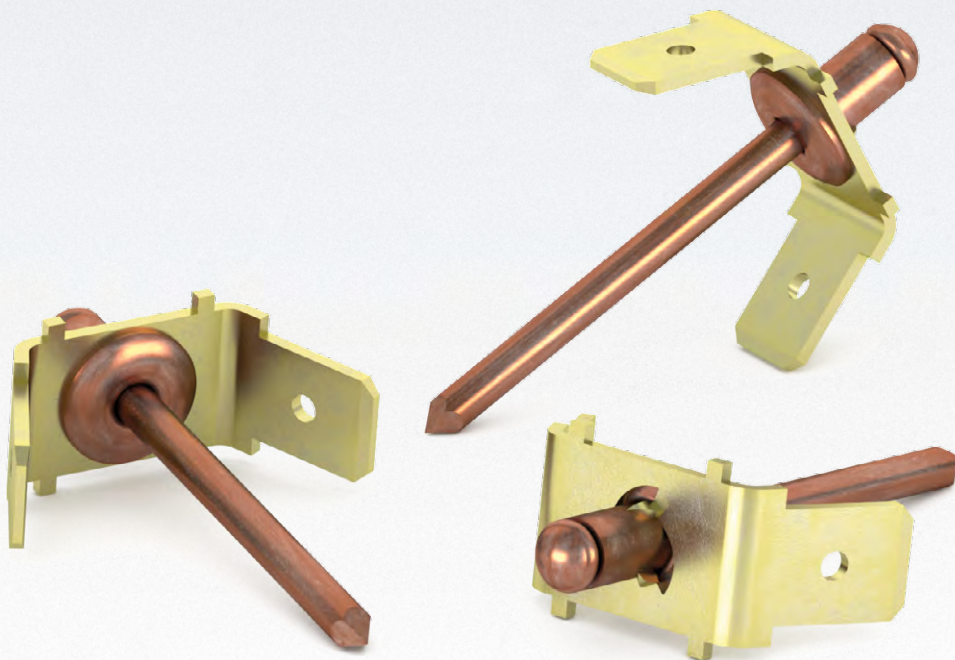


Fastening Technology / Blind Rivets

TIFAS[®] Earth Tab Blind Rivets



Copyright

All texts, images, technical documents and other information contained in this catalogue are subject to copyright held by Titgemeyer GmbH & Co. KG. Any reproduction or disclosure, whether as a copy or other form of duplication or use, is expressly prohibited without the prior consent of Titgemeyer GmbH & Co. KG.

Registered trademarks

The trademarks BÖRTI, GETO, GETO therm, GETOVAN, GTO, LockBolt, MEGA PORT, plasti van, PLYFIX, POLYSTIC, press-ti, RIEKO, RIV-TI, ROLL-TO, TIBOLT, TIBULB, TIFAS, TILA, TIOS and Titgemeyer are registered trademarks and the intellectual property of Titgemeyer GmbH & Co. KG.

Term of Delivery and Payment

All deliveries are carried out in compliance with our Terms of Delivery and Payment.

Limitation of liability

All technical data, performance descriptions, drawings, illustrations, measurements, weights or any other performance data, recommendations and guidelines contained in this catalogue and relating to the installation of parts that we supply are only binding if so expressly agreed. Moreover, the user is obliged at all times to check each individual use and decide whether the components that we supply can be used as needed.

We accept liability in the case of wilful intent, gross negligence and infringement of cardinal contractual duties as well as for errors in respect of express or implied representations. Notwithstanding this, any claims for compensation not explicitly agreed to in these terms and conditions are hereby excluded in the case of customers who are not consumers and, in the case of such customers, who are not consumers, at all events limited to the damage foreseeable at the time of concluding the contract as well as to the value of the delivered consignment. To the extent that our liability is excluded or limited, this shall extend accordingly to the personal liability of employees, legal representatives and vicarious agents. In all instances of gross negligence committed by vicarious agents, we shall solely be liable to customers, who are not consumers, to compensate for typically foreseeable damage. The statutory regulation governing the burden of proof shall remain unaffected. The aforementioned limitation of liability shall not apply to claims resulting from product liability, for damage resulting from injury to life, limb or health, or for damage to privately used property.

All technical specifications contained in this brochure are approximate and no guarantee is given as to their accuracy. Designs are subject to change.

Contents

			Page
TIFAS® earth tab blind rivets	Overview		4
	With one tab	Copper / copper-plated steel / brass	6
	With two tabs	Copper / copper-plated steel / brass	7
	With four tabs	Copper / copper-plated steel / brass	8
	Dome head	Aluminium / steel	9
	Dome head	Steel/steel	10
	Large dome head	Steel/steel	11
	VDE Test Report		12

