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| PATENT ASSIGNMENT COVER SHEET |
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Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5232058

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------------------------|----------------|
| EATON INDUSTRIES (AUSTRIA) GMBH | 12/27/2017 |

RECEIVING PARTY DATA

| | |
|------------------------|---------------------------------|
| Name: | EATON INTELLIGENT POWER LIMITED |
| Street Address: | 30 PEMBROKE ROAD |
| City: | DUBLIN 4 |
| State/Country: | IRELAND |

PROPERTY NUMBERS Total: 17

| Property Type | Number |
|---------------------|----------|
| Patent Number: | 8624694 |
| Patent Number: | 8711531 |
| Patent Number: | 9129766 |
| Patent Number: | 9136074 |
| Patent Number: | 9153952 |
| Patent Number: | 9748061 |
| Patent Number: | 9829530 |
| Application Number: | 14237906 |
| Application Number: | 14892202 |
| Application Number: | 15104531 |
| Application Number: | 15104533 |
| Application Number: | 15105596 |
| Application Number: | 15312188 |
| Application Number: | 15326041 |
| Application Number: | 15329585 |
| Application Number: | 15507809 |
| Application Number: | 15527715 |

CORRESPONDENCE DATA

Fax Number: (703)273-7684

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

PATENT

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Email: rshapiro@sasiplaw.com
Correspondent Name: RONALD E. SHAPIRO
Address Line 1: 11350 RANDOM HILLS ROAD, SUITE 740
Address Line 4: FAIRFAX, VIRGINIA 22030

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|--------------------------------|---------------------|
| ATTORNEY DOCKET NUMBER: | CH116 |
| NAME OF SUBMITTER: | RONALD E. SHAPIRO |
| SIGNATURE: | /Ronald E. Shapiro/ |
| DATE SIGNED: | 11/11/2018 |

Total Attachments: 37

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INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

This Intellectual Property Assignment Agreement (this “**Agreement**”) is entered into as of this 27th day of December 2017 between

- (1) **Eaton Industries (Austria) GmbH**, an Austrian limited liability company (*Gesellschaft mit beschränkter Haftung - GmbH*) having its seat in Schrems and business address at 3943 Schrems (NÖ), Eugenia 1 , registered with the companies register held by the Regional Court Krems an der Donau in its capacity as commercial court under FN 419796 y (the “**Assignor**”), and
- (2) **Eaton Intelligent Power Limited**, an Irish limited company having its registered office at 30 Pembroke Road, Dublin 4, Ireland, registration number 523985 (the “**Assignee**”)

BACKGROUND

- (A) The Assignor is the owner of certain Intellectual Property used or held for use in the development and manufacture of Products.
- (B) The Assignee desires to acquire such Intellectual Property from the Assignor and thereafter intends to develop, enhance, maintain, protect and exploit such Intellectual Property.
- (C) The Assignor has agreed to assign the Acquired Intellectual Property to the Assignee, and the Assignee has agreed to acquire the Acquired Intellectual Property, on the terms set out in this Agreement.

THE PARTIES THEREFORE AGREE AS FOLLOWS:

1. DEFINITIONS AND INTERPRETATION

- 1.1 In this Agreement the following words and expressions have the following meanings, unless the context otherwise requires:

“**Acquired Intellectual Property**” means all Intellectual Property owned by the Assignor that is used or held for use, in whole or in part, in the manufacture or offering for sale of any Product, including the Scheduled Patents, but excluding all Excluded Intellectual Property;

“**Copyrights**” means all copyrights (registered or unregistered), writings and other works in which copyright subsists, moral rights and all other rights corresponding thereto in work of authorship, and all registrations and applications for registration thereof anywhere in the world;

“**Domain Names**” means all rights in World Wide Web addresses and domain names and all registrations and applications for registration thereof anywhere in the world;

“**Eaton Business System**” means the management tools, processes and measures used by the Assignor and its affiliates in the conduct of their operations;

“**Encumbrance**” means any lien, encumbrance, charge or other security interest;

“Effective Time” means the close of business on 31 December 2017;

“Excluded Intellectual Property” means (i) all Trademarks; (ii) all Domain Names; (iii) all Intellectual Property (other than Intellectual Property included in the Eaton Business System) used or held for use in whole or in part in production processes; (iv) all Intellectual Property (other than Intellectual Property included in the Eaton Business System) used or held for use in whole or in part in marketing, sales, service or distribution processes; (v) all Intellectual Property used or held for use exclusively to provide Services; and (vi) all Intellectual Property comprising the Eaton Business System;

“Intellectual Property” means (i) Patents; (ii) Trademarks; (iii) Copyrights; (iv) Know-How; (v) Software; (vi) Domain Names; and (vii) all other intellectual and industrial property and rights of a similar or corresponding nature anywhere in the world, whether registered or not or capable of registration or not, and including all applications for, and continuations, re-filings, re-issues and extensions of any of the foregoing rights;

“Know-How” means all know-how, inventions, discoveries, ideas, processes, formulae, designs, drawings, models, trade secrets, proprietary information, and confidential information, in any form (including paper, electronically stored data, magnetic media, film and microfilm), whether patentable or not, including technical information, drawings, test results or reports, testing procedures, and instruction and training manuals;

“Party” means a party to this Agreement;

“Patents” means all utility patents, utility models, design patents, industrial designs and applications therefor and all reissues, divisions, re-examinations, renewals, extensions, provisionals, continuations and continuations in part thereof, and equivalent or similar rights anywhere in the world in inventions and discoveries including invention disclosures;

“Permitted Encumbrances” means Encumbrances for taxes, assessments or governmental or other similar charges or levies that are not yet due and payable or that, although due and payable, are being contested in good faith;

“Proceeding” means any suit, action or other proceeding;

“Product” means any product offering of the Assignor or any of its affiliates other than Services;

“Purchase Price” has the meaning set out in clause 4.1;

“Scheduled Patents” means the Patents listed on Schedule 1 to this Agreement;

“Services” means the performance of maintenance or repair services as a follow on to a sale of a Product;

“Software” means all computer software programs (including object code and source code), whether embodied in firmware, software or otherwise;

“Trademarks” means all registered trademarks, registered service marks, logos, get-up, trade dress, common law trademarks, common law service marks, business names, trade

names, corporate or company names, and all registrations and applications for registration thereof anywhere in the world and all goodwill associated therewith anywhere in the world; and

“**Transfer Tax**” means any value added tax, transfer, stamp or sales tax or duty or other similar tax, charge or duty due or payable as a result of the execution of this Agreement or the consummation of the transactions contemplated hereby.

- 1.2 Except as otherwise provided, any references in this Agreement to clauses, schedules and/or parties are references to the clauses, schedules and/or parties to this Agreement.
- 1.3 Where applicable references to the singular shall include the plural and vice versa and reference to any gender shall include other genders.
- 1.4 The division of this Agreement to clauses and sub-clauses, and the headings used in this Agreement, are for convenience only, and shall not affect the interpretation of this Agreement.
- 1.5 In this Agreement, unless otherwise specified, any reference to a document is a reference to the document as from time to time supplemented, modified or amended.
- 1.6 A waiver by either Party of any breach by the other Party of any other terms, provisions or conditions of this Agreement or the acquiescence of such Party and any act (whether by commission or omission) that but for such acquiescence would be a breach as aforesaid shall not constitute a general waiver of such term, provision or condition or of any subsequent act contrary thereto.
- 1.7 This Agreement and all rights and obligations hereunder shall for all purposes be treated and construed as being separate and apart from any other agreement or agreements or any rights or obligations thereunder save only insofar as the express provision requires to the contrary.
- 1.8 This Agreement represents the entire understanding of the Parties concerning the subject matter hereof and overrides and supersedes all prior promises, representations, undertakings, understandings, arrangements, agreements, side letters or heads of agreement between the Parties concerning the same, which are hereby revoked by mutual consent of the Parties.
- 1.9 In this Agreement, any phrase introduced by the words *include, including, includes* and *such as* are to be construed as illustrative, and shall not limit the sense of the words preceding those words.
- 1.10 In this Agreement, unless otherwise specified, any reference to a statute or statutory provision includes a reference to the statute or statutory provision as modified or re-enacted, or both, from time to time, and to any subordinate legislation made under it.
- 1.11 If any provision of this Agreement shall be found by any court or administrative body of competent jurisdiction to be invalid or unenforceable, such invalidity or unenforceability shall not affect the other provisions of this Agreement which shall remain in full force and effect. If any provision of this Agreement is so found to be invalid or unenforceable but would be valid or enforceable if some part of the provision were deleted or modified, the provision in question shall apply with such modification(s) as may be necessary to

make it valid. The Parties agree, in the circumstances referred to in this clause 1.11 to attempt in good faith to substitute for any invalid or unenforceable provision a valid or enforceable provision that achieves to the greatest extent possible the same effect as would have been achieved by the invalid or unenforceable provision.

- 1.12 This Agreement may be executed in any number of counterparts, but all the counterparts shall together constitute the same Agreement.

2. ASSIGNMENT

2.1 With effect as of the Effective Time, the Assignor hereby irrevocably and unconditionally assigns, transfers and conveys to the Assignee, and the Assignee hereby accepts, all of the Assignor's right, title and interest in and to the Acquired Intellectual Property, free and clear of all Encumbrances other than Permitted Encumbrances.

