer Str. 17,** **32423 Minden** **Germany**
General product information: **See pages 30 to 32**	

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.1	**MARKING**		
	Terminal block shall be marked with:		
	- manufacturer's name or trademark		**P**
	- type designation	**TOP JOB S 2004**	**P**
5.2	The following information shall be stated by the manufacturer if applicable, e.g. in the manufacturer's data sheet, or his catalogue or on the packing unit:		
	- manufacturer's claim for compliance with IEC 60 947-7-1	**IEC 60947-7-1**	**P**
	- rated cross-section	**4 mm² or 6 mm²**	**P**
	- rated connecting capacity	**0,5 mm² - 6 mm² rigid and flexible**	**P**
	- rated insulation voltage (Ui)	**800 V**	**P**
	- rated impulse withstand voltage (Uimp)	**8 kV**	**P**
	- conventional free air thermal current (Ith)		**N/A**
	- service conditions if different from those of Cl. 6.		**N/A**

7.	**CONSTRUCTION**		
7.1	Constructional requirements		
7.1.1	Clamping units		
7.1.7.1	All parts of clamping units which maintain contact and carry current shall be of metal having adequate mechanical strength		**P**
	Clamping units connections shall be such that necessary contact pressure is maintained		**P**
	Clamping units shall be so constructed that the conductor is clamped between suitable surfaces without damage to the conductor and terminal		**P**
	Clamping units shall not allow the conductor to be displaced or to be displaced themselves in a manner detrimental to the operation of equipment and the insulation voltage shall not be reduced below the rated value		**P**

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Clamping units shall allow the conductor to be connected by means ensuring that a reliable mechanical linkage and electrical contact is properly maintained		**P**
	Clamping units shall be able to withstand the forces that can be applied through the connected conductors		**P**
	Contact pressure is not transmitted through insulation materials		**P**
7.1.2	Mounting		
	Terminal blocks shall be provided with means that allow them to be securely attached to a rail or a mounting surface (see 8.3.2)		**P**
7.1.3	Clearances and creepage distances		
	For clearances and creepage distances see 8.4.2		**P**
7.1.4	Terminal identification and marking:		
	- terminals intended exclusively for the neutral conductor		**N/A**
	- other terminals		**P**
	- terminal blocks shall have provision, or at least space, for identification marks or numbers for each terminal or terminal assembly to be related to the circuit of which it is to form a part		**P**
	- For the identification of the terminal block the colour combination green-yellow is not allowed		**P**
7.1.5	Resistance to abnormal heat and fire		
	Needle flame test for insulation materials of terminal blocks (see 8.5)		**P**
7.1.6	Rated cross-section and rated connecting capacity		
	Terminal blocks are so designed that conductors of the rated cross-section and/or the rated connecting capacity can be accepted	**0,5 mm² - 6 mm² rigid and flexible**	**P**
8	**TESTS**		
8.3	Verification of mechanical characteristics		
8.3.2	Attachment of the terminal block on its support		

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	mounting rail .....:	**Top hat rail 35 mm**	—
	Tighting torque (Nm) ..... :	**-**	—
	steel pin diameter (mm) .....:	**2,8 mm**	—
	force (N) .....:	**5 N**	—
	During the test, no terminal block shall work free from its rail or support, nor suffer any other damage		**P**
8.3.3	Mechanical properties of clamping units		
8.3.3.1	Test of mechanical strength of clamping units		
8.2.4.1	Mechanical strength of clamping units (IEC60947-1)		
	rated cross-section of a rigid conductor (mm²) ....:	**4 mm² / 6 mm²**	—
	diameter of thread (mm) .....:	**-**	—
	torque (Nm) .....:	**-**	—
	5 times on 2 clamping units at the centre terminal block out of 5 terminal blocks		**P**
	Voltage drop before and after mechanical strength test		
	rated cross-section of a rigid conductor (mm²) ....:	**6 mm²**	—
	test current (A) d.c. .....:	**4,1 A**	—
	voltage drop (mV) before mechanical strength test not exceeding 3,2 mV .....:	**2,46 mV – 2,59 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**
	voltage drop (mV) after mechanical strength test not exceeding 150% of the value measured before mechanical strength test :	**2,38 mV – 2,63 mV**	**P**
	rated cross-section of a rigid conductor (mm²) ....:	**4 mm²**	—
	test current (A) d.c. .....:	**3,2 A**	—
	voltage drop (mV) before mechanical strength test not exceeding 3,2 mV .....:	**2,51 mV – 2,83 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	voltage drop (mV) after mechanical strength test not exceeding 150% of the value measured before mechanical strength test :	**2,37 mV – 2,89 mV**	**P**
	minimum cross-section of a flexible conductor (mm²) .....:	**0,5 mm²**	—
	test current (A) d.c. .....:	**0,6 A**	—
	voltage drop (mV) before mechanical strength test not exceeding 3,2 mV .....:	**0,69 mV – 0,81 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**
	voltage drop (mV) after mechanical strength test not exceeding 150% of the value measured before mechanical strength test .....:	**0,78 mV – 0,71 mV**	**P**
8.3.3.2	Testing for damage to and accidental loosening of conductors of a terminal block (flexion test)		
	conductor of the smallest cross-section (mm²) ....:	**0,5 mm² rigid and flexible**	—
	number of conductors of the smallest cross-section .....:	**1**	—
	diameter of bushing hole (mm) .....:	**6,5 mm**	—
	height between the equipment and the platen (mm) .....:	**260 mm**	—
	mass at the conductor(s) (kg) .....:	**0,3 kg**	—
	135 continuous revolutions: the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	Pull-out test		
	force (N) .....:	**20 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	conductor of the rated cross-section (mm²) .....:	**4 mm² rigid and flexible**	—
	number of conductors of the rated cross-section :	**1**	—
	diameter of bushing hole (mm) .....:	**9,5 mm**	—
	height between the equipment and the platen (mm) .....:	**280 mm**	—

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	mass at the conductor(s) (kg) .....:	**0,9 kg**	—
	135 continuous revolutions: the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	Pull-out test		
	force (N) .....:	**60 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	conductor of the rated cross-section (mm²) .....:	**6 mm² rigid and flexible**	—
	number of conductors of the rated cross-section :	**1**	—
	diameter of bushing hole (mm) .....:	**9,5 mm**	—
	height between the equipment and the platen (mm) .....:	**280 mm**	—
	mass at the conductor(s) (kg) .....:	**1,4 kg**	—
	135 continuous revolutions: the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	Pull-out test		
	force (N) .....:	**80 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	conductor of the largest cross-section (mm²) .....:	**6 mm² rigid and flexible**	—
	number of conductors of the largest cross-section .....:	**1**	—
	diameter of bushing hole (mm) .....:	**9,5 mm**	—
	height between the equipment and the platen (mm) .....:	**280 mm**	—
	mass at the conductor(s) (kg) .....:	**1,4 kg**	—
	135 continuous revolutions: the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	Pull-out test		
	force (N) .....:	**80 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	conductor of the largest or smallest cross-section (mm²) .....:		—
	number of conductors of the largest or smallest cross-section .....:		—
	torque (Nm) .....:		—
	diameter of bushing hole (mm) .....:		—
	height between the equipment and the platen (mm) .....:		—
	mass at the conductor(s) (kg) .....:		—
	135 continuous revolutions: the conductor shall neither slip out of the terminal nor break near the clamping unit		**N/A**
	Pull-out test		
	force (N) .....:		—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**N/A**
8.3.3.4	Verification of rated cross section and rated connecting capacity		
	One conductor of the two next smaller cross-sections can be unhindered and connected in each clamping unit of one terminal block (up to 35 mm²)	**1,5 mm²**	**P**
8.4.2	Verification of clearances and creepage distances		
	Conductor type and conductor cross-section	**6 mm² rigid**	—
	Conductor end length (mm)	**11 – 13 mm**	—
	Type of support	**Top hat rail 35 mm**	—
8.4.2.2	Clearances		
	Case A (mm) ..... : Case B (mm) ..... : Measured (mm) ..... :	**8,0 mm** **3,0 mm** **13,60 mm**	**P**
	Rated impulse withstand voltage Uimp (kV)	**8 kV**	
8.4.2.3	Creepage distances:		
	- pollution degree .....:	**3**	—
	- comparative tracking index (V) .....:	**600 V**	—
	- material group .....:	**I**	—
	- rated insulation voltage Ui (V) .....:	**800 V**	—