TIFAS® earth tab blind rivets

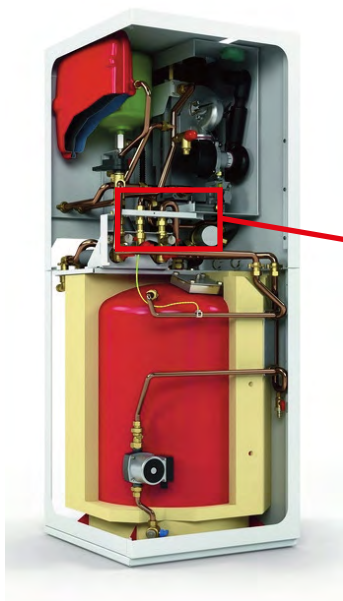


Photo: August Brötje GmbH, Rastede

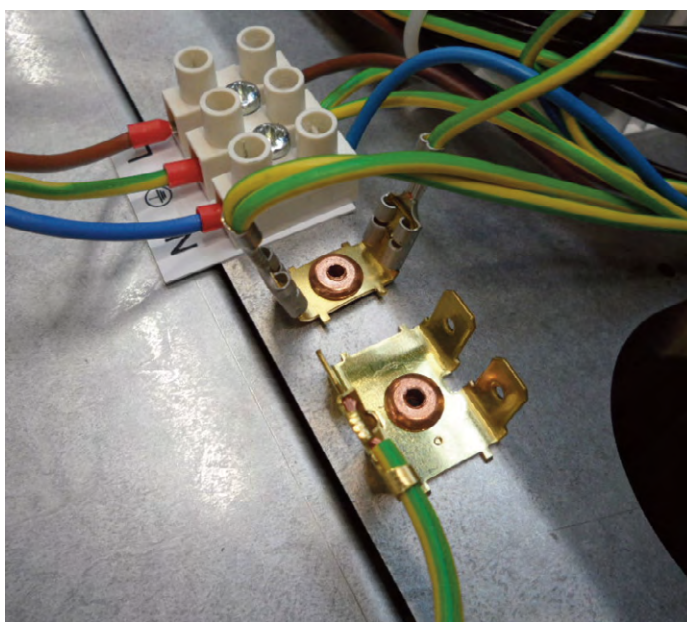


Photo: August Brötje GmbH, Rastede

Example: 2 and 4-pole earth tab blind rivet

Safety requirements for electrical appliances

Electrical installations are fitted in numerous household appliances, such as heating appliances. These are subject to regulation under the household appliance standards, irrespective of whether they are used in residential, commercial or industrial applications. DIN EN 60335-1 regulates the safety of electrical appliances and machinery that are operated in the so-called household environment and where the rated voltage of single-phase appliances and machinery does not exceed 250 V. TIFAS® earth tab blind rivets are available with 1, 2 or 4 earthing conductors in compliance with IEC 760. TIFAS® earth tab blind rivets have also been tested to VDE standards.

With safe installation of earthing connectors in mind

TIFAS® earth tab blind rivets have been specially engineered to enable every type of earthing connector to be quickly and safely installed in electrical appliances. They are supplied with standards-compliant, integrated spade connectors to ensure that the appliance or machine is properly earthed. Just like any other rivet, TIFAS® earth tab blind rivets insert into pre-drilled holes on the substrate and are permanently fastened to the component with the aid of a suitable rivet installation tool. During installation, three integrated brass tabs are pressed into the paneling to provide for good electrical conductivity.

Benefits at a glance

- Quick and secure installation
- Permanent fastener guards against unauthorised removal.
- Standards-compliant spade connector
- Three tabs provide good electrical connection
- Various designs available: 1, 2 or 4-pole
- Optionally available with additional surface coating (tin plating)
- VDE-tested
- Up to 60% cost savings compared to screws or welding (fewer components and faster installation)

Applications

- Household appliances
- Transport technology
- Farm machinery
- General industry

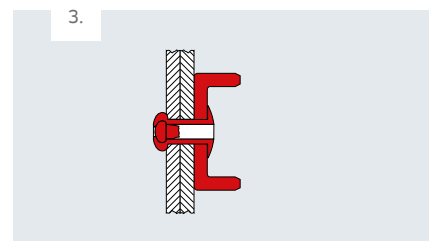
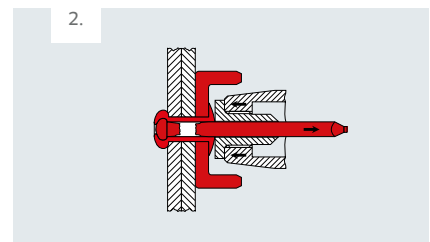
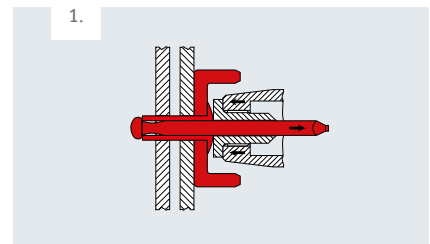



Photo: August Brötje GmbH, Rastede

TIFAS® earth tab blind rivets

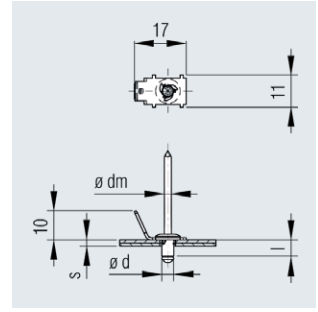
With one tab

Material

 Sleeve
Copper

 Mandrel
Steel,
copper-plated

 Tab
Brass



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Mandrel \varnothing dm nom. [mm]	Tabs Qty.	Tab width Qty.	Article No.
5.2	5.15 - 5.20	0.6 - 2.0	2.3	1	6.3	424 910 000

Please note: Also available with tin plating (DIN 50965)


Other designs available on request.