2.2 In the event that any or all of the Assignor's rights, title or interest in and to any of the Acquired Intellectual Property are deemed not to vest in the Assignee as of the Effective Time for any reason whatsoever, the Assignor shall, and hereby does, to the extent permitted by law, irrevocably assign, transfer and convey to the Assignee or its designee all such rights, title and interest in and to all of the Acquired Intellectual Property, including all economic rights and moral rights of authorship, and the Assignee hereby accepts such assignment. To the extent permitted by law, the Assignor hereby waives all of its personal rights, or at a minimum agrees that it will not invoke its personal rights with respect to any Acquired Intellectual Property. If as a matter of law any Acquired Intellectual Property is not assignable by the Assignor to the Assignee, the Assignor shall, and hereby does, to the extent permitted by law, grant to the Assignee or its designee an exclusive, unrestricted, irrevocable, worldwide, perpetual, royalty-free license to all such rights, including the right to exploit, amend, edit and (sub-)license such rights.

2.3 In the event that the Assignee requires any additional details of the Acquired Intellectual Property, the Assignor shall furnish the Assignee with such particulars as are reasonably requested by the Assignee.

3. RIGHTS OF ACTION

3.1 The Assignor confirms that the assignment of the Acquired Intellectual Property made under clause 2 is made with all rights and powers arising or accrued from the Acquired Intellectual Property, including the right to sue for past damages and recover damages for past infringements and other remedies in respect of any past or future infringements or violations of such rights and to retain any damages obtained as a result of such action.

3.2 The Assignor confirms that the assignment of the Patents comprised within the Acquired Intellectual Property is made with:

- (a) all rights and powers arising or accrued from such Patents, including the right to sue for past damages and recover damages for past infringements and other remedies in respect of any past or future infringements of such rights or other acts within the scope of the claims of any of such Patents or accompanying any of the applications for such Patents; and

- (b) the right to apply for, prosecute and obtain patent or similar protection anywhere in the world in respect of any of the inventions claimed in any of the Patents including the right to claim priority therefrom.

4. **CONSIDERATION**

- 4.1 The purchase price to be paid by the Assignee for the assignment of the Acquired Intellectual Property is set forth on Schedule 2 (the “**Purchase Price**”), which shall be paid in the manner set forth on Schedule 2.
- 4.2 The Purchase Price is exclusive of any Transfer Tax properly chargeable thereon. Each Party shall be responsible for and shall timely pay any Transfer Tax that is required to be paid by such Party under applicable law in connection with the transactions contemplated by this Agreement.

5. **WARRANTIES BY THE ASSIGNOR**

- 5.1 The Assignor warrants to the Assignee as follows:
 - (a) the Assignor has been duly established and is validly existing under the laws of the jurisdiction of its formation;
 - (b) the Assignor has all requisite corporate power and authority to execute, deliver and perform its obligations under this Agreement and to consummate the transactions contemplated hereby;
 - (c) no bankruptcy, insolvency or judicial composition Proceedings have been commenced or, to the knowledge of the Assignor, applied for, nor are any enforcement measures pending or, to the knowledge of the Assignor applied for, with respect to any property or other assets of the Assignor and, to the knowledge of the Assignor, no circumstance exists in respect of the Assignor that would justify the avoidance of this Agreement under applicable insolvency law;
 - (d) there is no Proceeding pending or threatened against or affecting the Assignor before any court, arbitrator, governmental authority, agency or official that in any manner challenges or seeks to prevent, enjoin, alter or materially delay the execution of this Agreement or the consummation of transactions contemplated hereby;
 - (e) this Agreement constitutes the legal, valid and binding obligation of the Assignor, enforceable against the Assignor in accordance with its terms; and
 - (f) except as has been disclosed to the Assignee prior to the date hereof,
 - (i) the Assignor is the legal and beneficial owner of the Acquired Intellectual Property, free and clear of Encumbrances other than Permitted Encumbrances;
 - (ii) none of the Acquired Intellectual Property is involved in any current, pending, or threatened Proceeding, interference, reissue, re-examination, inter partes review, opposition or cancellation proceeding, nor has it been in the last six years;

- (iii) to the knowledge of the Assignor, the Acquired Intellectual Property is in effect and subsisting;
- (iv) all maintenance or other fees relating to the Acquired Intellectual Property due and payable on or before the Effective Time have been paid in full;
- (v) the Assignor has not received any written notice or, to the knowledge of the Assignor, any other notice asserting that any such infringement or misappropriation has occurred or disputing the right of the Assignor to use the Acquired Intellectual Property; and
- (vi) no Proceeding is pending or, to the knowledge of the Assignor, threatened involving the Acquired Intellectual Property that challenges the validity, enforceability, ownership, use or licensing thereof.

5.2 EXCEPT AS SET OUT IN THIS AGREEMENT, THE ACQUIRED INTELLECTUAL PROPERTY IS ASSIGNED "AS IS" AND ALL CONDITIONS, WARRANTIES AND REPRESENTATIONS, EXPRESSED OR IMPLIED BY STATUTE, COMMON OR CIVIL LAW OR OTHERWISE, ARE EXCLUDED TO THE MAXIMUM EXTENT PERMITTED BY LAW.

6. WARRANTIES BY THE ASSIGNEE

6.1 The Assignee warrants to the Assignor as follows:

- (a) the Assignee has been duly established and is validly existing under the laws of the jurisdiction of its formation;
- (b) the Assignee has all requisite corporate power and authority to execute, deliver and perform its obligations under this Agreement and to consummate the transactions contemplated hereby and thereby;
- (c) no bankruptcy, insolvency or judicial composition Proceedings have been commenced or, to the knowledge of the Assignee, applied for, nor are any enforcement measures pending or, to the knowledge of the Assignee applied for, with respect to any property or other assets of the Assignee and, to the knowledge of the Assignee, no circumstance exists in respect of the Assignee that would justify the avoidance of this Agreement under applicable insolvency law;
- (d) there is no Proceeding pending or threatened against or affecting the Assignee before any court, arbitrator, governmental authority, agency or official that in any manner challenges or seeks to prevent, enjoin, alter or materially delay the execution of this Agreement or the consummation of transaction contemplated hereby or thereby; and
- (e) this Agreement constitutes the legal, valid and binding obligation of the Assignee, enforceable against the Assignee in accordance with their respective terms.

7. **MISCELLANEOUS**


- 7.1 The Assignor shall upon request and for no additional consideration do and execute or procure that there shall be done and executed in a form or manner reasonably satisfactory to the Assignee all such documents, deeds, matters, acts and things as the Assignee may at any time require properly to vest the Acquired Intellectual Property or any part thereof in the Assignee or otherwise to give effect to this assignment and perfect the Assignee's title. Without limiting the generality of the foregoing, the Assignor agrees and undertakes to provide to the Assignee (at its request) all reasonable assistance with any Proceeding that may be brought by or against the Assignee against or by any third party relating to the rights assigned by this Agreement.
- 7.2 The Assignor shall be responsible for registering the transfers of the Acquired Intellectual Property with the applicable patent, copyright or other offices and for paying all costs and fees associated with such registrations.
- 7.3 To the extent an additional version is or is required to be prepared in a language other than English, the English language version of this Agreement is the official and controlling text for all purposes.
- 7.4 This Agreement and any dispute arising out of or in connection with it or its subject matter or formation (including non-contractual disputes or claims) shall be governed by and construed in accordance with the laws of Ireland without giving effect to its rules on conflicts of law.
- 7.5 Each of the Parties irrevocably agrees that the courts of Ireland (excluding Northern Ireland) are to have exclusive jurisdiction to settle any dispute arising out of or in connection with this Agreement and, for such purposes, irrevocably submits to the exclusive jurisdiction of such courts. Any Proceeding arising out of or in connection with this Agreement shall therefore be brought in the courts of Ireland. Each of the Parties to this Agreement irrevocably waives any objection to Proceedings in the courts referred to in this clause 7.5 on the grounds of venue or on the grounds of *forum non conveniens*.

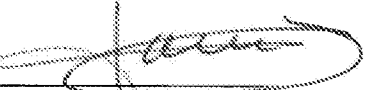
IN WITNESS OF WHICH, THIS AGREEMENT HAS BEEN DULY EXECUTED BY THE UNDERSIGNED SIGNATORIES ON BEHALF OF THE PARTIES AS OF THE DATE FIRST WRITTEN ABOVE.

(Signature page follows.)

SIGNED FOR AND ON BEHALF OF


Eaton Industries (Austria) GmbH

By  12/27/2017
Name: Bruno Roger Imelda Georges Lawaree
Title: Authorized representative

By  12/27/2017
Name: Bruno Roger Imelda Georges Lawaree
Title: Authorized representative

SIGNED FOR AND ON BEHALF OF

Eaton Intelligent Power Limited

By  12/27/2017
Name: Bruno Roger Imelda Georges Lawaree
Title:

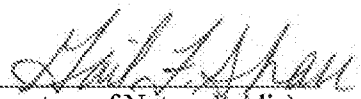
State of Ohio

County of Cuyahoga

The foregoing instrument was acknowledged before me this 27th day of December, 2017 by

Bruno Roger Imelda Georges Lawaree.