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- minimum creepage distances (mm) .....:	**10,0 mm**	—
	- measured creepage distances (mm) .....:	**< 15 mm**	—
8.4.3	Dielectric tests		
	Dielectric test, Uimp indicated:		
	- five terminal blocks connected with unfavourable cross-section (mm²) / type / conductor end length (mm) .....:	**6 mm², rigid, 11 - 13 mm**	—
	- rated impulse withstand voltage (kV) .....:	**8 kV**	—
	- test Uimp main circuits (kV) .....:	**9,8 kV**	**P**
	Dielectric test, Uimp not indicated:		
	- five terminal blocks connected with unfavourable cross-section (mm²) / type / conductor end length (mm) :	**6 mm², rigid, 11 - 13 mm**	—
	- rated insulation voltage (V) .....:	**800 V**	—
	- test voltage for 60 sec (V) .....:	**2000 V**	***P***
8.4.5	Temperature-rise test		
	Temperature-rise conditions		
	- test current (A) .....:	**32 A**	—
	- cross-section of the conductor (mm²) .....:	**4 mm²**	—
	- torque (Nm) .....:	**-**	—
	- temperature-rise does not exceed 45 K	see appended table 8.4.5	**P**
	Voltage drop before and after temperature-rise test:		
	- test current (A) d.c. .....:	**3,2 A**	—
	- voltage drop (mV) before temperature-rise test not exceeding 3,2 mV .....:	**1,79 mV – 1,90 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**
	- voltage drop (mV) after temperature-rise test not exceeding 150% of the value measured before temperature-rise test .....:	**1,80 mV – 1,89 mV**	**P**
8.4.5	Temperature-rise test		
	Temperature-rise conditions		
	- test current (A) .....:	**41 A**	—

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- cross-section of the conductor (mm²) .....:	**6 mm²**	—
	- torque (Nm) .....:	**-**	—
	- temperature-rise does not exceed 45 K	see appended table 8.4.5	**P**
	Voltage drop before and after temperature-rise test:		
	- test current (A) d.c. .....:	**4,1 A**	—
	- voltage drop (mV) before temperature-rise test not exceeding 3,2 mV .....:	**2,32 mV – 2,40 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**
	- voltage drop (mV) after temperature-rise test not exceeding 150% of the value measured before temperature-rise test .....:	**2,32 mV – 2,39 mV**	**P**
8.4.6	Short-time withstand current test		
	- rated cross-section of the conductor (mm²) .....:	**4 mm²**	—
	- torque (Nm) .....:	**-**	—
	- test current (A) .....:	**480 A**	—
	- duration of the test current (s) .....:	**1 s**	—
	At the end of the test, continuity shall exist on the test sample assembly and the terminal blocks shall not show any cracking, breakage or other critical damage		**P**
	Voltage drop before and after short-time withstand current test		
	- test current (A) d.c. .....:	**3,2 A**	—
	- voltage drop (mV) before short-time withstand current test not exceeding 3,2 mV .....:	**2,74 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N/A**
	- voltage drop (mV) after short-time withstand current test not exceeding 150% of the value measured before short-time withstand current test .....:	**2,51 mV**	**P**
8.4.6	Short-time withstand current test		
	- rated cross-section of the conductor (mm²) .....:	**6 mm²**	—

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- torque (Nm) .....:	**-**	—
	- test current (A) .....:	**720 A**	—
	- duration of the test current (s) .....:	**1 s**	—
	At the end of the test, continuity shall exist on the test sample assembly and the terminal blocks shall not show any cracking, breakage or other critical damage		**P**
	Voltage drop before and after short-time withstand current test		
	- test current (A) d.c. .....:	**4,1 A**	—
	- voltage drop (mV) before short-time withstand current test not exceeding 3,2 mV .....:	**2,35 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**
	- voltage drop (mV) after short-time withstand current test not exceeding 150% of the value measured before short-time withstand current test .....:	**2,21 mV**	**P**
8.4.7	Ageing test for screwless-type terminal blocks		
	Maximum ambient temperature (°C) .....:	**40° C**	—
	Rated cross-section rigid or stranded < 10 mm² solid, > 10 mm² stranded (mm²) .....:	**4 mm²**	—
	Heating cabinet is increased, in each cycle to (°C) .....:	**40° C**	—
	Test current (A) d.c. for measurement of the voltage drop .....:	**3,2 A**	—
	Voltage drop after 0 cycles:		
	- requirement: ≤ 3,2 mV (mV) .....:	1 – **2,00 mV** 2 – **2,00 mV** 3 – **2,10 mV** 4 – **1,90 mV** 5 – **2,00 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Voltage drop after the 24th cycle:		
	- requirement: 4,8 mV (mV) .....:	1 – **2,10 mV** 2 – **2,10 mV** 3 – **2,10 mV** 4 – **2,00 mV** 5 – **2,00 mV**	**P**
	Voltage drop after the 48th cycle		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,10 mV** 2 – **2,10 mV** 3 – **2,10 mV** 4 – **2,00 mV** 5 – **2,00 mV**	**P**
	Voltage drop after the 72th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,10 mV** 2 – **2,10 mV** 3 – **2,10 mV** 4 – **2,00 mV** 5 – **2,00 mV**	**P**
	Voltage drop after the 96th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,10 mV** 2 – **2,10 mV** 3 – **2,10 mV** 4 – **2,00 mV** 5 – **2,00 mV**	**P**
	Voltage drop after the 120th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,10 mV** 2 – **2,10 mV** 3 – **2,10 mV** 4 – **2,00 mV** 5 – **2,00 mV**	**P**
	Voltage drop after the 144th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,10 mV** 2 – **2,10 mV** 3 – **2,10 mV** 4 – **2,00 mV** 5 – **2,00 mV**	**P**

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Voltage drop after the 168th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,10 mV** 2 – **2,10 mV** 3 – **2,10 mV** 4 – **2,00 mV** 5 – **2,00 mV**	**P**
	Voltage drop after the 192th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,10 mV** 2 – **2,10 mV** 3 – **2,10 mV** 4 – **2,00 mV** 5 – **2,00 mV**	**P**
	Pull-out test		
	force (N) .....:	**60 N**	**—**
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	Maximum ambient temperature (°C) .....:	**40° C**	—
	Rated cross-section rigid or stranded < 10 mm² solid, > 10 mm² stranded (mm²) .....:	**6 mm²**	—
	Heating cabinet is increased, in each cycle to (°C) .....:	**40° C**	—
	Test current (A) d.c. for measurement of the voltage drop .....:	**4,1 A**	—
	Voltage drop after 0 cycles:		
	- requirement: ≤ 3,2 mV (mV) .....:	1 – **2,89 mV** 2 – **2,59 mV** 3 – **2,50 mV** 4 – **2,35 mV** 5 – **2,19 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**
	Voltage drop after the 24th cycle:		

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- requirement: 4,8 mV (mV) .....:	1 – **2,57 mV** 2 – **2,78 mV** 3 – **2,56 mV** 4 – **2,36 mV** 5 – **2,20 mV**	**P**
	Voltage drop after the 48th cycle		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **3,84 mV** 2 – **2,86 mV** 3 – **2,59 mV** 4 – **2,37 mV** 5 – **2,22 mV**	**P**
	Voltage drop after the 72th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **4,13 mV** 2 – **2,86 mV** 3 – **2,59 mV** 4 – **2,30 mV** 5 – **2,05 mV**	**P**
	Voltage drop after the 96th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,32 mV** 2 – **2,28 mV** 3 – **2,60 mV** 4 – **2,29 mV** 5 – **2,10 mV**	**P**
	Voltage drop after the 120th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,37 mV** 2 – **2,29 mV** 3 – **2,59 mV** 4 – **2,29 mV** 5 – **2,10 mV**	**P**
	Voltage drop after the 144th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,42 mV** 2 – **2,29 mV** 3 – **2,59 mV** 4 – **2,29 mV** 5 – **2,10 mV**	**P**
	Voltage drop after the 168th cycle:		