TIFAS® earth tab blind rivets

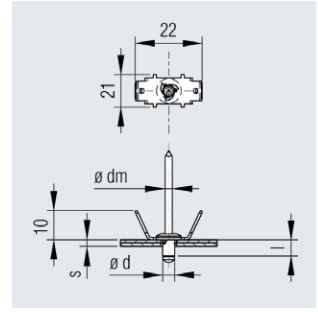
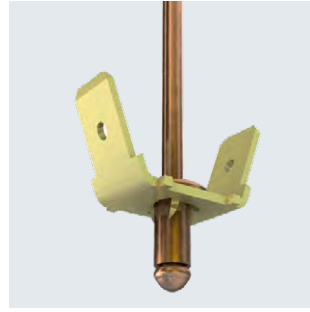
With two tabs

Material

 Sleeve
Copper

 Mandrel
Steel,
copper-plated

 Tab
Brass



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Mandrel \varnothing dm nom. [mm]	Tabs Qty.	Tab width Qty.	Article No.
5.2	5.15 - 5.20	0.6 - 2.0	2.3	2	6.3	424 911 000

Please note: Also available with tin plating (DIN 50965)


Other designs available on request.

TIFAS® earth tab blind rivets

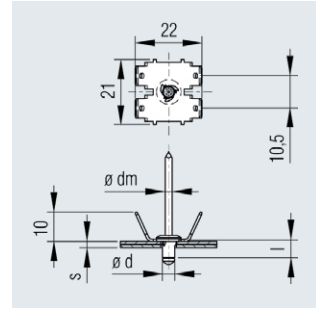
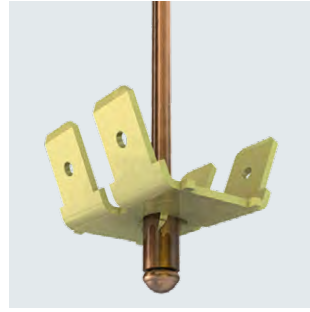
With four tabs

Material

 Sleeve
Copper

 Mandrel
Steel,
copper-plated

 Tab
Brass



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Mandrel \varnothing dm nom. [mm]	Tabs Qty.	Tab width Qty.	Article No.
5.2	5.15 - 5.20	0.6 - 2.0	2.3	4	6.3	424 912 000

Please note: Also available with tin plating (DIN 50965)

Other designs available on request.

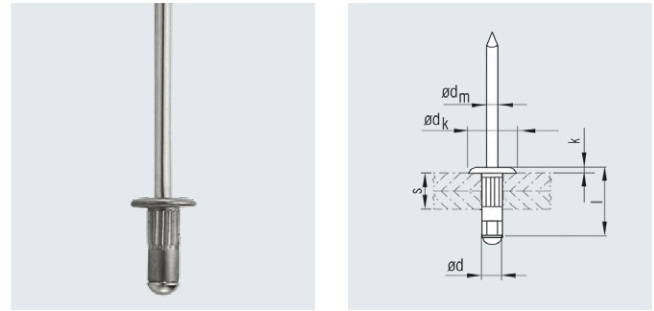
TIFAS® earth tab blind rivets

Dome head

Material

Sleeve
Aluminium AlMg 2.0/2.5

Mandrel
Steel,
galvanised



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve l +0.4 / -0.2 [mm]	Blind rivet head		Mandrel \varnothing dm nom. [mm]	Nominal strength at break*		Article No.
				\varnothing dk ±0.3 [mm]	Height k ±0.1 [mm]		Shear N	Tensile N	
4	4.1 - 4.2	1.2 - 6.4	9.5	7.9	1.2	2.1	980	1300	429 131 900

* Strengths at break relate to rivet failure.

Other designs available on request.

TIFAS® earth tab blind rivets

Dome head

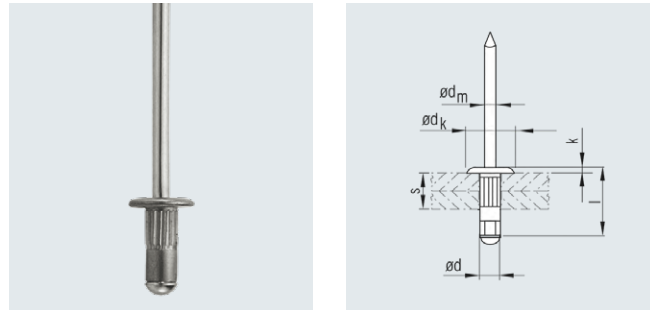
Material

Sleeve

Steel, galvanised,
passivated

Mandrel

Steel, galvanised



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve l +0.4 / -0.2 [mm]	Blind rivet head \varnothing dk ± 0.3 [mm]	Height k ± 0.3 [mm]	Mandrel \varnothing dm nom. [mm]	Nominal strength at break*		Article No.
							Shear N	Tensile N	
4	4.2 - 4.3	1.4 - 5.0	11.0	8.1	1.2	2.7	1470	2300	421 029 900

* Strengths at break relate to rivet failure.

Other designs available on request.