(Seal)


(Signature of Notary Public)

GAIL E. SHAW
NOTARY PUBLIC, STATE OF OHIO
Recorded in Cuyahoga County
My Comm. Expires April 17, 2021

[Signature page to Intellectual Property Assignment Agreement]

SCHEDULE 1: SCHEDULED PATENTS

| Docket Number | Country | Application Number | Application Date | Patent Number | Grant Date | Title |
|---------------|---------|--------------------|------------------|----------------|------------|---|
| 02VNA3079 | CZ | PV20032438 | 03/15/2002 | 301531 | 02/25/2010 | L9 AUSBLASKAMMER |
| 04VNA3112 | DE | 05730722.5 | 04/15/2005 | 502005011778.6 | 08/17/2011 | SCHALTER MIT ERHOETHER KRIECH- UND LUFSTRECKE |
| 04VNA3112 | IT | 502011901989012 | 04/15/2005 | EP1741117 | 08/17/2011 | SCHALTER MIT ERHOETHER KRIECH- UND LUFSTRECKE |
| 04VNA3114 | DE | 05752420.9 | 06/23/2005 | 502005010293.2 | 09/22/2010 | PLUG IN CONCEPT "FEHLERSTROMAMPEL" |
| 04VNA3114 | FR | EP05752420.9 | 06/23/2005 | 1771869 | 09/22/2010 | PLUG IN CONCEPT "FEHLERSTROMAMPEL" |
| 04VNA3114 | GB | EP05752420.9 | 06/23/2005 | 1771869 | 09/22/2010 | PLUG IN CONCEPT "FEHLERSTROMAMPEL" |
| 04VNA3114 | IT | 502010901894630 | 06/23/2005 | 1771869 | 09/22/2010 | PLUG IN CONCEPT "FEHLERSTROMAMPEL" |
| 05VNA3123 | DE | 06804385.0 | 11/09/2006 | 502006008198.9 | 10/27/2010 | LIFTKLEMME MIT FEDER |
| 05VNA3123 | FR | 06804385.0 | 11/09/2006 | 1949500 | 10/27/2010 | LIFTKLEMME MIT FEDER |
| 06VNA3130 | DE | 07710525.2 | 03/21/2007 | 502007008589.8 | 11/02/2011 | FI MIT VVD-FUNKTION (SCHALTEINRICHTUNG) |
| 06VNA3134 | DE | 07701340.7 | 02/26/2007 | 502007007172.2 | 05/11/2011 | UNI DESIGN ABDECKUNG |
| 08VNA3137 | IL | 207317 | 02/02/2009 | 207317 | 11/01/2014 | PRUEFSTROMKREIS MIT TERIAERWICKLUNG |
| 08VNA3139 | EP | 09717170.6 | 02/17/2009 | | | LOESCHKAMMER |
| 08VNA3148 | IN | 451/KOLNP/2011 | 07/02/2009 | | | SWITCHING DEVICE |
| 08VNA3150 | EP | 09744906.0 | 09/23/2009 | | | DIFI - MTI VVD-FUNKTION |
| 08VNA3150 | IN | 1985/KOLNP/2011 | 09/23/2009 | | | DIFI - MTI VVD-FUNKTION |
| 08VNA3150-2 | AT | 891/10 | 11/13/2008 | | | DIFI - MTI VVD-FUNKTION |
| 08VNA3150-3 | AT | 889/10 | 11/13/2008 | | | DIFI - MTI VVD-FUNKTION |
| 09VNA3153 | EP | 10706471.9 | 01/18/2010 | | | AFCI KONZEPT - STROMUNTERBRECHUNG |
| 09VNA3157 | EP | 10721270.6 | 04/28/2010 | | | UEBERWACHUNGSVORRICHTUNG/Kennung von Verbrauchern |
| 10VNA3162 | AT | 626/10 | 04/16/2010 | | | SCHALTGERAET |

| Docket Number | Country | Application Number | Application Date | Patent Number | Grant Date | Title |
|-----------------|---------|--------------------|------------------|----------------|------------|--|
| 10VNA3163 | AT | 595/10 | 04/14/2010 | | | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3163 | US | 13/086913 | 04/14/2011 | 8625238 | 01/07/2014 | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3165 | AT | 1391/10 | 08/19/2010 | | | SCHALTGERAET |
| 10VNA3165 | US | 13/212664 | 08/18/2011 | 8836339 | 09/16/2014 | SCHALTGERAET |
| 10VNA3171 | AT | 2027/10 | 12/07/2010 | | | HALVESTER RCCB - ROTARY HANDLE |
| 10VNA3173 | AT | 464/2011 | 04/01/2011 | | | FI B+ neu / Fehlerstromschutzschalter |
| 11VNA906 | AT | 1094/2011 | 07/26/2011 | | | Adaptive Methode zur Lichtbogenerkennung - of electric arc identification Lichtbogenerkennung I |
| 11VNA907 | AT | A 1091/2011 | 07/26/2011 | | | Eine Methode zur Lichtbogenerkennung - Methode of arc fault detection |
| 11VNA908 | AT | 1092/11 | 07/26/2011 | 511792 | 02/15/2015 | Unterbrechungsfreie FI-Prüfung - Interruptable FI-testing |
| 11VNA911 | AT | A 1181/2011 | 08/12/2011 | 511757 | 06/15/2013 | FERTIGUNGSVERFAHREN FÜR SCHALTBRÜCKE |
| 11VNA912 | AT | A1278/2011 | 09/06/2011 | | | ECI IN HOME AUTOMATION |
| 04VNA3950.10DES | ECD | 000262712-0010 | 12/02/2004 | 000262712-0010 | 12/02/2004 | UNIVERSALBEDIENGERAET |
| 04VNA3950.3DES | ECD | 000262712-0003 | 12/02/2004 | 000262712-0003 | 12/02/2004 | UNIVERSALBEDIENGERAET |
| 06VNA3128 | IT | 502012902111156 | 06/14/2007 | 2059936 | 10/03/2012 | UNI-DESIGN-AUFSTECKKNOPF |
| 06VNA3958.10DES | ECD | 000559661-0010 | 07/14/2006 | 000559661-0010 | 07/14/2006 | . |
| 06VNA3958.11DES | ECD | 000559661-0011 | 07/14/2006 | 000559661-0011 | 07/14/2006 | . |
| 06VNA3958.1DES | ECD | 000559661-0001 | 07/14/2006 | 000559661-0001 | 07/14/2006 | . |
| 06VNA3958.2DES | ECD | 000559661-0002 | 07/14/2006 | 000559661-0002 | 07/14/2006 | . |
| 06VNA3958.3DES | ECD | 000559661-0003 | 07/14/2006 | 000559661-0003 | 07/14/2006 | . |
| 06VNA3958.4DES | ECD | 000559661-0004 | 07/14/2006 | 000559661-0004 | 07/14/2006 | . |
| 06VNA3958.5DES | ECD | 000559661-0005 | 07/14/2006 | 000559661-0005 | 07/14/2006 | . |
| 06VNA3958.6DES | ECD | 000559661-0006 | 07/14/2006 | 000559661-0006 | 07/14/2006 | . |

| Docket Number | Country | Application Number | Application Date | Patent Number | Grant Date | Title |
|----------------|---------|--------------------|------------------|----------------|------------|--|
| 06VNA3958.7DES | ECD | 000559661-0007 | 07/14/2006 | 000559661-0007 | 07/14/2006 | . |
| 06VNA3958.8DES | ECD | 000559661-0008 | 07/14/2006 | 000559661-0008 | 07/14/2006 | . |
| 06VNA3958.9DES | ECD | 000559661-0009 | 07/14/2006 | 000559661-0009 | 07/14/2006 | . |
| 06VNA3959.1DES | ECD | 000554845-0001 | 07/04/2006 | 000554845-0001 | 07/04/2006 | DISTRIBUTION BOXES |
| 06VNA3959.2DES | ECD | 000554845-0002 | 07/04/2006 | 000554845-0002 | 07/04/2006 | DISTRIBUTION BOXES |
| 06VNA3959.3DES | ECD | 000554845-0003 | 07/04/2006 | 000554845-0003 | 07/04/2006 | DISTRIBUTION BOXES |
| 06VNA3959.4DES | ECD | 000554845-0004 | 07/04/2006 | 000554845-0004 | 07/04/2006 | DISTRIBUTION BOXES |
| 06VNA3959.5DES | ECD | 000554845-0005 | 07/04/2006 | 000554845-0005 | 07/04/2006 | DISTRIBUTION BOXES |
| 06VNA3959.6DES | ECD | 000554845-0006 | 07/04/2006 | 000554845-0006 | 07/04/2006 | DISTRIBUTION BOXES |
| 06VNA3959.7DES | ECD | 000554845-0007 | 07/04/2006 | 000554845-0007 | 07/04/2006 | DISTRIBUTION BOXES |
| 06VNA3959.8DES | ECD | 000554845-0008 | 07/04/2006 | 000554845-0008 | 07/04/2006 | DISTRIBUTION BOXES |
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| 09TFD724 | CN | 2014800701616 | 11/12/2014 | | | DOUBLE PUMP CANISTER |
| 10TFD830 | CN | 2013800401354 | 07/12/2013 | | | MISSING PHASE DETECTOR FOR USE WITH THREE-PHASE TWELVE-PULSE TRANSFORMER-RECTIFIER SYSTEM |
| 11TFD981 | CN | 201380020872.8 | 04/18/2013 | 201380020872.8 | 06/29/2016 | ELECTRONIC CONTROL OF ENGINE FUEL FEED INTERFACE CONDITIONS |
| 12TFD281 | CN | 2013800231048 | 04/29/2013 | | | DISTRIBUTING VENT AIR INFLOW TO AN INERT AIRCRAFT FUEL TANK USING A FLOAT VALVE TO DIRECT THE INFLOWING AIR INTO THE FUEL TANK STRUCTURE SO THAT IT IS DIRECTED BY "STRINGERS" OR EQUIVALENT STRUCTURE OR PIPEWORK THROUGHOUT THE FUEL TANK AND MIXED EVENLY. |
| 12TFD479 | CN | 2013800403932 | 07/12/2013 | 2013800403932 | 06/30/2017 | DROP TANK CONNECTION VALVE |