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,45 mV** 2 – **2,29 mV** 3 – **2,58 mV** 4 – **2,28 mV** 5 – **2,10 mV**	**P**
	Voltage drop after the 192th cycle:		
	- requirement: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) .....:	1 – **2,19 mV** 2 – **2,26 mV** 3 – **2,42 mV** 4 – **2,34 mV** 5 – **2,30 mV**	**P**
	Pull-out test		
	force (N) .....:	**80 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
8.5	Verification of thermal characteristics is checked by the needle flame test.		**P**
	Before the test, the terminal blocks are stored for 24 h in an atmosphere having a temperature between 15°C and 35°C and a relative humidity between 45% and 75%		**P**
	The flame is applied for 10 s. for insulation walls <1 mm and / or an area < 100 mm², the flame is applied for 5 s.	**10 s**	**P**
	The terminal blocks are considered to have passed the test if the duration of burning is < 30s in case of ignition. Moreover, the tissue paper on the pinewood board shall not ignite if burning or glowing particles fall from the terminal block.		**P**
8.6	Verification of EMC characteristics		
	Subclause 8.4 of EN 60947-1 applies with the following addition:		**N/A**
8.6.1	Immunity		

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Terminal blocks within the scope of this standard are not sensitive of electromagnetic disturbances and therefore no immunity tests are necessary.		**N/A**
8.6.2	Emission		
	Terminal blocks within the scope of this standard do not generate electromagnetic disturbances and therefore no emission tests are necessary.		**N/A**

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
Annex A	**vacant**		
Annex B	**informative**		
	Items subject to agreement between manufacturer and user		**N/A**
Annex C	**vacant**		
Annex D	**ADDITIONAL REQUIREMENTS FOR TEST DISCONNECT TERMINALBLOCKS**		
D5	Product information		
	- service life in number of cycles		**N/A**
D6.	Normal service, mounting and transport conditions		
	Clause 6 applies.		**N/A**
D7	Construction and performance conditions		
	Clause 7 applies with the following additions		
D7.1	Constructional requirements		
D7.1.3	Clearances and creepages are not required to be measured over the open disconnect contacts (Gap). However, the rated impulse withstand voltage (Uimp) stated by the manufacturer according to table 13 of IEC 60947-1, without using the altitude correction factor, shall be verified across the open disconnect contacts (gap) (see D.7.2.2)		**N/A**
D7.1.7	Disconnect unit		
	For longitudinal and perpendicular disconnection, test disconnect terminal blocks may be equipped with disconnect units, for instance of the following type: - plug - knife - slide (with or without busbar)		**N/A**
	the position of the disconnect unit shall be recognizable in normal use and shall not be changed unintentionally		**N/A**

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
D.7.2.2	Dielectric properties		
	Dielectric test, Uimp indicated:		
	- five terminal blocks connected with unfavourable cross-section (mm²) / type / conductor end length tested over open disconnect contacts (gap) (mm) .....:		—
	- rated impulse withstand voltage (kV) .....:		—
	- test Uimp without altitude correction factor (kV) :		**N/A**
D 8.4.5	Temperature rise test		
	Temperature rise conditions:		
	- test current (A) .....:		—
	- cross-section of the conductor (mm²) .....:		—
	- torque (Nm) .....:		—
	- temperature rise does not exceed 45 K		**N/A**
	Voltage drop before and after temperature rise test:		
	- test current (A) d.c. .....:		—
	- voltage drop (mV) before temperature rise test not exceeding 3,2 mV .....:		**N/A**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N/A**
	- voltage drop (mV) after temperature rise test not exceeding 150% of the value measured before temperature rise test .....:		**N/A**
D.8.4.6	Short-time withstand current test		
	- rated cross-section of the conductor (mm²) .....:		—
	- torque (Nm) .....:		—
	- torque disconnect unit (Nm) .....:		—
	- test current (A) .....:		—
	- duration of the test current (s) .....:		—
	At the end of the test, continuity shall exist on the test sample assembly and the terminal blocks shall not show any cracking, breakage or other critical damage		**N/A**

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Voltage drop before and after short-time withstand current test		
	- test current (A) d.c. .....:		—
	- voltage drop (mV) before temperature-rise test not exceeding 1,6 mV times the total of conductor clamping unit and disconnect unit contact points .....:		**N/A**
	If the measured value exceeds this calculated value, the voltage drop is measured on each individual conductor clamping unit and disconnect unit contact point. it shall not exceed 1,6 mV on any conductor clamping unit and disconnect unit contact point		**N/A**
	- voltage drop (mV) after temperature-rise test not exceeding 150% of the value measured before temperature-rise test .....:		**N/A**
D.8.4.7	Ageing test for test disconnect terminal blocks with screwless-type clamping		
	Maximum ambient temperature (°C) .....:	40 °C /	—
	Rated cross-section rigid or stranded < 10 mm² solid, > 10 mm² stranded (mm²) .....:		—
	Test current (A) according D.8.4.5 .....:		—
	Torque disconnect unit (Nm) .....:		—
	Heating cabinet is increased, in each cycle to (°C) .....:		—
	Test current (A) d.c. for measurement of the voltage drop .....:		—
	Voltage drop after 0 cycles:		
	- requirement: ≤ 1,6 mV (mV) .....: the voltage drop is determined on each individual clamping unit separately		**N/A**
	Voltage drop after the 24th cycle:		
	- requirement: 2,4 mV (mV) .....:		**N/A**
	Voltage drop after the 48th cycle		

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- requirement: ≤ 2,4 mV or 1,5 times the value measured after the 24th cycle, whichever is the lower (mV) .....:		**N/A**
	Voltage drop after the 72th cycle:		
	- requirement: ≤ 2,4 mV or 1,5 times the value measured after the 24th cycle, whichever is the lower (mV) .....:		**N/A**
	Voltage drop after the 96th cycle:		
	- requirement: ≤ 2,4 mV or 1,5 times the value measured after the 24th cycle, whichever is the lower (mV) .....:		**N/A**
	Voltage drop after the 120th cycle:		
	- requirement: ≤ 2,4 mV or 1,5 times the value measured after the 24th cycle, whichever is the lower (mV) .....:		**N/A**
	Voltage drop after the 144th cycle:		
	- requirement: ≤ 2,4 mV or 1,5 times the value measured after the 24th cycle, whichever is the lower (mV) .....:		**N/A**
	Voltage drop after the 168th cycle:		
	- requirement: ≤ 2,4 mV or 1,5 times the value measured after the 24th cycle, whichever is the lower (mV) .....:		**N/A**
	Voltage drop after the 192th cycle:		
	- requirement: ≤ 2,4 mV or 1,5 times the value measured after the 24th cycle, whichever is the lower (mV) .....:		**N/A**
	Pull-out test		
	force (N) .....:		—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**N/A**
D.8.5.1	Service life		
	- rated cross-section of the conductor (mm²) .....:		—
	- torque (Nm) .....:		—
	- torque disconnect unit (Nm) .....:		—

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- number of operating cycles .....:		—
	Entire test apparatus is stored for 168 h in dry heat at a temperature of 85 °C		**N/A**
	Voltage drop before and after service life		
	- test current (A) d.c. .....:		—
	- voltage drop (mV) before service life test not exceeding 1,6 mV times the total of conductor clamping unit and disconnect unit contact points :		**N/A**
	If the measured value exceeds this calculated value, the voltage drop is measured on each individual conductor clamping unit and disconnect unit contact point. it shall not exceed 1,6 mV on any conductor clamping unit and disconnect unit contact point		**N/A**
	- voltage drop (mV) after service life test not exceeding 150% of the value measured before service life test .....:		**N/A**
D.8.4.5	Emission		
	Terminal blocks within the scope of this standard are not sensitive of electromagnetic disturbances and therefore no immunity tests are necessary.		**N/A**
8.6.2	Emission		
	Terminal blocks within the scope of this standard do not generate electromagnetic disturbances and therefore no emission tests are necessary.		**N/A**

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict

8.4.2	TABLE: Clearance And Creepage Distance Measurements					
clearance cl and creepage distance dcr at/of:	**Uimp (V)**	**U r.m.s. (V)**	**Required cl (mm)**	**cl (mm)**	**required dcr (mm)**	**dcr (mm)**
Between levels, between terminal blocks and support	**8000**	**800**	**14**	**13,6**	**10**	**> 15**
Supplementary information:						

8.4.3	TABLE: Dielectric Strength	
Test voltage applied between:	**Test potential applied (V)**	**Breakdown / flashover (Yes/No)**
terminal 1,3,5 to 2,4	**2000 V**	**No**
All terminals to support	**2000 V**	**No**
Supplementary information:		