TIFAS® earth tab blind rivets

Large dome head

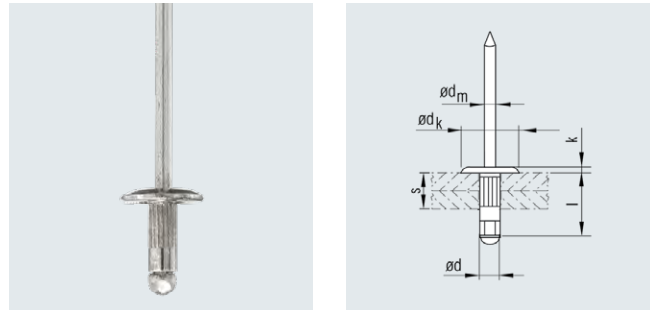
Material

Sleeve

Steel, galvanised,
passivated

Mandrel

Steel, galvanised



Nominal \varnothing d [mm]	Bore \varnothing [mm]	Grip range s [mm]	Blind sleeve l ±0.5 [mm]	Blind rivet head		Mandrel \varnothing dm nom. [mm]	Nominal strength at break*		Article No.
				\varnothing dk ±0.3 [mm]	Height k ±0.2 [mm]		Shear N	Tensile N	
5	5.1 - 5.2	3.2 - 4.8	9.3	14	1.8	3	2600	3500	306 923 900

* Strengths at break relate to rivet failure.

Other designs available on request.



VDE Prüf- und Zertifizierungsinstitut GmbH /
VDE Testing and Certification Institute

VDE

VDE Prüfbericht / VDE Test Report

Prüfbericht Nr. Report No.	210817-CC3-1
VDE-Aktenzeichen VDE File No.	1434600-9999-0001/210817
Ausstellungsdatum Date of issue.....	2015-06-12
Labor Laboratory	VDE Prüf- und Zertifizierungsinstitut GmbH VDE Testing and Certification Institute
Adresse Address	Merianstrasse 28 63069 Offenbach/Main; Germany
Prüfört / Adresse Testing location/ address	VDE Prüf- und Zertifizierungsinstitut GmbH VDE Testing and Certification Institute Merianstrasse 28 63069 Offenbach/Main; Germany
Auftraggeber Applicant's name	Ges. für Befestigungstechnik; Gebr. Titgemeyer GmbH & Co. KG
Auftraggeber Adresse Applicant's address	Hannoversche Strasse 97; 49033 Osnabrück; Germany
Angewandte Norm(en) Applied standard(s)	DIN EN 61210 (VDE 0613 Teil 6):2011-06; EN 61210:2010 DIN EN 60335-1 (VDE 0700-1):2012-10; EN 60335-1:2012
Art des Prüflings Test item description	---
Warenzeichen Trade Mark	---
Typenbezeichnungen(en) Type reference(s)	Masseblindniete unverzinkt und verzinkt Ground blind rivet without and with tin-plated
Bemessungsdaten Ratings	---

Zustand des Prüfmusters Test sample condition	<input checked="" type="checkbox"/> Unbeschädigtes Prüfmuster Non-damaged sample
	Bemerkung / Remark:
Wareneingang Prüfmuster Sample entry date	2015-04-08
Datum der Durchführung der Prüfungen Date (s) of performance of tests.....	2015-06-08...2015-06-12

Prüfbericht Nr. Report No.:	210817-CC3-1	Seite Page	1	von of	8
Haftungsausschluss / Disclaimer:					
<p>Dieser Prüfbericht enthält das Ergebnis einer einmaligen Untersuchung an dem zur Prüfung vorgelegten Erzeugnis. Ein Muster dieses Erzeugnisses wurde geprüft, um die Übereinstimmung mit den nachfolgend aufgeführten Normen bzw. Abschnitten von Normen festzustellen. Der Prüfbericht berechtigt Sie nicht zur Benutzung eines Zertifizierungszeichens des VDE und berücksichtigt ausschließlich die Anforderungen der unten genannten Regelwerke. Wenn gegenüber Dritten auf diesen Prüfbericht Bezug genommen wird, muss dieser Prüfbericht in voller Länge an gleicher Stelle verfügbar gemacht werden.</p> <p><i>This test report contains the result of a singular investigation carried out on the product submitted. A sample of this product was tested to found the accordance with the thereafter listed standards or clauses of standards resp. The test report does not entitle for the use of a VDE Certification Mark and considers solely the requirements of the specifications mentioned below. Whenever reference is made to this test report towards third party, this test report shall be made available on the very spot in full length.</i></p>					



VDE Prüf- und Zertifizierungsinstitut GmbH /
VDE Testing and Certification Institute

VDE

Geprüft und ausgestellt von: <i>Tested by</i>		
Name / Name, Unterschrift / Signature	Berthold Reinholz (Autorisierung des Prüfberichtes/ Authorization of test report)	
Funktion / Function	Prüfingenieur / Testing engineer	
Überprüft von / Verified by		
Name / Name, Unterschrift / Signature	Sven Lebert	
Funktion / Function	Reviewer	

Fertigungsstätten <i>Factory(ies)</i>	- ---
--	----------

Mögliche Prüfergebnisse <i>Possible test case verdicts:</i>	
Prüfung nicht anwendbar <i>Test case does not apply to the test object :</i>	N/A
Prüfung erfüllt (positiv) <i>Test object does meet the requirement..... :</i>	P (Pass)
Prüfung nicht erfüllt (negativ) <i>Test object does not meet the requirement :</i>	F (Fail)