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| 11VNA908 | GB | 12748179.4 | 07/26/2012 | EP2737514 | 05/25/2016 | Unterbrechungsfreie FI-Prüfung - interruptable FI-testing |
| 13VNA1154 | CN | 2015800424232 | 07/16/2015 | | | RCD CONTROL SYSTEM |
| 13VNA201 | CN | 201480075090.9 | 12/04/2014 | | | VERTEILSAMMELSCHIENENKUPFER VON UNTEN EINBRINGEN DURCH ABNEHMBARE BODENPLATTE |
| 13VNA211 | CN | 201480075086.2 | 12/05/2014 | | | SCHWENKEN DER VERTEILSAMMELSCHIENE FÜR VEREINFACHTES EINBRINGEN DER KUPFERSCHIENEN |
| 13VNA668 | CN | 2014800718570 | 11/13/2014 | | | LOCKING DEVICE ONLY IN OFF POSITION |
| 12VNA431 | CN | 201380057104.X | 10/31/2013 | | | MODIFIABLE EXTINGUISHING CHAMBER FOR DC - SWITCHING |
| 12VNA432 | CN | 2013800571105 | 10/31/2013 | | | DIRECT CURRENT ARC ACCELERATION BY MOVING POTENTIALS WITHIN A MAGNETIC FIELD |
| 12VNA637 | CN | 2013800570916 | 10/31/2013 | | | SPECIAL ARC PLATE FOR DC ARC CHAMBERS |
| 12VNA878 | CN | 201480029741.0 | 05/23/2014 | | | B+I UMSCHALTUNG VI-VD MODE |
| 13VNA172 | CN | 2014800315315 | 04/03/2014 | | | Isolator für Sammelschienen |
| 13VNA462 | CN | 2014800750843 | 12/18/2014 | | | FEDERFIXIERUNG - (ERSATZ DES RASTSCHIEBERS) |
| 13VNA940 | CN | 2014800754596 | 12/18/2014 | | | MEASURES FOR MAGNETICALLY INFLUENCING THE MOVEMENT OF THE ARC IN MINIATURE CIRCUIT BREAKERS |
| 14VNA028 | CN | 2015800409213 | 07/16/2015 | | | UNBEEINFLUSSTE AUSSCHALTBEATUNG DER KLINKE EINES SCHALTGERÄTES |
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| 10VNA3173 | CN | 201280026717.2 | 03/27/2012 | ZL201280026717.2 | 05/25/2016 | FI B+ neu / Fehlerstromschutzschalter |
| 11VNA906 | CN | 201280046638.8 | 07/26/2012 | 2012800466388 | 06/09/2017 | Adaptive Methode zur Lichtbogenerkennung -. Adaptive methode of electric arc identification |
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| 11VNA908 | CN | 201280046907.0 | 07/26/2012 | ZL2012800469070 | 02/15/2017 | Unterbrechungsfreie FI-Prüfung - interruptable FI-testing |
| 11VNA909 | CN | 201210229148.3 | 07/03/2012 | | | MAGNET HYDRAUL AUSLÖSER |
| 10VNA3164 | IN | 3683/DELNP/2013 | 09/13/2011 | | | FEHLERSTROMSCHUTZSCHALTER |
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| 08VNA3146 | EP | 09765233.3 | 04/27/2009 | EP2291893 | 02/08/2017 | FEHLERSTROMPEGEL-ZUVERLÄSSIGKEIT |
| 08VNA3146 | FR | 09765233.3 | 04/27/2009 | EP2291893 | 02/08/2017 | FEHLERSTROMPEGEL-ZUVERLÄSSIGKEIT |
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| 09VNA3158 | EP | 10720118.8 | 04/28/2010 | 2438664 | 04/19/2017 | MODULARER FUNKTASTER |
| 10VNA3163 | DE | 11717925.9 | 03/25/2011 | 502011006590.6 | 04/15/2015 | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3163 | FR | 11717925.9 | 03/25/2011 | EP2559127 | 04/15/2015 | FEHLERSTROMSCHUTZSCHALTER |
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| 10VNA3169 | EP | 12808740.0 | 12/10/2012 | EP2789002 | 06/21/2017 | EINSTUECKIGE AUSLÖSEEINHEIT |
| 10VNA3171 | DE | 11811510.4 | 12/06/2011 | 502011005687.7 | 01/14/2015 | HALVESTER RCCB - ROTARY HANDLE |

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| 11VNA860 | EP | 13802307.2 | 11/29/2013 | | | EMV SCHUTZ MIT VORWIDERSTÄNDEN "SURGE" SCHUTZ" |
| 11VNA860 | WO | PCT/EP2013/075177 | 11/29/2013 | | | EMV SCHUTZ MIT VORWIDERSTÄNDEN "SURGE" SCHUTZ" |
| 11VNA863 | EP | 13799034.7 | 11/29/2013 | | | JOCH MIT PASSIV BEHEIZTEM BIMETALL- STREIFEN |
| 11VNA863 | WO | PCT/EP2013/075178 | 11/29/2013 | | | JOCH MIT PASSIV BEHEIZTEM BIMETALL- STREIFEN |
| 11VNA866 | EP | 13799283.0 | 11/29/2013 | | | B-TYPE RCD BASED ON A NEW MODULAR RCD - CONCEPT |
| 11VNA866 | WO | PCT/EP2013/075175 | 11/29/2013 | | | B-TYPE RCD BASED ON A NEW MODULAR RCD - CONCEPT |
| 11VNA906 | EP | 12748177.8 | 07/26/2012 | | | Adaptive Methode zur Lichtbogenerkennung -. Adaptive methode of electric arc identification |
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| 11VNA909 | EP | 12746333.9 | 08/13/2012 | | | MAGNET HYDRAUL. AUSLÖSER |
| 11VNA911 | EP | 12756398.9 | 08/13/2012 | | | FERTIGUNGSVERFAHREN FÜR SCHALTBRÜCKE |
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| 11VNA913 | EP | 12808739.2 | 12/10/2012 | | | NEUARTIGE KOPPLUNG ABLEITERMODULE; ZEIGERKOPPLUNG |
| 11VNA914 | EP | 12808738.4 | 12/10/2012 | | | NEUARTIGE KOPPLUNG ABLEITERMODULE; MODULBAUWEISE |
| 11VNA915 | DE | 102013100906.9 | 01/30/2013 | | | SELBSTLERNEENDER AFDD |
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| 11VNA973 | DE | 102013100907.7 | 01/30/2013 | | | ANALYSESYSTEM |
| 12VNA077 | EP | 15787540.2 | 10/26/2015 | | | NETZTEIL MIT ZWEI MOSFET SELBSTLEITENDE TRANSISTOREN BSS126 |
| 12VNA077 | WO | PCT/EP2015/074778 | 10/26/2015 | | | NETZTEIL MIT ZWEI MOSFET SELBSTLEITENDE TRANSISTOREN BSS126 |
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| 12VNA430 | WO | PCT/EP2013/075182 | 11/29/2013 | | | MULTIDETECTOR AFDD |
| 12VNA431 | EP | 13805278.2 | 10/31/2013 | | | MODIFIABLE EXTINGUISHING CHAMBER FOR DC - SWITCHING |
| 12VNA431 | WO | PCT/EP2013/072804 | 10/31/2013 | | | MODIFIABLE EXTINGUISHING CHAMBER FOR DC - SWITCHING |
| 12VNA432 | WO | PCT/EP2013/072806 | 10/31/2013 | | | DIRECT CURRENT ARC ACCELERATION BY MOVING POTENTIALS WITHIN A MAGNETIC FIELD |
| 12VNA510 | DE | 13783568.2 | 10/28/2013 | 502013006551.0 | 03/01/2017 | "NEUARTIGE ANORDNUNG DER HOLME EINES SCHALTSCHRANKGEHÄUSES" |
| 12VNA510 | EP | 13783568.2 | 10/28/2013 | EP2912734 | 03/01/2017 | "NEUARTIGE ANORDNUNG DER HOLME EINES SCHALTSCHRANKGEHÄUSES" |
| 12VNA510 | FR | 13783568.2 | 10/28/2013 | EP2912734 | 03/01/2017 | "NEUARTIGE ANORDNUNG DER HOLME EINES SCHALTSCHRANKGEHÄUSES" |
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| 12VNA819 | WO | PCT/EP2013/076989 | 12/17/2013 | | | CALCULATION OF THE REMAINING BATTERY CAPACITY OF BATTERY POWERED SENSORS BASED ON THE RECEIVED MESSAGES |
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| 12VNA833 | EP | 15723512.8 | 05/19/2015 | | | SPRUNGAUSSCHALTUNG PLHT PLATTFORM |
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| 12VNA833 | WO | PCT/EP2015/060988 | 05/19/2015 | | | SPRUNGAUSSCHALTUNG PLHT PLATTFORM |
| 12VNA834 | EP | 15723511.0 | 05/19/2015 | | | SPRUNGEINSCHALTUNG PLHT PATTFORM |
| 12VNA834 | US | 15/312188 | 05/19/2015 | | | SPRUNGEINSCHALTUNG PLHT PATTFORM |
| 12VNA834 | WO | PCT/EP2015/060987 | 05/19/2015 | | | SPRUNGEINSCHALTUNG PLHT PATTFORM |
| 12VNA878 | EP | 14725727.3 | 05/23/2014 | | | B+I UMSCHALTUNG VI-VD MODE |
| 12VNA878 | US | 14/892202 | 05/23/2014 | | | B+I UMSCHALTUNG VI-VD MODE |
| 12VNA878 | WO | PCT/EP2014/060671 | 05/23/2014 | | | B+I UMSCHALTUNG VI-VD MODE |
| 13VNA1145 | EP | 15759782.4 | 09/04/2015 | | | ARC FLASH DETECTION SYSTEM |
| 13VNA1145 | US | 15/507809 | 09/04/2015 | | | ARC FLASH DETECTION SYSTEM |
| 13VNA1145 | WO | PCT/EP2015/070254 | 09/04/2015 | | | ARC FLASH DETECTION SYSTEM |
| 13VNA1154 | EP | 15738627.7 | 07/16/2015 | | | RCD CONTROL SYSTEM |
| 13VNA1154 | US | 15/326041 | 07/16/2015 | | | RCD CONTROL SYSTEM |
| 13VNA1154 | WO | PCT/EP2015/066273 | 07/16/2015 | | | RCD CONTROL SYSTEM |
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| 13VNA172 | EP | 14722119.6 | 04/03/2014 | | | Isolator für Sammelschienen |
| 13VNA212 | EP | 14716266.3 | 04/03/2014 | | | FINGERSICHERE DURCHFÜHRUNG |