IEC 60947-7-1			
Clause	Requirement + Test	Result - Remark	Verdict

8.4.5	**TABLE: Heating** ,		
	Test voltage (V):	**< 5 V**	—
	Ambient (°C):	**23,5 °C**	—

Thermocouple Locations	max. temperature measured, (°C)	max. temperature limit, (°C)
Clamping unit of terminal block 1	**30**	45
Clamping unit of terminal block 2	**32**	45
Clamping unit of terminal block 3 (IN)	**33**	45
Busbar of terminal block 3	**33**	45
Clamping unit of terminal block (OUT)	**32**	45
Clamping unit of terminal block 4	**29**	45
Clamping unit of terminal block 5	**29**	45

Supplementary information:

4 mm², 32 A

8.4.5	**TABLE: Heating** ,		
	Test voltage (V):	**< 5 V**	—
	Ambient (°C):	**21,8 °C**	—

Thermocouple Locations	max. temperature measured, (°C)	max. temperature limit, (°C)
Busbar of terminal block 3	**45**	45

Supplementary information:

6 mm², 41 A

Remarks

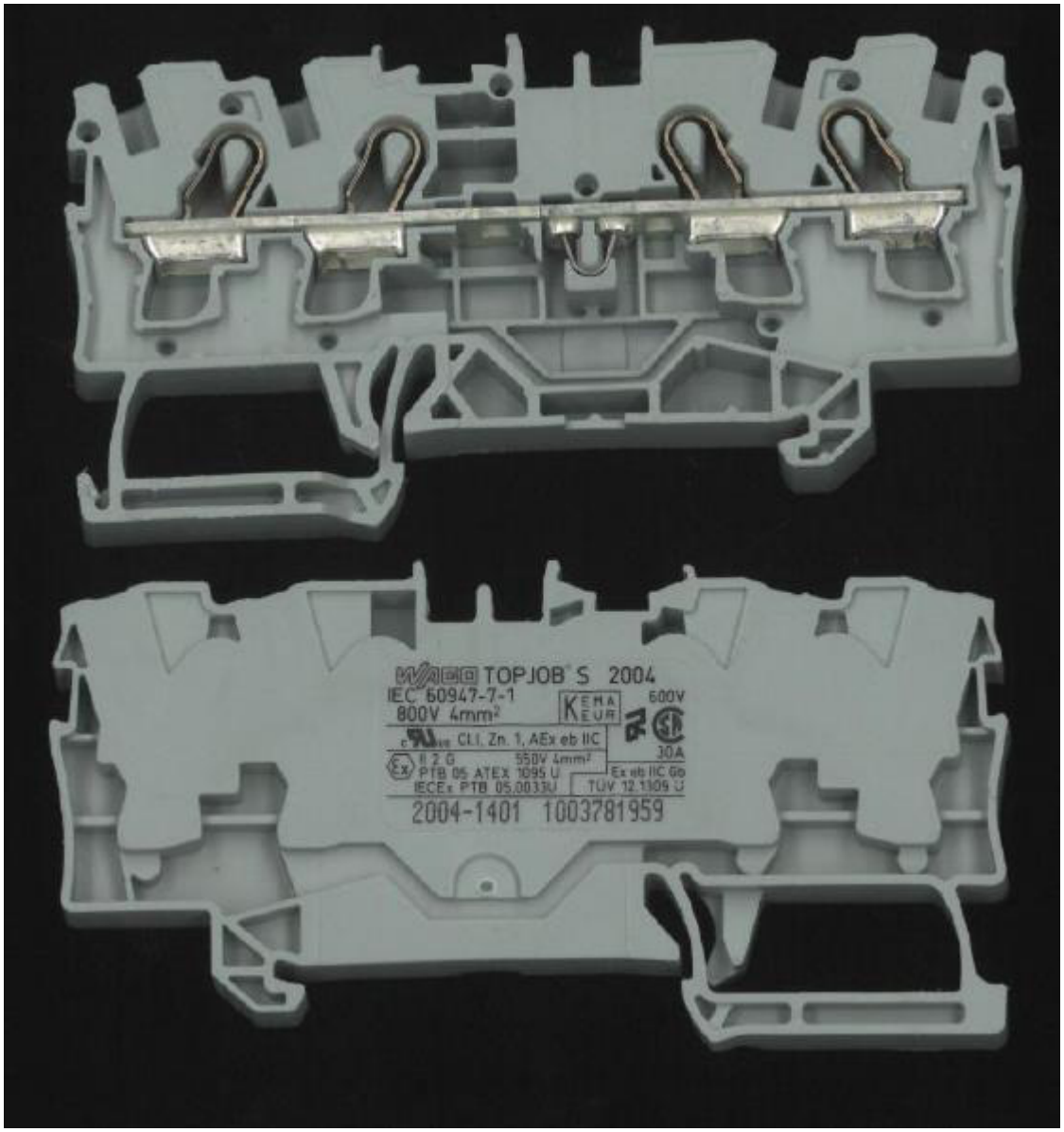
Product data

product	:	terminal block
trade name(s)	:	WAGO
type(s)	:	TOPJOB S 2004
material	:	thermoplastic material.
rated cross-section	:	4 mm² 6 mm²
rated connecting capacity	:	0,5 mm² - 6 mm² rigid and flexible
method of mounting	:	top hat rail 35 mm
conventional free air thermal current	:	32 A (4 mm²) 41 A (6 mm²)
rated insulation voltage	:	800 V
rated impulse withstand voltage	:	8 kV
type	:	2004 with suffixes -1201, -1202, -1203, -1204, -1205, -1206 -1208, -1209
description	:	two-conductor through terminal block, with screwless-type clamping units, 1-pole
type	:	2004 with suffixes -1301, -1302, -1303, 1304, -1305, -1306, -1308, -1309
description	:	three conductor through terminal block, with screwless-type clamping units, 1-pole
type	:	2004 with suffixes -1401, -1402, -1403, -1404, 1405, -1406, -1408, -1409
description	:	four conductor through terminal block, with screwless-type clamping units, 1-pole

Remarks


DEKRA
TOPJOB S 2004
IEC 60947-7-1
800V 4mm²
KEMA KEUR
500V
30A
2004-1401 1003781959

Remarks


TOPJOB S 2004
IEC 60947-7-1
800V 4mm²
KEMA KEUR
600V
Cl.I. Zn. 1, AEx eb IIC
30A
II 2 G
550V 4mm²
PTB 05 ATEX 1095 U
Ex eb IIC Gb
IECEx PTB 05.0033U
TÜV 12.1309 U
2004-1401 1003781959

ETICS	OD ECS 040-1 January 2019	Responsible CB DEKRA

TEST REPORT SUMMARY

Report Number ..... :	**2266648.59**
Date of issue ..... :	**2023-06-16**
Tested by (name, function, signature):	**A. Bultmann** (Test Engineer)
Witnessed by (name, function, signature):	**H.L. Schendstok** (Project Manager Industrial Safety)
Approved by (name, function, signature):	**Chr. Stendel** (Head of Electrotechnical laboratory)
Supervised by (name, function, signature):	**F. Fu** (Project Manager Industrial Safety)

Testing Laboratory ..... :	**DEKRA Certification B.V.**
Address ..... :	**Meander 1051, 6825 MJ Arnhem, The Netherlands**
Testing procedure ..... :	☐ ENEC ☒ CCA NTR
	☐ ENEC based on IECEE CBTC with number: .....
Customer Testing Procedure ..... :	☐ TMP/CTF Stage 1 ☐ WMT/CTF Stage 2 ☒ SMT/CTF Stage 3
Applicant ..... :	**WAGO GmbH & Co. KG**
Address ..... :	**Hansastrasse 27, 32423 Minden/Westfalen, Germany**
Manufacturer ..... :	**WAGO GmbH & Co. KG**
Address ..... :	**Hansastrasse 27, 32423 Minden/Westfalen, Germany**
Product ..... :	**Terminal blocks for copper conductors**
Model/Type reference ..... :	**TOPJOB S 2004**
Trademark ..... :	WAGO
Ratings ..... :	**800 V, 8 kV, 4 mm² / 6 mm², 32 A / 41 A**
Certification Scheme ..... :	☐ ENEC ☒ CCA ☐ Other: _____
Standard(s) ..... :	**EN 60947-7-1: 2009, in conjunction with EN 60947-1: 2007 + A1:2012 + A2:2014**

☒ The text of the a.m. European Standard was approved by CENELEC is equivalent with the corresponding IEC Publication.