Abschließendes Prüfergebnis Final Verdict:	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
Bemerkung / Remark	<p>Prüfung wurde durchgeführt mit Aluminiumblech nach DIN EN 485 Teil 1 bis Teil 4, Werkstoff EN AW-ALMg3 nach DIN EN 573 - 3, Materialdicke t = 2,0 mm.</p> <p><i>Test was performed with aluminum sheet according to DIN EN 485 part 1 to part 4, Material EN AW-ALMg3 according to DIN EN 573 - 3, Material thickness t = 2,0 mm.</i></p>	

Prüfbericht Nr. <i>Report No.:</i>	210817-CC3-1	Seite <i>Page</i>	2	von <i>of</i>	8
---------------------------------------	--------------	----------------------	---	------------------	---



VDE Prüf- und Zertifizierungsinstitut GmbH /
VDE Testing and Certification Institute



Umgebungsbedingungen (falls relevant) <i>Environmental conditions (if applicable)</i>	Umgebungstemperatur <i>Ambient temperature</i>	Atmosphärischer Druck <i>Atmospheric pressure</i>	Relative Luftfeuchtigkeit <i>Relative humidity</i>
Nennwert / <i>Rated values</i>	15-35 °C	860-1060 hPa	30-60 %
Überprüfter Wert / <i>Verified values</i>		<i>Bereich bestätigt von: Deutscher Wetterdienst Range confirmed by: Deutscher Wetterdienst (Meteorological service)</i>	

Prüfbericht Nr. <i>Report No.:</i>	210817-CC3-1	Seite <i>Page</i>	3	von <i>of</i>	8
---------------------------------------	--------------	----------------------	---	------------------	---



Durchgeführte Prüfungen nach Norm DIN EN 61210 / Performed tests according to standard DIN EN 61210							
Abschnitt Clause	Prüfanforderungen / Requirement + Test			Ergebnis – Anmerkung Result – Remark		Beurteilung Verdict	
6	CONSTRUCTIONAL REQUIREMENTS						
6.3	Dimensions			See appended table		P	
	TABLE: dimension measurements						
Dimensions of male tabs Maße von Flachsteckern							
Nominal tab size.....: Standard Stecker Größe.....:		6,3 x 0,8 mm			Kind of detent.....: Art der Verrastung.....:		hole
	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	
Required minimum ...: Gefordertes Min.....:	0,5	7,8	0,77	6,20	4,3	1,6	
Required maximum ..: Gefordertes Max.....:	1,0	-	0,84	6,40	4,7	2,0	
Measured value.....: Gemessener Wert.....:	1,0	8,0	0,84	6,4	4,6	1,96	
	J (°)	M (mm)	N (mm)	P (mm)	Q (mm)	(mm)	
Required minimum ...: Gefordertes Min.....:	8°	-	-	-	-	-	
Required maximum ..: Gefordertes Max.....:	12°	-	-	-	-	-	
Measured value.....: Gemessener Wert.....:	10°	-	-	-	-	-	
8.2	Mechanical overload force Mechanische Überlast					-	
	Retention force – push (N).....: Mindest Haltekraft - Stecken (N).....:			96 N		-	
	Retention force – pull (N).....: Mindest Haltekraft - Ziehen (N).....:			88 N		-	
	No damage Keine Beschädigung					P	
Ergänzende Information / Supplementary information:							

Prüfbericht Nr. Report No.:	210817-CC3-1	Seite Page	4	von of	8
--------------------------------	--------------	---------------	---	-----------	---



Durchgeführte Prüfungen nach Norm DIN EN 60335-1 / Performed tests according to standard DIN EN 60335-1			
Abschnitt Clause	Prüfanforderungen / Requirement + Test	Ergebnis – Anmerkung Result – Remark	Beurteilung Verdict
27.5	Low resistance of connection between earthing terminal and earthed metal parts		P
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided the clearances of basic insulation are based on the rated voltage of the appliance		P
	Resistance not exceeding 0,1 Ω at the specified low-resistance test (Ω)..... :	<p><u>Type: 424910000</u> without tin- plated</p> <p>1) 0,01 Ω 2) 0,01 Ω 3) 0,01 Ω</p> <p><u>Type: 424911000</u> without tin- plated</p> <p>1) 0,01 Ω 2) 0,01 Ω 3) 0,01 Ω</p> <p><u>Type: 424912000</u> without tin- plated</p> <p>1) 0,01 Ω 2) 0,01 Ω 3) 0,01 Ω</p> <p><u>Type: 424910001</u> with tin- plated</p> <p>1) 0,01 Ω 2) 0,01 Ω 3) 0,01 Ω</p> <p><u>Type: 424911001</u> with tin- plated</p> <p>1) 0,01 Ω 2) 0,01 Ω 3) 0,01 Ω</p> <p><u>Type: 424912001</u> with tin- plated</p> <p>1) 0,01 Ω 2) 0,01 Ω 3) 0,01 Ω</p>	P
Ergänzende Information / Supplementary information:			

Prüfbericht Nr. Report No.:	210817-CC3-1	Seite Page	5	von of	8
--------------------------------	--------------	---------------	---	-----------	---