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| 13VNA392 | EP | 15797319.9 | 11/18/2015 | | | NEUARTIGER WÄRMEAUSTAUSCHER ZUR KÜHLUNG VON SCHALTSTRANKANLAGEN |
| 13VNA392 | WO | PCT/EP2015/077021 | 11/18/2015 | | | NEUARTIGER WÄRMEAUSTAUSCHER ZUR KÜHLUNG VON SCHALTSTRANKANLAGEN |
| 13VNA462 | EP | 14818972.3 | 12/18/2014 | | | FEDERFIXIERUNG - (ERSATZ DES RASTSCHIEBERS) |
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| 13VNA697 | EP | 14816232.4 | 12/18/2014 | | | COAXIAL SWITCH |
| 13VNA698 | EP | 14820845.7 | 12/18/2014 | | | MULTI-CONTACT ARC SPLITTING |
| 13VNA699 | EP | 14814890.1 | 12/18/2014 | | | SWITCHING CAPACITY VOLTAGE OPTIMISATION |
| 13VNA743 | DE | 102014106015.6 | 04/29/2014 | | | REMOTE CONTROLLED MCB |
| 13VNA743 | EP | 15719701.3 | 04/28/2015 | | | REMOTE CONTROLLED MCB |
| 13VNA743 | WO | PCT/EP2015/059256 | 04/28/2015 | | | REMOTE CONTROLLED MCB |
| 13VNA912 | DE | 102014107070.4 | 05/20/2014 | | | LICHTBOGENLAUFSCHEIBE MIT BESCHLEUNIGENDER WIRKUNG AUF DEN LICHTBOGEN |
| 13VNA912 | EP | 15726040.7 | 05/19/2015 | | | LICHTBOGENLAUFSCHEIBE MIT BESCHLEUNIGENDER WIRKUNG AUF DEN LICHTBOGEN |
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| 13VNA940 | US | 15/105602 | 12/18/2014 | 9748061 | 08/29/2017 | MEASURES FOR MAGNETICALLY INFLUENCING THE MOVEMENT OF THE ARC IN MINIATURE CIRCUIT BREAKERS |
| 13VNA940 | WO | PCT/EP2014/078574 | 12/18/2014 | | | MEASURES FOR MAGNETICALLY INFLUENCING THE MOVEMENT OF THE ARC IN MINIATURE CIRCUIT BREAKERS |
| 14VNA028 | DE | 102014110757.8 | 07/29/2014 | 102014110757 | 12/29/2016 | UNBEEINFLUSSTE AUSSCHALTBEATIGUNG DER KLINKE EINES SCHALTGERATES |
| 14VNA028 | EP | 15738105.4 | 07/16/2015 | | | UNBEEINFLUSSTE AUSSCHALTBEATIGUNG DER KLINKE EINES SCHALTGERATES |
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| 14VNA028 | WO | PCT/EP2015/066274 | 07/16/2015 | | | UNBEEINFLUSSTE AUSSCHALTBEATIGUNG DER KLINKE EINES SCHALTGERATES |
| 14VNA1159 | EP | 16700560.2 | 01/12/2016 | | | TIME-RESOLVED ARC FLASH DETECTION |
| 14VNA1159 | WO | PCT/EP2016/050490 | 01/12/2016 | | | TIME-RESOLVED ARC FLASH DETECTION |
| 14VNA160 | DE | 102014114843.6 | 10/13/2014 | | | KUPFERLASCHEN FÜR STROMWANDLER - VEREINFACHUNG BEI WARTUNGSARBEITEN |
| 14VNA290 | WO | PCT/EP2016/063409 | 06/11/2016 | | | INTELLIGENT METHOD TO DETECT OPEN DOOR OR WINDOW IN A HOME FOR REDUCING HVAC ENERGY CONSUMPTION |
| 14VNA404 | WO | PCT/EP2016/064632 | 06/24/2016 | | | HUMAN EARTH FAULT IDENTIFICATION (HEFI) |
| 14VNA574 | WO | PCT/EP2016/063410 | 06/12/2016 | | | COMFORT INDEX BASED ENERGY SAVINGS POTENTIAL FOR RESIDENTIAL HOME OWNERS USING HVAC |
| 14VNA653 | EP | 16700435.7 | 01/12/2016 | | | FAST-RECOVERY-ARC-QUENCHING-DEVICE |
| 14VNA653 | WO | PCT/EP2016/050489 | 01/12/2016 | | | FAST-RECOVERY-ARC-QUENCHING-DEVICE |