☐ The text of the a.m. European Standard was approved by CENELEC with agreed common modifications and is not equivalent with the corresponding IEC Publication. An EU Deviation Addendum has to be issued.

This EN test report consists of the following parts:

☒ IEC Test Report Number ..... :	**2266648.59**
☐ EU Deviation Addendum ..... :	

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Test Report issued under the responsibility of:

DEKRA

TEST REPORT
IEC 60947-7-2
Low-voltage switchgear and controlgear
Part 7: Ancillary equipment
Section Two: Protective terminal blocks for copper conductors

Report Number.....:	**2266648.60**
Date of issue .....:	**2023-06-16**
Total number of pages.....	**31**
Name of Testing Laboratory preparing the Report.....:	**DEKRA Certification B.V.** **Meander 1051, 6825 MJ Arnhem, The Netherlands**
Applicant's name .....:	**WAGO GmbH & Co. KG**
Address .....:	**Hansastrasse 27, 32423 Minden/Westfalen, Germany**
Test specification:	
Standard.....:	IEC 60947-7-2:2009 (Third Edition) in conjunction with IEC 60947-1 (Fifth Edition) + A1:2012 + A2:2014
Test procedure.....:	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No. .....:	IEC60947_7_2B
Test Report Form(s) Originator....:	DEKRA Certification B.V.
Master TRF .....:	Dated 2016-01

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Test item description .....:	**Protective conductor terminal block for copper conductors**
Trade Mark.....:	
Manufacturer .....:	**WAGO GmbH & Co. KG**
Model/Type reference .....:	**TOPJOB S 2004**
Ratings .....:	**4 mm² / 6 mm²**

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	**DEKRA Certification B.V.**	
Testing location/ address .....:		**Meander 1051, 6825 MJ Arnhem, The Netherlands**	
☐	**Associated CB Testing Laboratory:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:		**B. Veenvliet** (Technician Industrial Safety)	
Approved by (name, function, signature) ..:		**F. Fu** (Project Manager Industrial Safety)	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:			
Approved by (name, function, signature) ..:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address .....:			
Tested by (name + signature).....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature) ..:			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address .....:			
Tested by (name, function, signature) .....:			
Witnessed by (name, function, signature) .:			
Approved by (name, function, signature) ..:			
Supervised by (name, function, signature) :			

List of Attachments (including a total number of pages in each attachment): N/A

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
<u>Project 2089139.53:</u> **Complete examination** **All tests are carried out on 2004-1407 unless otherwise stated.** **<u>Project 2213768.51</u>:** **This Test Report replaces Test Report 2089139.53 issued on 23 June 2006 and test Report 2160584.64 issued on 6 March 2013 due to the fact mounting feet is modified.** **The following tests are additional performed: Attachment of the terminal block on its support (clause 8.3.2 of IEC 60947-7-1).** **<u>Project 2266648.60</u>** **This test report replaces test report 2213768.51 issued on 2017-01-30, due to the fact that new factory locations were added.** **The following tests are performed:** **Clause 8.4.3 Dielectric strength**	**DEKRA Certification B.V.** **Meander 1051, 6825 MJ Arnhem, The Netherlands**

Summary of compliance with National Differences (List of countries addressed): N/A

☒ **The product fulfils the requirements of EN 60947-7-2: 2009.**

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Test item particulars..... :	
Classification of installation and use ..... :	**Protective conductor terminal blocks for copper conductors**
Supply Connection ..... :	**N/A**
Particulars: test item vs. test requirements	
- method of fixing :	**Top hat rail 35 mm**
- number of poles..... :	**1 pole**
- type of clamping unit..... :	**screwless-type clamping units**
- ability to receive conductors ..... :	**unprepared conductors, flexible or rigid**
- number of terminals on terminal assembly..... :	**4**
- PE or PEN functions..... :	**PE**
- rated cross-section (mm²) ..... :	**4 mm² or 6 mm²**
- rated connecting capacity (mm²) ..... :	**0,5 mm² - 6 mm² rigid and flexible**
Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	**05-2022**
Date (s) of performance of tests.....:	**06-2022**
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. **Throughout this report a ☒ comma / ☐ point is used as the decimal separator.**	
Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**
When differences exist; they shall be identified in the General product information section.	

Name and address of factory (ies) .....:	**Wago Elwag sp.z.o.o.** **ul. Piekna 58 a** **50-506, Wroclaw, Poland** **Wago Elwag** **Innowacyjna 2** **55-330 Wroblowice, Poland** **WAGO Private Limited** **Block No. 94, National Highway-8** **Village Vadsala – Varnama, Vadodara, Gujarat-391243, India** **Wago Electronic (Tianjin) Co. Ltd.** **No. 5 Quanhui Road** **Wu Qing Development Area** **301700 Tianjin, China** **WAGO GmbH & Co. KG** **Hansastrasse 27, 32423 Minden/Westfalen** **Germany** **WAGO GmbH & Co. KG, Werk Sondershausen** **Waldstrasse 1, 99706, Sondershausen** **Germany** **WAGO Contact S.A.** **Route de l'Industrie 19, CP 168, 1564,** **Domdidier, Switzerland** **WAGO GmbH & Co. KG** **Cammer Str. 17,** **32423 Minden** **Germany**
General product information: **See page 30 and 31.**	

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
5	**PRODUCT INFORMATION**		
5.1	**Marking**		
	Terminal block shall be marked with:		
	- manufacturer's name or trademark	WAGO	**P**
	- type designation	**TOPJOB S 2004**	**P**
5.2	**The following information shall be stated by the manufacturer if applicable, e.g. in the manufacturer's data sheet, or his catalogue or on the packing unit:**		
	- manufacturer's claim for compliance with IEC 60 947-7-2	**IEC 60947-7-2**	**P**
	- rated cross-section	**4 mm² or 6 mm²**	**P**
	- rated connecting capacity	**0,5 mm² - 6 mm² rigid and flexible**	**P**
	- service conditions if different from those of Cl. 6.		**P**
	The manufacturer shall declare if the protective conductor terminal block rated equal to or above 10 mm^2 (AWG 8) is intended for PE function only.		**N/A**

7.	**CONSTRUCTION**		
7.1	**Constructional requirements**		
7.1.1	Terminals		
	Terminals shall permit a reliable connection between the conductor clamping unit and the clamping unit to the support		**P**
7.1.7.1	All parts of terminals which maintain contact and carry current shall be of metal having adequate mechanical strength		**P**
	Clamping units connections shall be such that necessary contact pressure is maintained		**P**

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	Clamping units shall be so constructed that the conductor is clamped between suitable surfaces without damage to the conductor and terminal		**P**
	Clamping units shall not allow the conductor to be displaced or to be displaced themselves in a manner detrimental to the operation of equipment and the insulation voltage shall not be reduced below the rated value		**P**
	Clamping units shall allow the conductor to be connected by means ensuring that a reliable mechanical linkage and electrical contact is properly maintained		**P**
	Clamping units shall be able to withstand the forces that can be applied through the connected conductors		**P**
	Contact pressure is not transmitted through insulation materials		**P**
7.1.2	Connection of support		
	Protective conductor terminal blocks are provided with means that allow them to be securely attached to the corresponding support without risk of galvanic corrosion		**P**
	The design of the protective conductor terminal blocks shall clearly show how the fixation has to be made to ensure the correct conducting connection to appropriate support		**P**
	The clamping connection to the support shall only be released by means of tools		**P**
7.1.3	Clearances and creepage distances		
	Clearances and creepage distances do not apply to protective conductor terminal blocks		**P**
7.1.4	Terminal identification and marking:		

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	- terminal blocks shall have provision, or at least space, for identification marks or numbers for each terminal or terminal assembly to be related to the circuit of which it is to form a part		**P**
	- any partial insulated protective conductor terminal blocks shall be coloured green and yellow		**P**
7.1.5	Resistance to abnormal heat and fire		
	Needle flame test for insulation materials of terminal blocks (see 8.5)	**5 s**	**P**
7.1.6	Rated cross section and rated connecting capacity		
	Terminal blocks are so designed that conductors of the rated cross-section and/or the rated connecting capacity can be accepted	**0,5 mm² - 6 mm² rigid and flexible**	**P**
7.1.7	Protective conductor mounting rails		
	Mounting rails may be used as protective conductor busbars, provided the values specified in Table A.1 for thermal short-time withstand current and the thermal rated current are not exceeded	**Top hat rail 35 mm**	**P**
	Other types of mounting rails may be used for this purpose if the values of Table A.1 are comparable		**N/A**
	Steel protective conductor busbars are not allowed to be used as a PEN conductor		**N/A**