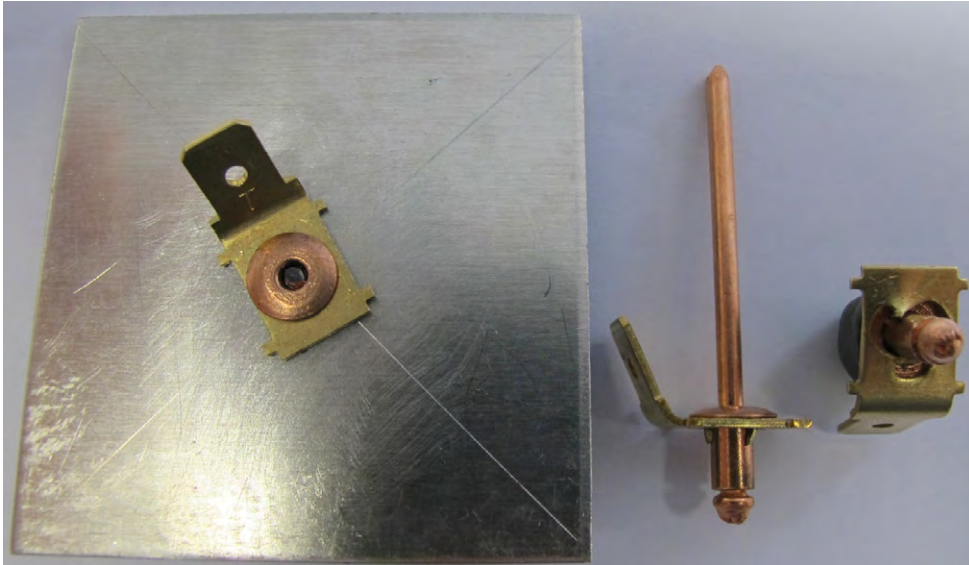
VDE Prüf- und Zertifizierungsinstitut GmbH /
VDE Testing and Certification Institute

VDE

Fotodokumentation / Photo documentation:

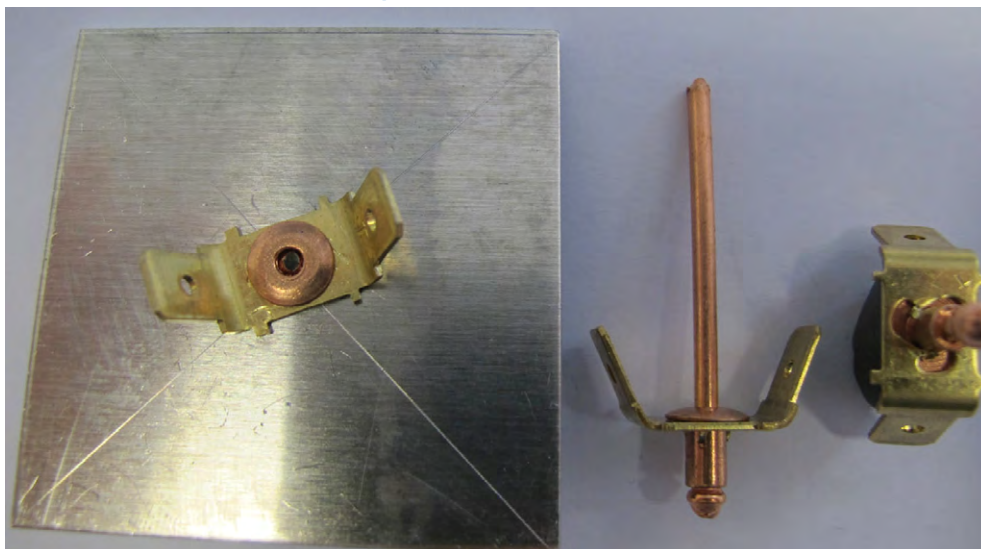
Typ/ Type: 424910000

**ohne Verzinnung und mit einem Flachstecker
without tin-plated and with one flat male tab**



Typ/ Type: 424911000

**ohne Verzinnung und mit zwei Flachstecker
without tin-plated and with two flat male tabs**



Prüfbericht Nr. 210817-CC3-1
Report No.:

Seite
Page

6

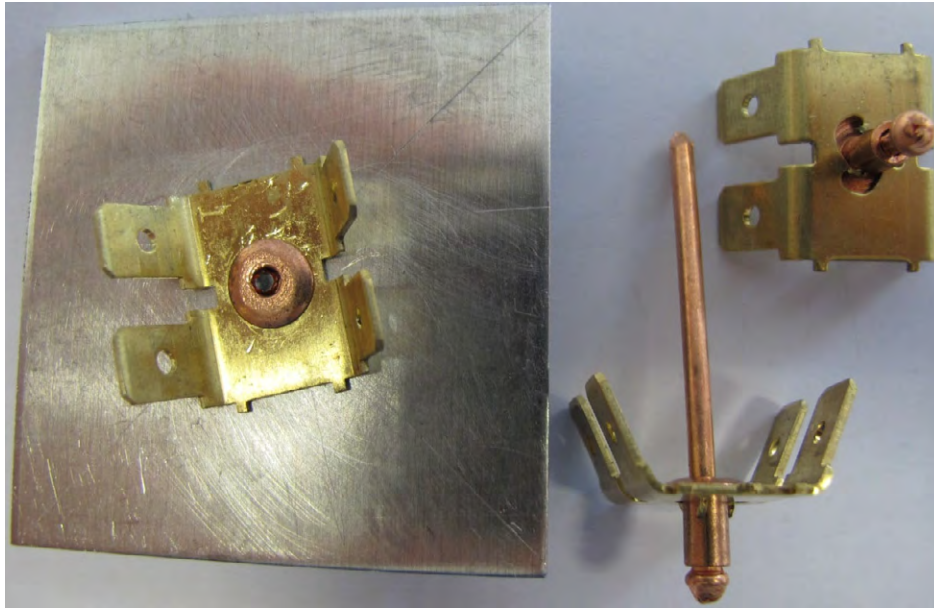
von
of

8



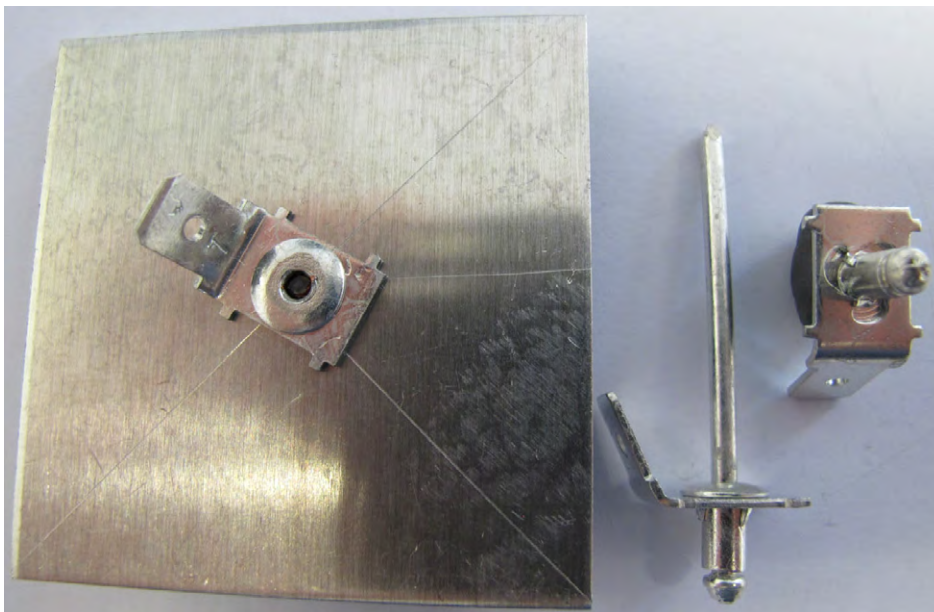
Typ/ Type: 424912000

**ohne Verzinnung und mit vier Flachstecker
without tin-plated and with four flat male tab**



Typ/ Type: 424910001

**mit Verzinnung und mit einem Flachstecker
with tin-plated and with one flat male tab**



Prüfbericht Nr. Report No.:	210817-CC3-1	Seite Page	7	von of	8
--------------------------------	--------------	---------------	---	-----------	---

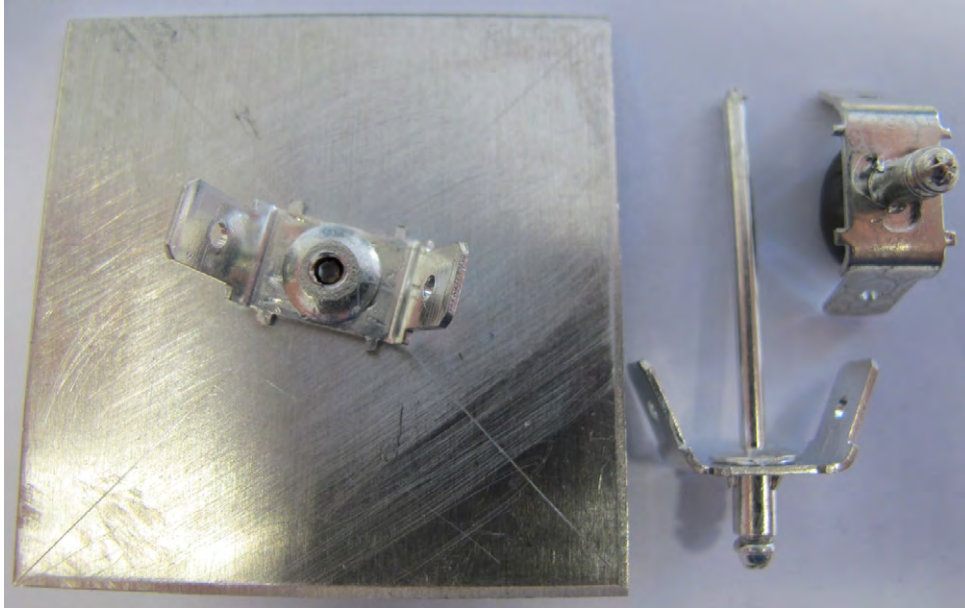


VDE Prüf- und Zertifizierungsinstitut GmbH /
VDE Testing and Certification Institute