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| 14VNA847 | DE | 102016105341.4 | 03/22/2016 | | | AUSLÖSER-MCB |
| 14VNA858 | WO | PCT/EP2016/065203 | 06/29/2016 | | | MINIATURE RELAYS USED AS INSTALLATION RELAY/CONDUCTOR SUBASSEMBLY |
| 14VNA933 | EP | 16700436.5 | 01/12/2016 | | | SELECTIVE ARC QUENCHING DEVICE |
| 14VNA933 | WO | PCT/EP2016/050491 | 01/12/2016 | | | SELECTIVE ARC QUENCHING DEVICE |
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| 15VNA199 | WO | PCT/EP2016/056319 | 03/23/2016 | | | COMBINED TEMPERATURE AND CURRENT MONITORING IN LOW VOLTAGE SYSTEMS |
| 15VNA230 | WO | PCT/EP2016/055176 | 03/10/2016 | | | TRANSMITTING RF SIGNALS IN LOW VOLTAGE ENCLOSURES |
| 15VNA503 | DE | 102016102554.2 | 02/15/2016 | | | XR-DRAWER-FEATURES |
| 15VNA503 | WO | PCT/EP2017/053328 | 02/14/2017 | | | XR-DRAWER-FEATURES |
| 15VNA705 | DE | 102015116493.0 | 09/29/2015 | | | SPRUNQ-AUS SYSTEM FÜR SCHALTOERATE |
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| 04VNA3106 | PL | 04802023.4 | 12/30/2004 | 1711982 | 02/27/2008 | KLEMMHILFE NEU |
| 06VNA3128 | AT | 07718501.5 | 06/14/2007 | 2059936 | 10/03/2012 | UNI-DESIGN-AUFSTECKKNOPF |
| 06VNA3128 | CZ | 07718501.5 | 06/14/2007 | 2059936 | 10/03/2012 | UNI-DESIGN-AUFSTECKKNOPF |
| 06VNA3128 | DE | 07718501.5 | 06/14/2007 | 502007010629.1 | 10/03/2012 | UNI-DESIGN-AUFSTECKKNOPF |
| 06VNA3128 | FR | 07718501.5 | 06/14/2007 | 2059936 | 10/03/2012 | UNI-DESIGN-AUFSTECKKNOPF |
| 06VNA3128 | GB | 07718501.5 | 06/14/2007 | 2059936 | 10/03/2012 | UNI-DESIGN-AUFSTECKKNOPF |
| 06VNA3128 | NL | 07718501.5 | 06/14/2007 | 2059936 | 10/03/2012 | UNI-DESIGN-AUFSTECKKNOPF |
| 06VNA3128 | RO | 07718501.5 | 06/14/2007 | 2059936 | 10/03/2012 | UNI-DESIGN-AUFSTECKKNOPF |
| 06VNA3128 | TR | 07718501.5 | 06/14/2007 | 2012/15322 | 10/03/2012 | UNI-DESIGN-AUFSTECKKNOPF |
| 08VNA3137 | DE | 09709553.3 | 02/02/2009 | 502009009828.6 | 08/20/2014 | PRUEFSTROMKREIS MIT TERIAERWICKLUNG |
| 08VNA3137 | NO | 09709553.3 | 02/02/2009 | 2253004 | 08/20/2014 | PRUEFSTROMKREIS MIT TERIAERWICKLUNG |
| 08VNA3141 | DE | 09717512.9 | 02/11/2009 | 502009009790.5 | 08/13/2014 | MAGNETSYSTEM |
| 08VNA3148 | AU | 2009276298 | 07/02/2009 | 2009276298 | 12/17/2015 | SWITCHING DEVICE |
| 08VNA3148 | BG | 09775551.6 | 07/02/2009 | EP2313905 | 04/04/2012 | SWITCHING DEVICE |
| 08VNA3148 | CZ | 09775551.6 | 07/02/2009 | EP2313905 | 04/04/2012 | SWITCHING DEVICE |
| 08VNA3148 | DE | 09775551.6 | 07/02/2009 | 502009003211.0 | 04/04/2012 | SWITCHING DEVICE |
| 08VNA3148 | ES | 09775551.6 | 07/02/2009 | EP2313905 | 04/04/2012 | SWITCHING DEVICE |
| 08VNA3148 | FR | 09775551.6 | 07/02/2009 | EP2313905 | 04/04/2012 | SWITCHING DEVICE |
| 08VNA3148 | IT | 502012902062849 | 07/02/2009 | EP2313905 | 04/04/2012 | SWITCHING DEVICE |
| 08VNA3148 | NL | 09775551.6 | 07/02/2009 | EP2313905 | 04/04/2012 | SWITCHING DEVICE |
| 08VNA3148 | NO | 09775551.6 | 07/02/2009 | EP2313905 | 04/04/2012 | SWITCHING DEVICE |

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| 08VNA3148 | RO | 09775551.6 | 07/02/2009 | EP2313905 | 04/04/2012 | SWITCHING DEVICE |
| 08VNA3148 | TR | 09775551.6 | 07/02/2009 | 2012/07289 | 04/04/2012 | SWITCHING DEVICE |
| 08VNA3149 | DE | 09775552.4 | 07/02/2009 | 502009002330.8 | 12/28/2011 | STECKBARER UESPG-ABLEITER DESIGN- /ARRETIERUNGSFUNKT. |
| 08VNA3149 | NO | 09775552.4 | 07/02/2009 | 2308144 | 12/28/2011 | STECKBARER UESPG-ABLEITER DESIGN- /ARRETIERUNGSFUNKT. |
| 08VNA3149 | PL | 09775552.4 | 07/02/2009 | 2308144 | 12/28/2011 | STECKBARER UESPG-ABLEITER DESIGN- /ARRETIERUNGSFUNKT. |
| 08VNA3150 | AU | 2009316247 | 09/23/2009 | 2009316247 | 07/23/2015 | DIFI - MTT VIVD-FUNKTION |
| 09VNA3158 | AU | 2010256320 | 04/28/2010 | 2010256320 | 08/27/2015 | MODULARER FUNKTASTER |
| 09VNA3159 | AU | 2010281335 | 06/01/2010 | 2010281335 | 08/13/2015 | ELEKTRISCHE INSTALLATIONSANORDNUNG |
| 09VNA3159 | EP | 10730688.8 | 06/01/2010 | | | ELEKTRISCHE INSTALLATIONSANORDNUNG |
| 09VNA3159 | IN | 982/CHEMP/2012 | 06/01/2010 | | | ELEKTRISCHE INSTALLATIONSANORDNUNG |
| 09VNA3159 | US | 13/388918 | 06/01/2010 | 8711531 | 04/29/2014 | ELEKTRISCHE INSTALLATIONSANORDNUNG |
| 10HEN3170 | DE | 12712530.0 | 02/16/2012 | EP2676284 | 06/07/2017 | FEHLERSTROMSCHUTZSCHALTER |
| 10HEN3170 | EP | 12712530.0 | 02/16/2012 | EP2676284 | 06/07/2017 | FEHLERSTROMSCHUTZSCHALTER |
| 10HEN3170 | FR | 12712530.0 | 02/16/2012 | EP2676284 | 06/07/2017 | FEHLERSTROMSCHUTZSCHALTER |
| 10HEN3170 | GB | 12712530.0 | 02/16/2012 | EP2676284 | 06/07/2017 | FEHLERSTROMSCHUTZSCHALTER |
| 10HEN3170 | NL | 12712530.0 | 02/16/2012 | EP2676284 | 06/07/2017 | FEHLERSTROMSCHUTZSCHALTER |
| 10HEN3170 | US | 13/985064 | 02/16/2012 | 9153952 | 10/06/2015 | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3161 | AT | 11714674.6 | 03/09/2011 | 2548214 | 01/15/2014 | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3161 | DE | 11714674.6 | 03/09/2011 | 502011002053.8 | 01/15/2014 | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3161 | NO | 11714674.6 | 03/09/2011 | 2548214 | 01/15/2014 | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3161 | PL | 11714674.6 | 03/09/2011 | 2548214 | 01/15/2014 | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3161 | US | 13/635783 | 03/09/2011 | 8624694 | 01/07/2014 | FEHLERSTROMSCHUTZSCHALTER |
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| 10VNA3164 | DE | 11773373.3 | 09/13/2011 | 502011004697.9 | 10/15/2014 | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3165 | IN | 2380/DELNP/2013 | 08/04/2011 | | | SCHALTGERAET |
| 10VNA3168 | DE | 112011103890.9 | 11/14/2011 | | | VERBINDUNG VON 2 KUPFERSCHIENEN LOTRECHT |
| 10VNA3169 | AT | A 1806/11 | 12/09/2011 | 512262 | 08/15/2016 | EINSTUECKIGE AUSLÖSEEINHEIT |
| 10VNA3173 | US | 14/008592 | 03/27/2012 | 9136074 | 09/15/2015 | FI B+ neu / Fehlerstromschutzschalter |
| 11HEN977 | AT | A 1832/2011 | 12/14/2011 | | | VOLTAGE DEPENDENT EARTHFAULT DETECTION CIRCUIT WITH G-TYPE PERFORMANCE BY DISCONNECTING THE DETECTION CALL |
| 11VNA906 | US | 14/234667 | 07/26/2012 | | | Adaptive Methode zur Lichtbogenerkennung -. Adaptive methode of electric arc identification Lichtbogenerkennung |
| 11VNA907 | DE | 112012003107.5 | 07/26/2012 | | | Eine Methode zur Lichtbogenerkennung - Methode of arc fault detection |
| 11VNA908 | US | 14/235108 | 07/26/2012 | 9129766 | 09/08/2015 | Unterbrechungsfreie FI-Prüfung - Interruptable FI-testing |
| 11VNA911 | US | 14/237906 | 08/13/2012 | | | FERTIGUNGSVERFAHREN FÜR SCHALTBRÜCKE |
| 11VNA913 | AT | A 1808/11 | 12/09/2011 | | | NEUARTIGE KOPPLUNG ABLEITERMODULE; ZEIGERKOPPLUNG |
| 11VNA914 | AT | A 1807/11 | 12/09/2011 | | | NEUARTIGE KOPPLUNG ABLEITERMODULE; MODULBAUWEISE |
| 11VNA974 | AT | A 1701/11 | 11/16/2011 | | | RUECKHALTEMECHANISMUS |
| 11VNA975 | AT | A 1700/11 | 11/16/2011 | | | VERKLINUNGSSCHUTZ |
| 11VNA975 | RU | 2014124185 | 11/15/2012 | | | VERKLINUNGSSCHUTZ |
| 11VNA990 | AT | A 259/2012 | 02/29/2012 | 512555 | 08/15/2014 | MODULTUER FUER LEISTUNGSSCHALTER |
| 11VNA990 | CZ | 13711303.1 | 02/26/2013 | EP2820729 | 12/23/2015 | MODULTUER FUER LEISTUNGSSCHALTER |