8.	**TESTS**		
8.3	**Verification of mechanical characteristics**		
8.3.2	Attachment of the terminal block on its support		
	mounting rail ..... :	**top hat rail 35 mm**	—
	torque (Nm) clamping to support ..... :	**-**	—

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	steel pin diameter (mm) ..... :	**2,8 mm**	—
	tightening torque clamping units (Nm) ..... :	**-**	—
	force (N) ..... :	**5 N**	—
	During the test, no terminal block shall work free from its rail or support, nor suffer any other damage		**P**
8.3.3.1	Test of mechanical strength of clamping units		
8.2.4.2	Mechanical strength of terminals (IEC 60947-1)		
	rated cross-section of a rigid conductor (mm²) ... :	**4 mm²**	—
	diameter of thread (mm) ..... :	**-**	—
	torque (Nm) ..... :	**-**	—
	5 times on 2 separate clamping units		**P**
	Voltage drop before and after mechanical strength test		
	rated cross-section of a rigid conductor (mm²) ... :	**4 mm²**	—
	test current (A) d.c. ..... :	**3,2 A**	—
	voltage drop (mV) before mechanical strength test not exceeding 3,2 mV ..... :	**2,15 mV – 1,98 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N/A**
	voltage drop (mV) after mechanical strength test not exceeding 150% of the value measured before mechanical strength test ..... :	**2,28 mV – 2,06 mV**	**P**
	rated cross-section of a rigid conductor (mm²) ... :	**6 mm²**	—
	diameter of thread (mm) ..... :	**-**	—
	torque (Nm) ..... :	**-**	—
	5 times on 2 separate clamping units		**P**
	Voltage drop before and after mechanical strength test		
	rated cross-section of a rigid conductor (mm²) ... :	**6 mm²**	—
	test current (A) d.c. ..... :	**4,1 A**	—

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	voltage drop (mV) before mechanical strength test not exceeding 3,2 mV ..... :	**2,46 mV – 2,59 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N/A**
	voltage drop (mV) after mechanical strength test not exceeding 150% of the value measured before mechanical strength test ..... :	**2,38 mV – 2,63 mV**	**P**
	minimum cross-section of a flexible conductor (mm^2) ..... :	**0,5 mm^2**	—
	test current (A) d.c. ..... :	**0,6 A**	—
	voltage drop (mV) before mechanical strength test not exceeding 3,2 mV ..... :	**0,58 mV – 0,73 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N/A**
	voltage drop (mV) after mechanical strength test not exceeding 150% of the value measured before mechanical strength test ..... :	**0,65 mV – 0,68 mV**	**P**
	Mechanical strength of the clamping to support		
	- rail profile ..... :	**top hat rail 35 mm**	—
	diameter of thread (mm) ..... :	**-**	—
	torque (Nm) ..... :	**-**	—
	5 times on 2 separate clamping units		**P**
	rated cross-section of a rigid conductor (mm^2) ... :	**4 mm^2**	—
	test current (A) d.c. ..... :	**3,2 A**	—
	voltage drop (mV) before mechanical strength test not exceeding 6,4 mV ..... :	**0,99 mV – 1,26 mV**	**P**
	If the measured value exceeds 6,4 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 4,8 mV		**N/A**

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	voltage drop (mV) after mechanical strength test not exceeding 150% of the value measured before mechanical strength test ..... :	**1,38 mV – 1,40 mV**	**P**
	Mechanical strength of the clamping to support		
	- rail profile ..... :	**Top hat rail 35 mm**	—
	diameter of thread (mm) ..... :	**-**	—
	torque (Nm) ..... :	**-**	—
	5 times on 2 separate clamping units		**P**
	rated cross-section of a rigid conductor (mm²) ... :	**6 mm²**	—
	test current (A) d.c. ..... :	**4,1 A**	—
	voltage drop (mV) before mechanical strength test not exceeding 6,4 mV ..... :	**1,93 mV – 2,30 mV**	**P**
	If the measured value exceeds 6,4 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 4,8 mV		**N/A**
	voltage drop (mV) after mechanical strength test not exceeding 150% of the value measured before mechanical strength test ..... :	**1,97 mV – 2,53 mV**	**P**
8.3.4.2	Testing for damage to and accidental loosening of conductors of a terminal block (flexion test)		
	conductor of the smallest cross-section (mm²) ... :	**0,5 mm² rigid and flexible**	—
	number of conductor of the smallest cross-section ..... :	**1**	—
	torque (Nm) ..... :	**-**	—
	diameter of bushing hole (mm) ..... :	**6,5 mm**	—
	height between the equipment and the platen (mm) ..... :	**260 mm**	—
	mass at the conductor(s) (kg) ..... :	**0,3 kg**	—
	135 continuous revolutions: the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	Pull-out test		
	force (N) ..... :	**20 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	conductor of the rated cross-section (mm²) ..... :	**4 mm² rigid and flexible**	—
	number of conductors of the rated cross-section :	**1**	—
	diameter of bushing hole (mm) ..... :	**9,5 mm**	—
	height between the equipment and the platen (mm) ..... :	**280 mm**	—
	mass at the conductor(s) (kg) ..... :	**0,9 kg**	—
	135 continuous revolutions: the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	Pull-out test		
	force (N) ..... :	**60 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	conductor of the rated cross-section (mm²) ..... :	**6 mm² rigid and flexible**	—
	number of conductors of the rated cross-section :	**1**	—
	diameter of bushing hole (mm) ..... :	**9,5 mm**	—
	height between the equipment and the platen (mm) ..... :	**280 mm**	—
	mass at the conductor(s) (kg) ..... :	**1,4 kg**	—
	135 continuous revolutions: the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	Pull-out test		
	force (N) ..... :	**80 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	conductor of the largest cross-section (mm²) ..... :	**6 mm² rigid and flexible**	—

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	number of conductors of the largest cross-section ..... :	**1**	—
	diameter of bushing hole (mm) ..... :	**9,5 mm**	—
	height between the equipment and the platen (mm) ..... :	**280 mm**	—
	mass at the conductor(s) (kg) ..... :	**1,4 kg**	—
	135 continuous revolutions: the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	Pull-out test		
	force (N) ..... :	**80 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	conductor of the largest or smallest cross-section (mm²) ..... :		—
	number of conductor of the largest or smallest cross-section ..... :		—
	torque (Nm) ..... :		—
	diameter of bushing hole (mm) ..... :		—
	height between the equipment and the platen (mm) ..... :		—
	mass at the conductor(s) (kg) ..... :		—
	135 continuous revolutions: the conductor shall neither slip out of the terminal nor break near the clamping unit		**N/A**
	Pull-out test		
	force (N) ..... :		—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**N/A**
8.3.4.4	Verification of rated cross section and rated connecting capacity		

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	One conductor of the two next smaller cross-sections can be unhindered and connected in each clamping unit of one terminal block (up to 35 mm²)	**1,5 mm²**	**P**
8.4.3	Dielectric tests		
	Dielectric test, Uimp indicated:		
	- The test is made on protective terminal blocks installed with terminal blocks of the same series and size according to the manufactures instructions rated cross-section (mm²) / type / conductor end length (mm) ..... :	**Type 2004-1407** **4 mm²/ 6 mm², rigid, 11-13 mm**	—
	- rated impulse withstand voltage (kV) ..... :	**8 kV**	—
	- test Uimp main circuits (kV) ..... :	**9,8 kV**	**P**
	Dielectric test, Uimp not indicated:		
	- The test is made on protective terminal blocks installed with terminal blocks of the same series and size according to the manufactures instructions rated cross-section (mm²) / type / conductor end length (mm) :	**Type 2004-1407** **4 mm² / 6 mm², rigid, 11-13 mm**	—
	- rated insulation voltage (V) ..... :	**800 V**	—
	- test voltage for 60 sec (V) ..... :	**2000 V**	**P**
8.4.5	Temperature-rise test		
	Temperature rise conditions:		
	- test current (A) ..... :		—
	- cross-section of the conductor (mm²) ..... :		—
	- torque (Nm) clamping unit ..... :		—
	- torque (Nm) clamping to support ..... :		—
	Temperature-rise without support		
	- temperature-rise does not exceed 45 K	see appended table 8.4.5	**N/A**
	Voltage drop before and after temperature-rise test:		
	- test current (A) d.c. ..... :		—