VDE

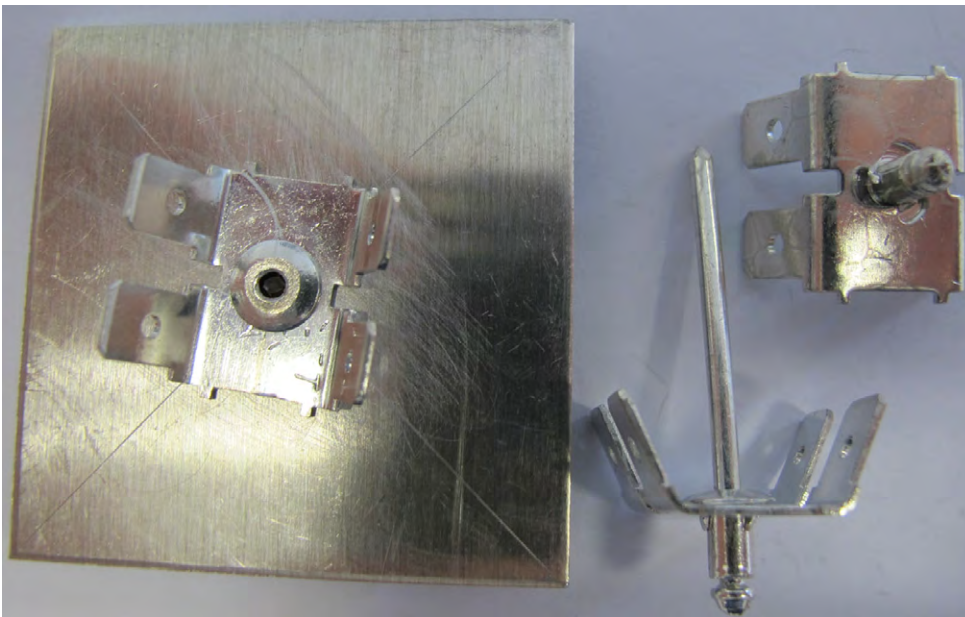
Typ/ Type: 424911001

**mit Verzinnung und mit zwei Flachstecker
with tin-plated and with two flat male tab**



Typ/ Type: 424912001

**mit Verzinnung und mit vier Flachstecker
with tin-plated and with four flat male tab**



Prüfbericht Nr. 210817-CC3-1
Report No.:

Seite Page	8	von of	8
---------------	---	-----------	---

About us

The Titgemeyer Group is a leading company for fastening technology and vehicle components at 15 locations in Europe.

The traditional company develops, manufactures and sells more than 30,000 fastening elements, tools and vehicle components – in series production and on request.

Headquarters

Titgemeyer GmbH & Co. KG
Hannoversche Straße 97
49084 Osnabrück / DE

PO Box 4320
49033 Osnabrück / DE

T +49 541 5822-0
E info@titgemeyer.com
W titgemeyer.com



Sales locations

Titgemeyer Austria GmbH
Brunner Straße 77 - 79
1230 Wien / AT

T +43 (0) 1/6 67 90 40 - 0
E sales@titgemeyer.com
W titgemeyer.at

Titgemeyer CZ spol. s r. o.
U Vodárny 1506
397 01 Písek / CZ

T +420 382 2067 - 25
E sales@titgemeyer.com
W titgemeyercz.cz

Titgemeyer Polska sp. z o.o.
Cypriana Bazylika 17
98-200 Sieradz / PL

T +48 (0) 43 828 20 - 15
E sales@titgemeyer.com
W titgemeyer.pl

Titgemeyer Skandinavien A/S
Lunikvej 32
2670 Greve / DK

T +45 4360 0966
E info@titgemeyer.dk
W titgemeyer.dk

Titgemeyer Skandinavien A/S
Box 3218
550 03 Jönköping / SE

T +46 36 128350
E info@titgemeyer.se
W titgemeyer.se

Titgemeyer Skandinavien A/S
Korkeakoulunkatu 7
33720 Tampere / FI

T +358 (0) 400 448 401
E info@titgemeyer.fi
W titgemeyer.fi

Titgemeyer Turkey Baglanti Teknolojileri San. ve Tic. A.S.
Barbaros Mah. Is Merkezi No.1
Kat: 8 D.58
34746 Atasehir, Istanbul / TUR

T +90 (0) 21 66 88 20 - 27
E sales@titgemeyer.com.tr
W titgemeyer.com.tr

Titgemeyer (UK) Limited
A2 Link One Industrial Park
George Henry Road
DY4 7BU Tipton / UK

T +44 (0) 1 21 5 57 97 - 77
E sales@titgemeyer.co.uk
W titgemeyer.co.uk

Production sites

Cirteq Limited
'Hayfield' Colne Road,
Glusburn, Keighley,
West Yorkshire, BD20 8QP

T +44 1535 633333
E sales@cirteq.com
W cirteq.com

Titgemeyer Tools & Automation spol s.r.o.
U Vodárny 1506
397 01 Písek / CZ

T +42 382 2067 - 11
E info@rivetec.cz
W rivetec.cz

RIEKO GmbH
Robert-Bosch-Straße 9
72124 Pliezhausen / DE

T +49 7127 9744 - 0
E info@rieko-web.com
W rieko-web.com

Titgemeyer GmbH & Co. KG Werk Lotte
Daimlerstraße 13 - 15
49504 Lotte / DE

T +49 5404 9666 - 0
E info@titgemeyer.com
W titgemeyer.com

TS Gesellschaft für Transport- und Sicherungssysteme mbH
Haßlinghauser Straße 156
58285 Gevelsberg / DE

T +49 541 5822 - 900
E ts@cargocontrol.de
W wir-sind-ladungssicherung.de