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| 11VNA990 | DE | 13711303.1 | 02/26/2013 | 502013001657.9 | 12/23/2015 | MODULTUER FUER LEISTUNGSSCHALTER |
| 11VNA990 | FR | 13711303.1 | 02/26/2013 | EP2820729 | 12/23/2015 | MODULTUER FUER LEISTUNGSSCHALTER |
| 11VNA990 | GB | 13711303.1 | 02/26/2013 | EP2820729 | 12/23/2015 | MODULTUER FUER LEISTUNGSSCHALTER |
| 11VNA990 | IT | 502016000002246 | 02/26/2013 | EP2820729 | 12/23/2015 | MODULTUER FUER LEISTUNGSSCHALTER |
| 11VNA990 | NL | 13711303.1 | 02/26/2013 | EP2820729 | 12/23/2015 | MODULTUER FUER LEISTUNGSSCHALTER |
| 11VNA990 | PL | 13711303.1 | 02/26/2013 | EP2820729 | 12/23/2015 | MODULTUER FUER LEISTUNGSSCHALTER |
| 12VNA325 | EP | 15790490.5 | 10/26/2015 | | | DIRECT CURRENT ARC BEHAVIOUR INVESTIGATION |
| 12VNA325 | WO | PCT/EP2015/074779 | 10/26/2015 | | | DIRECT CURRENT ARC BEHAVIOUR INVESTIGATION |
| 12VNA800 | EP | 15797318.1 | 11/18/2015 | | | AUSLÖSERBAUGRUPPE FÜR EIN INSTALLATIONSSCHALTGERÄT MIT INTEGRIERTEM MAGNETISCHEM UND THERMISCHEM AUSLÖSER.....linked with 14VNA1335 |
| 12VNA800 | WO | PCT/EP2015/077020 | 11/18/2015 | | | AUSLÖSERBAUGRUPPE FÜR EIN INSTALLATIONSSCHALTGERÄT MIT INTEGRIERTEM MAGNETISCHEM UND THERMISCHEM AUSLÖSER.....linked with 14VNA1335 |
| 13VNA201 | EP | 14809374.3 | 12/04/2014 | | | VERTEILSAMMELSCHIENENKUPFER VON UNTEN EINBRINGEN DURCH ABNEHMBARE BODENPLATTE |
| 13VNA201 | US | 15/104531 | 12/04/2014 | | | VERTEILSAMMELSCHIENENKUPFER VON UNTEN EINBRINGEN DURCH ABNEHMBARE BODENPLATTE |
| 13VNA211 | EP | 14811822.7 | 12/05/2014 | | | SCHWENKEN DER VERTEILSAMMELSCHIENE FÜR VEREINFACHTES EINBRINGEN DER KUPFERSCHIENEN |

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| 13VNA211 | US | 15/104533 | 12/05/2014 | | | SCHWENKEN DER VERTEILSAMMELSCHIENE FÜR VEREINFACHTES EINBRINGEN DER KUPFERSCHIENEN |
| 13VNA668 | EP | 14796533.9 | 11/13/2014 | | | LOCKING DEVICE ONLY IN OFF POSITION |
| 13VNA668 | US | 15/036443 | 11/13/2014 | | | LOCKING DEVICE ONLY IN OFF POSITION |
| 14VNA1335 | EP | 15798409.7 | 11/20/2015 | | | AUSLÖSERBAUGRUPPE FÜR EIN INSTALLATIONSSCHALTGERÄT MIT INTEGRIERTEM MAGNETISCHEM UND THERMISCHEM AUSLÖSER ...linked with 12VNA800 |
| 14VNA1335 | WO | PCT/EP2015/077264 | 11/20/2015 | | | AUSLÖSERBAUGRUPPE FÜR EIN INSTALLATIONSSCHALTGERÄT MIT INTEGRIERTEM MAGNETISCHEM UND THERMISCHEM AUSLÖSER ...linked with 12VNA800 |
| 16HEN633 | GB | 1610901.9 | 06/22/2016 | | | SMART DC HYBRID BREAKER ARCHITECTURE |
| 13VNA1145 | CN | 2015800560148 | 09/04/2015 | | | ARC FLASH DETECTION SYSTEM |
| 12VNA325 | CN | 2015800609614 | 10/26/2015 | | | DIRECT CURRENT ARC BEHAVIOUR INVESTIGATION |
| 12VNA800 | CN | 2015800626268 | 11/18/2015 | | | AUSLÖSERBAUGRUPPE FÜR EIN INSTALLATIONSSCHALTGERÄT MIT INTEGRIERTEM MAGNETISCHEM UND THERMISCHEM AUSLÖSER....linked with 14VNA1335 |
| 14VNA1335 | CN | 2015800737260 | 11/20/2015 | | | AUSLÖSERBAUGRUPPE FÜR EIN INSTALLATIONSSCHALTGERÄT MIT INTEGRIERTEM MAGNETISCHEM UND THERMISCHEM AUSLÖSER ...linked with 12VNA800 |
| 06VNA3128 | PL | 07718501.5 | 06/14/2007 | 2059936 | 10/03/2012 | UNI-DESIGN-AUFSTECKKNOPF |

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| 06VNA3130 | GB | 07710525.2 | 03/21/2007 | EP2020014 | 11/02/2011 | FI MIT VIVD-FUNKTION (SCHALTEINRICHTUNG) |
| 06VNA3130 | IT | 502012902018326 | 03/21/2007 | EP2020014 | 11/02/2011 | FI MIT VIVD-FUNKTION (SCHALTEINRICHTUNG) |
| 08VNA3146 | GB | 09765233.3 | 04/27/2009 | EP2291893 | 02/08/2017 | FEHLERSTROMPEGEL-ZUVERLAESSIGKEIT |
| 08VNA3146 | NL | 09765233.3 | 04/27/2009 | EP2291893 | 02/08/2017 | FEHLERSTROMPEGEL-ZUVERLAESSIGKEIT |
| 08VNA3146 | NO | 09765233.3 | 04/27/2009 | EP2291893 | 02/08/2017 | FEHLERSTROMPEGEL-ZUVERLAESSIGKEIT |
| 08VNA3148 | GB | 09775551.6 | 07/02/2009 | EP2313905 | 04/04/2012 | SWITCHING DEVICE |
| 09VNA3158 | NO | 10720118.8 | 04/28/2010 | EP2438664 | 04/19/2017 | MODULARER FUNKTASTER |
| 10VNA3163 | AT | 11717925.9 | 03/25/2011 | EP2559127 | 04/15/2015 | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3163 | NO | 11717925.9 | 03/25/2011 | EP2559127 | 04/15/2015 | FEHLERSTROMSCHUTZSCHALTER |
| 10VNA3171 | AT | 11811510.4 | 12/06/2011 | EP2649626 | 01/14/2015 | HALVESTER RCCB - ROTARY HANDLE |
| 10VNA3171 | CZ | 11811510.4 | 12/06/2011 | EP2649626 | 01/14/2015 | HALVESTER RCCB - ROTARY HANDLE |
| 10VNA3171 | GB | 11811510.4 | 12/06/2011 | EP2649626 | 01/14/2015 | HALVESTER RCCB - ROTARY HANDLE |
| 10VNA3171 | NL | 11811510.4 | 12/06/2011 | EP2649626 | 01/14/2015 | HALVESTER RCCB - ROTARY HANDLE |
| 10VNA3171 | NO | 11811510.4 | 12/06/2011 | EP2649626 | 01/14/2015 | HALVESTER RCCB - ROTARY HANDLE |
| 10VNA3171 | PL | 11811510.4 | 12/06/2011 | EP2649626 | 01/14/2015 | HALVESTER RCCB - ROTARY HANDLE |
| 10VNA3171 | RO | 11811510.4 | 12/06/2011 | EP2649626 | 01/14/2015 | HALVESTER RCCB - ROTARY HANDLE |
| 10VNA3171 | TR | 11811510.4 | 12/06/2011 | 2015/04048 | 01/14/2015 | HALVESTER RCCB - ROTARY HANDLE |
| 11VNA990 | AT | 13711303.1 | 02/26/2013 | EP2820729 | 12/23/2015 | MODULUER FUER LEISTUNGSSCHALTER |
| 12VNA431 | RU | 2015120617 | 10/31/2013 | | | MODIFIABLE EXTINGUISHING CHAMBER FOR DC - SWITCHING |
| 12VNA510 | GB | 13783568.2 | 10/28/2013 | EP2912734 | 03/01/2017 | "NEUARTIGE ANORDNUNG DER HOLME EINES SCHALTSCHRANKGEHÄUSES" |
| 12VNA510 | IL | 238469 | 10/28/2013 | | | "NEUARTIGE ANORDNUNG DER HOLME EINES SCHALTSCHRANKGEHÄUSES" |
| 12VNA510 | IT | 13783568.2 | 10/28/2013 | EP2912734 | 03/01/2017 | "NEUARTIGE ANORDNUNG DER HOLME EINES SCHALTSCHRANKGEHÄUSES" |