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	- voltage drop (mV) before temperature-rise test not exceeding 3,2 mV ..... :	1 - 2 - 3 - 4 - 5 -	**N/A**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N/A**
	- voltage drop (mV) after temperature-rise test not exceeding 150% of the value measured before temperature rise test ..... :	1 - 2 - 3 - 4 - 5 -	**N/A**
	Temperature-rise with support		
	- rail profile and material ..... :		—
	- temperature-rise does not exceed 45 K ..... :	1 - 2 -	—
	Voltage drop before and after temperature-rise test:		
	- test current (A) d.c. ..... :		—
	- voltage drop (mV) before temperature-rise test not exceeding 6,4 mV ..... :	1 - 2 -	**N/A**
	If the measured value exceeds 6,4 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 4,8 mV		**N/A**
	- voltage drop (mV) after temperature-rise test not exceeding 150% of the value measured before temperature-rise test ..... :	1 - 2 -	**N/A**
8.4.6	Short-time withstand current test type		
	- cross-section of the conductor (mm²) ..... :	**4 mm²**	—
	- torque (Nm) clamping unit ..... :	**-**	—
	- rail profile and material ..... :	**Top hat rail 35 mm**	—

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Clause	Requirement – Test	Result - Remark	Verdict
	- torque (Nm) clamping to support ..... :	**-**	—
	Test current from clamping unit to clamping unit (1-1)		
	- test current (A) ..... :	**1 - 480 A** **2 - 480 A** **3 – 480 A**	—
	- duration of the test current (s) ..... :	**1 -1 s** **2 -1 s** **3 -1 s**	—
	At the end of the test, continuity shall exist on the test sample assembly and the terminal blocks shall not show any cracking, breakage or other critical damage		**P**
	Voltage drop after short-time withstand current test		
	- cross-section of the conductor (mm²) ..... :	**4 mm²**	—
	- test current (A) d.c. ..... :	**3,2 A**	—
	- voltage drop (mV) after short-time withstand current test not exceeding 3,2 mV ..... :	1 – **2,01 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**
	Test current from clamping unit to support (2-2)		
	- test current (A) ..... :	**1 - 480 A** **2 - 480 A** **3 - 480 A**	—
	- duration of the test current (s) ..... :	**1 -1 s** **2 -1 s** **3 -1 s**	—
	At the end of the test, continuity shall exist on the test sample assembly and the terminal blocks shall not show any cracking, breakage or other critical damage		**P**

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	Voltage drop after short-time withstand current test		
	- cross-section of the conductor (mm²) ..... :	**4 mm²**	—
	- test current (A) d.c. ..... :	**3,2 A**	—
	- voltage drop (mV) after short-time withstand current test not exceeding 6,4 mV ..... :	1 – **1,42 mV**	**P**
	If the measured value exceeds 6,4 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 4,8 mV		**N**
8.4.6	Short-time withstand current test type		
	- cross-section of the conductor (mm²) ..... :	**6 mm²**	—
	- torque (Nm) clamping unit ..... :	**-**	—
	- rail profile and material ..... :	**Top hat rail 35 mm**	—
	- torque (Nm) clamping to support ..... :	**-**	—
	Test current from clamping unit to clamping unit (1-1)		
	- test current (A) ..... :	**1 - 720 A** **2 - 720 A** **3 – 720 A**	—
	- duration of the test current (s) ..... :	**1 -1 s** **2 -1 s** **3 -1 s**	—
	At the end of the test, continuity shall exist on the test sample assembly and the terminal blocks shall not show any cracking, breakage or other critical damage		**P**
	Voltage drop after short-time withstand current test		
	- cross-section of the conductor (mm²) ..... :	**6 mm²**	—
	- test current (A) d.c. ..... :	**4,1 A**	—
	- voltage drop (mV) after short-time withstand current test not exceeding 3,2 mV ..... :	1 – **2,38 mV**	**P**

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**
	Test current from clamping unit to support (2-2)		
	- test current (A) ..... :	**1 - 720 A** **2 - 720 A** **3 - 720 A**	—
	- duration of the test current (s) ..... :	**1 -1 s** **2 -1 s** **3 -1 s**	—
	At the end of the test, continuity shall exist on the test sample assembly and the terminal blocks shall not show any cracking, breakage or other critical damage		**P**
	Voltage drop after short-time withstand current test		
	- cross-section of the conductor (mm²) ..... :	**6 mm²**	—
	- test current (A) d.c. ..... :	**4,1 A**	—
	- voltage drop (mV) after short-time withstand current test not exceeding 6,4 mV ..... :	**1 – 2,15 mV**	**P**
	If the measured value exceeds 6,4 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 4,8 mV		**N**
8.4.7	Ageing test (for screwless-type terminal blocks only)		
	Maximum ambient temperature (°C) ..... :	**40° C**	—
	Rated cross-section solid or stranded (mm²) ..... :	**4 mm²**	—
	Heating cabinet is increased, in each cycle to (°C) ..... :	**85° C**	—
	Test current (A) d.c. for measurement of the voltage drop ..... :	**3,2 A**	—
	Rail profile and material ..... :	**Top hat rail 35 mm Cu**	—
	Torque (Nm) clamping to support ..... :	**-**	—
	Voltage drop after 0 cycles:		

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Clause	Requirement – Test	Result - Remark	Verdict
	- requirement for clamping unit to clamping unit: ≤ 3,2 mV (mV) ..... :	1 – **2,10 mV** 2 – **2,40 mV** 3 – **2,30 mV** 4 – **2,20 mV** 5 – **2,10 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**
	- requirement for clamping unit to support: ≤ 6,4 mV (mV) ..... :	1 – **1,40 mV** 2 – **1,30 mV**	**P**
	If the measured value exceeds 6,4 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 4,8 mV		**N**
	Voltage drop after the 24th cycle:		
	- requirement for clamping unit to clamping unit: 4,8 mV (mV) ..... :	**1 – 2,10 mV** **2 – 2,30 mV** **3 – 2,20 mV** **4 – 2,20 mV** **5 – 2,00 mV**	***P***
	- requirement for clamping unit to support: 9,6 mV (mV) ..... :	**1 – 1,40 mV** **2 – 1,30 mV**	***P***
	Voltage drop after the 48th cycle		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,00 mV** 2 – **2,30 mV** 3 – **2,20 mV** 4 – **2,20 mV** 5 – **2,00 mV**	**P**

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Clause	Requirement – Test	Result - Remark	Verdict
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,40 mV** 2 – **1,30 mV**	**P**
	Voltage drop after the 72th cycle:		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,00 mV** 2 – **2,30 mV** 3 – **2,20 mV** 4 – **2,20 mV** 5 – **2,00 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,40 mV** 2 – **1,30 mV**	**P**
	Voltage drop after the 96th cycle:		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,00 mV** 2 – **2,30 mV** 3 – **2,20 mV** 4 – **2,20 mV** 5 – **2,00 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,40 mV** 2 – **1,30 mV**	**P**
	Voltage drop after the 120th cycle:		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,00 mV** 2 – **2,30 mV** 3 – **2,20 mV** 4 – **2,20 mV** 5 – **2,00 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,40 mV** 2 – **1,30 mV**	**P**
	Voltage drop after the 144th cycle:		

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Clause	Requirement – Test	Result - Remark	Verdict
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,00 mV** 2 – **2,30 mV** 3 – **2,20 mV** 4 – **2,20 mV** 5 – **2,00 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,40 mV** 2 – **1,30 mV**	**P**
	Voltage drop after the 168th cycle:		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,00 mV** 2 – **2,30 mV** 3 – **2,20 mV** 4 – **2,20 mV** 5 – **2,00 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,40 mV** 2 – **1,30 mV**	**P**
	Voltage drop after the 192th cycle:		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,00 mV** 2 – **2,30 mV** 3 – **2,20 mV** 4 – **2,10 mV** 5 – **2,00 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,40 mV** 2 – **1,30 mV**	**P**
	Pull-out test		
	force (N) ..... :	**60 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		**P**
	Maximum ambient temperature (°C) ..... :	**40° C**	—
	Rated cross-section solid or stranded (mm²) ..... :	**6 mm²**	—

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Clause	Requirement – Test	Result - Remark	Verdict
	Heating cabinet is increased, in each cycle to (°C) ..... :	**85° C**	—
	Test current (A) d.c. for measurement of the voltage drop ..... :	**4,1 A**	—
	Rail profile and material ..... :	**Top hat rail 35 mm Cu**	—
	Torque (Nm) clamping to support ..... :	**-**	—
	Voltage drop after 0 cycles:		
	- requirement for clamping unit to clamping unit: ≤ 3,2 mV (mV) ..... :	1 – **2,04 mV** 2 – **2,03 mV** 3 – **2,13 mV** 4 – **1,55 mV** 5 – **1,89 mV**	**P**
	If the measured value exceeds 3,2 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 1,6 mV		**N**
	- requirement for clamping unit to support: ≤ 6,4 mV (mV) ..... :	1 – **2,20 mV** 2 – **2,26 mV**	**P**
	If the measured value exceeds 6,4 mV, the voltage drop is determined on each individual clamping unit separately, which shall not exceed 4,8 mV		**N**
	Voltage drop after the 24th cycle:		
	- requirement for clamping unit to clamping unit: 4,8 mV (mV) ..... :	1 – **2,08 mV** 2 – **2,05 mV** 3 – **2,16 mV** 4 – **1,61 mV** 5 – **1,92 mV**	**P**
	- requirement for clamping unit to support: 9,6 mV (mV) ..... :	1 – **1,94 mV** 2 – **2,29 mV**	**P**

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Clause	Requirement – Test	Result - Remark	Verdict
	Voltage drop after the 48th cycle		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,08 mV** 2 – **2,04 mV** 3 – **2,16 mV** 4 – **1,61 mV** 5 – **1,92 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,92 mV** 2 – **2,17 mV**	**P**
	Voltage drop after the 72th cycle:		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,08 mV** 2 – **2,03 mV** 3 – **2,15 mV** 4 – **1,61 mV** 5 – **1,92 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,92 mV** 2 – **2,26 mV**	**P**
	Voltage drop after the 96th cycle:		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,08 mV** 2 – **2,03 mV** 3 – **2,15 mV** 4 – **1,61 mV** 5 – **1,92 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,91 mV** 2 – **2,26 mV**	**P**
	Voltage drop after the 120th cycle:		

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Clause	Requirement – Test	Result - Remark	Verdict
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,08 mV** 2 – **2,03 mV** 3 – **2,15 mV** 4 – **1,61 mV** 5 – **1,92 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,90 mV** 2 – **2,27 mV**	**P**
	Voltage drop after the 144th cycle:		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,07 mV** 2 – **2,03 mV** 3 – **2,15 mV** 4 – **1,61 mV** 5 – **1,92 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,90 mV** 2 – **2,26 mV**	**P**
	Voltage drop after the 168th cycle:		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,07 mV** 2 – **2,02 mV** 3 – **2,15 mV** 4 – **1,61 mV** 5 – **1,92 mV**	**P**
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,90 mV** 2 – **2,26 mV**	**P**
	Voltage drop after the 192th cycle:		
	- requirement for clamping unit to clamping unit: ≤ 4,8 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **2,07 mV** 2 – **2,02 mV** 3 – **2,14 mV** 4 – **1,61 mV** 5 – **1,92 mV**	***P***

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Clause	Requirement – Test	Result - Remark	Verdict
	- requirement for clamping unit to support: ≤ 9,6 mV or 1,5 times the value measured after the 24th cycle (mV) ..... :	1 – **1,90 mV** 2 – **2,26 mV**	***P***
	Pull-out test		
	force (N) ..... :	**80 N**	—
	1 min, the conductor shall neither slip out of the terminal nor break near the clamping unit		***P***
8.5	**Verification of thermal characteristics are checked by the needle flame test**		
	Before the test, the terminal blocks are stored for 24 h in an atmosphere having a temperature between 15°C and 35°C and a relative humidity between 45% and 75%		**P**
	The flame is applied for 10 s. for insulation walls <1 mm and / or an area < 100 mm², the flame is applied for 5 s.	**10 s**	**P**
	The terminal blocks are considered to have passed the test if the duration of burning is < 30s in case of ignition. Moreover, the tissue paper on the pinewood board shall not ignite if burning or glowing particles fall from the terminal block.		**P**
8.6	**Verification of EMC characteristics**		
	Subclause 8.4 of IEC 60947-1 applies with the following addition		**N/A**
8.6.1	Immunity		**N/A**
	Terminal blocks within the scope of this standard are not sensitive of electromagnetic disturbances and therefore no immunity tests are necessary.		**N/A**
8.6.2	Emission		**N/A**

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict
	Terminal blocks within the scope of this standard do not generate electromagnetic disturbances and therefore no emission tests are necessary.		**N/A**

IEC 60947-7-2			
Clause	Requirement – Test	Result - Remark	Verdict

8.4.3	**TABLE: Dielectric Strength**		
Test voltage applied between:		**Test potential applied (V)**	**Breakdown / flashover (Yes/No)**
Terminal 1,3, 5 to 2,4 (2 and 4 type 2004-1401)		**2000 V**	**No**
Supplementary information:			

8.4.5	**TABLE: Heating Test**		
	Test voltage (V):		—
	Ambient (^{o}C):.....		—

Thermocouple Locations	max. temperature measured, (^{o}C)	max. temperature limit, (^{o}C)
		45
		45
		45
		45
		45
		45

Supplementary information:

Product data

product	:	terminal block
trade name(s)	:	WAGO
type(s)	:	TOPJOB S 2004
material	:	thermoplastic material.
rated cross-section	:	4 mm² rigid and flexible 6 mm² rigid and flexible
rated connecting capacity	:	0,5 mm² - 6 mm² rigid and flexible
method of mounting	:	for mounting on top hat rail 35 mm
type	:	2004-1207
description	:	two conductor earth terminal block, with screwless-type clamping units, 1-pole
type	:	2004-1307
description	:	three conductor earth terminal block, with screwless-type clamping units, 1-pole
type	:	2004-1407
description	:	four conductor earth terminal block, with screwless-type clamping units, 1-pole


DEKRA
TOPJOB S 2004
IEC 60947-7-2
4mm²
2004-1407
1001188220

ETICS OD ECS 040-1 January 2019	Responsible CB DEKRA

TEST REPORT SUMMARY

Report Number ..... :	**2266648.60**
Date of issue ..... :	**2023-06-16**
Tested by (name, function, signature):	**B. Veenvliet** (Technician Industrial Safety)
Witnessed by (name, function, signature):	
Approved by (name, function, signature):	**F. Fu** (Project Manager Industrial Safety)
Supervised by (name, function, signature):	

Testing Laboratory ..... :	**DEKRA Certification B.V.**
Address ..... :	**Meander 1051, 6825 MJ Arnhem, The Netherlands**
Testing procedure ..... :	☐ ENEC ☒ CCA NTR ☐ ENEC based on IECEE CBTC with number: …….
Customer Testing Procedure..... :	☐ TMP/CTF Stage 1 ☐ WMT/CTF Stage 2 ☐ SMT/CTF Stage 3
Applicant ..... :	**WAGO GmbH & Co. KG**
Address ..... :	**Hansastrasse 27, 32423 Minden/Westfalen, Germany**
Manufacturer ..... :	**WAGO GmbH & Co. KG**
Address ..... :	**Hansastrasse 27, 32423 Minden/Westfalen, Germany**
Product ..... :	**Protective conductor terminal block for copper conductors**
Model/Type reference ..... :	**TOPJOB S 2004**
Trademark ..... :	WAGO
Ratings ..... :	**4 mm² / 6 mm²**
Certification Scheme ..... :	☐ ENEC ☒ CCA ☐ Other: _____
Standard(s) ..... :	**EN 60947-7-2: 2009, in conjunction with EN 60947-1: 2007 + A1:2012 + A2:2014**

☒ The text of the a.m. European Standard was approved by CENELEC is equivalent with the corresponding IEC Publication.

☐ The text of the a.m. European Standard was approved by CENELEC with agreed common modifications and is not equivalent with the corresponding IEC Publication. An EU Deviation Addendum has to be issued.

This EN test report consists of the following parts:

☒ IEC Test Report Number..... :	**2266648.60**
☐ EU Deviation Addendum..... :	

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