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| 12VNA510 | NL | 13783568.2 | 10/28/2013 | EP2912734 | 03/01/2017 | "NEUARTIGE ANORDNUNG DER HOLME EINES SCHALTSCHRANKGEHÄUSES" |
| 12VNA510 | NO | 13783568.2 | 10/28/2013 | EP2912734 | 03/01/2017 | "NEUARTIGE ANORDNUNG DER HOLME EINES SCHALTSCHRANKGEHÄUSES" |
| 12VNA510 | PL | 13783568.2 | 10/28/2013 | EP2912734 | 03/01/2017 | "NEUARTIGE ANORDNUNG DER HOLME EINES SCHALTSCHRANKGEHÄUSES" |
| 12VNA637 | GB | 13789741.9 | 10/31/2013 | EP2915174 | 04/26/2017 | SPECIAL ARC PLATE FOR DC ARC CHAMBERS |
| 15VNA352DES | ECD | 002724971 | 06/24/2015 | 002724971-0001 | 06/24/2015 | DINHMI |
| 15VNA939 | GB | 1621605.3 | 12/19/2016 | | | BUTTON WHICH CAN GENERATE ELECTRICAL ENERGY FOR POWER UP THE CIRCUIT BREAKER...combined with 15VNA715 & 15VNA938 |
| 16VNA141 | GB | 1701748.4 | 02/02/2017 | | | COMPLIANT 4-BAR MECHANISM FOR CIRCUIT BREAKER ... Combined with 14VNA1465 |
| 16VNA147 | GB | 1701746.8 | 02/02/2017 | | | MULTI-PORT COMPLIANT BISTABLE ARCHES FOR CIRCUIT BREAKER MECHANISMS |
| 12VNA510 | BR | BR112015009239.0 | 10/28/2013 | | | "NEUARTIGE ANORDNUNG DER HOLME EINES SCHALTSCHRANKGEHÄUSES" |
| 14VNA773 | WO | PCT/EP2017/056458 | 03/17/2017 | | | COOLING OPTIMIZATION BY USING CORRUGATED WALLS IN POWER DISTRIBUTION ENCLOSURES |
| 14VNA847 | WO | PCT/EP2017/056748 | 03/22/2017 | | | AUSLÖSER-MCB |
| 15VNA1058 | DE | 102016123958.5 | 12/09/2016 | | | LIGHT GUIDE PANEL. |
| 15VNA1144 | DE | 102017101453.5 | 01/25/2017 | | | MONTAGEKLAMMER UND ACHSSTABILISIERUNG FÜR SCHALTER |
| 15VNA1238 | DE | 102016121835.9 | 11/15/2016 | | | TOTAL ARC-FREE LOW VOLTAGE HYBRID CIRCUIT BREAKER |
| 15VNA136 | DE | 102016124638.7 | 12/16/2016 | | | 2D LOCUS CURVE SHORT CIRCUIT DETECTION ALGORITHM |

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| 15VNA1473 | DE | 102016117006.2 | 09/09/2016 | | | ROBUST LOW VOLTAGE HYBRID CIRCUIT BREAKER |
| 15VNA1473 | WO | PCT/EP2017/0722669 | 09/08/2017 | | | ROBUST LOW VOLTAGE HYBRID CIRCUIT BREAKER |
| 15VNA1474 | DE | 102016117005.4 | 09/09/2016 | | | NOVEL BI-DIRECTIONAL SWITCH FOR LOW VOLTAGE HYBRID CIRCUIT BREAKER |
| 15VNA1474 | WO | PCT/EP2017/0722668 | 09/08/2017 | | | NOVEL BI-DIRECTIONAL SWITCH FOR LOW VOLTAGE HYBRID CIRCUIT BREAKER |
| 15VNA259 | DE | 102016123953.4 | 12/09/2016 | | | ACTIVE ARC-PROTECTION IN LOW VOLTAGE PANANEL FOR INCREASED SAFETY |
| 15VNA363 | DE | 102016124178.4 | 12/13/2016 | | | PRETEST FOR AUTOMATIC RECLOSING DEVICES FOR RCCBS |
| 15VNA401 | DE | 102016116400.3 | 09/01/2016 | | | SEMICONDUCTOR JUNCTION TEMPERATURE SHORT CIRCUIT DETECTION ALGORITHM |
| 15VNA401 | WO | PCT/EP2017/071954 | 09/01/2017 | | | SEMICONDUCTOR JUNCTION TEMPERATURE SHORT CIRCUIT DETECTION ALGORITHM |
| 15VNA474 | DE | 102016105943.9 | 03/31/2016 | | | PORTABLE ARC QUENCHING DEVICE |
| 15VNA474 | WO | PCT/EP2017/057640 | 03/30/2017 | | | PORTABLE ARC QUENCHING DEVICE |
| 15VNA602 | DE | 102016123955.0 | 12/09/2016 | | | UNIVERSAL ELECTRIC FAULT PROTECTION SYSTEM (UNI E-FAPS) |
| 15VNA712 | DE | 102016123954.2 | 12/09/2016 | | | POTENTIAL MEASUREMENT ON OPERATORS DURING MAINTAINANCE FOR L V-SYSTEMS |
| 15VNA922 | DE | 102016117004.6 | 09/09/2016 | | | TURN OFF SNUBBER NETWORK FOR LOW VOLTAGE AC HYBRID CIRCUIT BREAKER. |
| 15VNA922 | WO | PCT/EP2017/072533 | 09/07/2017 | | | TURN OFF SNUBBER NETWORK FOR LOW VOLTAGE AC HYBRID CIRCUIT BREAKER. |

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| 16VNA1102PROV | IN | 201611044086 | 12/23/2016 | | | FLEXIBLE MEMBER BASED MECHANISM FOR MINIATURE CIRCUIT BREAKER APPLICATION ... Combined with 14VNA1300 |
| 16VNA1265 | DE | 102017101451.9 | 01/25/2017 | | | INRUSH CURRENT LIMITING AC HCB FOR USE IN MOTOR SPEED CONTROL APPLICATIONS ... This invention refers to 15VNA457 DE |
| 16VNA1351 | DE | 102017121790.8 | 09/20/2017 | | | SMART MCB - MEHRFACH-MONITORING VIRTUAL STRING PROTECTOR |
| 16VNA1395 | DE | 102017121788.6 | 09/20/2017 | | | COMPLIANT 4-BAR MECHANISM FOR CIRCUIT BREAKER ... Combined with 14VNA1465 |
| 16VNA141PROV | IN | 201611036187 | 10/22/2016 | | | VERBESSERTER SPERRWINKEL EINES TURVERSCHLUSSES ZUR ERHÖHUNG DER BELASTUNGSFAHIGKEIT |
| 16VNA1420 | DE | 102017121787.8 | 09/20/2017 | | | (IMPROVED LOCKING ANGLE OF A DOOR LOCK TO INCREASE THE LOAD CAPACITY (Eng translation)) |
| 16VNA142PROV | IN | 201611043480 | 12/20/2016 | | | TRIPPING MECHANISMS FOR CIRCUIT BREAKERS |
| 16VNA292 | DE | 102016117003.8 | 09/09/2016 | | | BYPASS RELAY STATUS ON-OFF DETECTION METHOD FOR HYBRID CIRCUIT BREAKER |
| 16VNA292 | WO | PCT/EP2017/072667 | 09/08/2017 | | | BYPASS RELAY STATUS ON-OFF DETECTION METHOD FOR HYBRID CIRCUIT BREAKER PORTABLE, SEMICONDUCTOR BASED TEST DEVICE FOR INJECTING ARBITRARY WAVEFORMS AND HIGH FREQUENCY CURRENTS INTO LOW VOLTAGE ELECTRIC INSTALLATIONS PROTECTED BY RESIDUAL AND ARC FAULT CURRENT PROTECTION DEVICES |
| 16VNA613 | DE | 102016121268.7 | 11/07/2016 | | | |

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| 16VNA666 | DE | 102017101452.7 | 01/25/2017 | | | BYPASS RELAY STATUS DETECTION METHOD VIA MILLER CAPACITANCE EFFECT |
| 16VNA881 | DE | 102016120071.9 | 10/21/2016 | | | A NOVEL METHOD TO REDUCE STRAY INDUCTANCES OF THE CURRENT COMMUTATION LOOP IN A HYBRID CIRCUIT BREAKER |
| 16VNA937 | DE | 102016120070.0 | 10/21/2016 | | | NOVEL HIGH EFFICIENT HYBRID CIRCUIT BREAKER |
| 97VNA3061 | DE | 98929114.1 | 06/19/1998 | 59801535.3 | 09/19/2001 | AUSLÖSE-EINRICHTUNG SELEKT. MAGNETAUSLÖSER |
| 97VNA3062 | DE | 98890179.9 | 06/24/1998 | 59812199.4 | 11/03/2004 | EINPHASIGER SCHUTZSCHALTER EINPHASIGER SCHUTZSCHALTER |
| 03VNA3117 | AT | 1769/03 | 11/06/2003 | 413168 | 07/15/2005 | FI MIT HOHER EIGENSCHALTLEISTUNG |
| 03VNA3118 | AT | 1932/03 | 12/03/2003 | 412830 | 05/04/2005 | HAUPTSCHALTER MIT HOHER SELEKTIVITÄT BRANDSCHUTZSCHALTER |
| 04VNA3120 | AT | 2082/04 | 12/10/2004 | 500884 | 04/15/2006 | HAUPTSCHALTGERÄT FÜR DEN BACK-UP- SCHUTZ |
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