

Part Name 0.64 Get Female in-line terminal (Sn) Cust. Part Number _____

Shown on Drawing Number C-3-1419158-1 Org. Part Number 1438299-2

Engineering Change Level F2 Dated 9/07/2015

Additional Engineering Changes _____ Dated _____

Safety and/or Government Regulation ☐ Yes ☒ No Purchase Order No. _____ Weight (kg) 0.0005

Checking Aid Number _____ Checking Aid Engineering Change Level _____ Dated _____

ORGANIZATION MANUFACTURING INFORMATION

CUSTOMER SUBMITTAL INFORMATION

Tyco Electronics Belgium EC bvba /370 654 167

Organization Name and Supplier Code

Nursan

Customer Name/Division

Siemenslaan 14

Street Address

Buyer/Buyer Code

Oostkamp **8020** **Belgium**

City Region Postal Code Country

Application

MATERIALS REPORTING

Has customer-required Substance of Concern information been reported ☐ Yes ☒ No ☐ n/a

Submitted by IMDS or other customer format 5470141 / 14

Are polymeric parts identified with appropriate ISO marking codes? ☒ Yes ☐ No ☐ n/a

REASON FOR SUBMISSION (Check at least one)

- | | |
|---|--|
| ☐ Initial submission | ☐ Change to Optional Construction or Material |
| ☐ Engineering Change(s) | ☐ Sub-Supplier or Material Source Change |
| ☐ Tooling: Transfer, Replacement, Refurbishment, or additional | ☐ Change in Part Processing |
| ☐ Correction of Discrepancy | ☐ Parts Produced at Additional Location |
| ☐ Tooling Inactive > than 1 year | ☒ Other - please specify |
| | <u>see explanation</u> |

REQUESTED SUBMISSION LEVEL (Check one)

- ☐ Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
- ☒ Level 2 - Warrant with product samples and limited supporting data submitted to customer.
- ☐ Level 3 - Warrant with product samples and complete supporting data submitted to customer.
- ☐ Level 4 - Warrant and other requirements as defined by customer.
- ☐ Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.

SUBMISSION RESULTS

The results for ☒ dimensional measurement ☐ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all design record requirements: ☒ Yes ☐ No (If "No" - Explanation Required)

Mold / Cavity / Production Process 2 Cavity Stamping Die

DECLARATION

I affirm that the samples represented by this warrant are representative of our parts, which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of 380.000 / 8 hours. I also certify that documented evidence of such compliance is on file and is available for review. I have noted any deviations from this declaration below.

EXPLANATION/COMMENTS PCN P-15-011385: new capacity tool 11-1776089

Is each Customer Tool properly tagged and numbered? ☐ Yes ☐ No

Organization Authorized Signature _____ Date 13/11/2015

Print Name Patrick Van de Voorde Phone No. 0032 50 83 2526 Fax 0032 50 83 2450

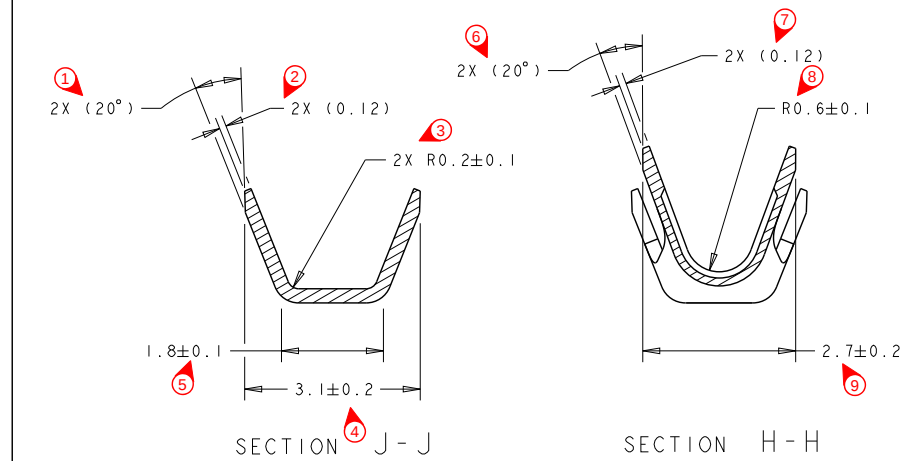
Title QE Email patrick.van_de_voorde@TE.com

FOR CUSTOMER USE ONLY (IF APPLICABLE)

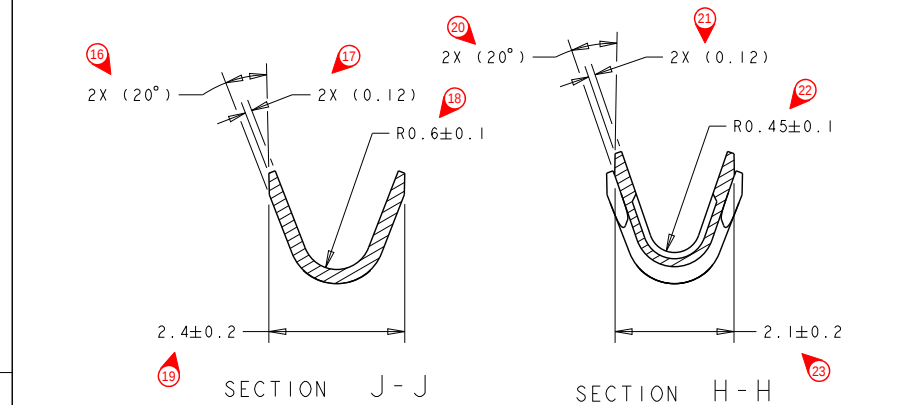
PPAP Warrant Disposition : ☐ Approved ☐ Rejected ☐ Other _____

Customer Signature _____ Date _____

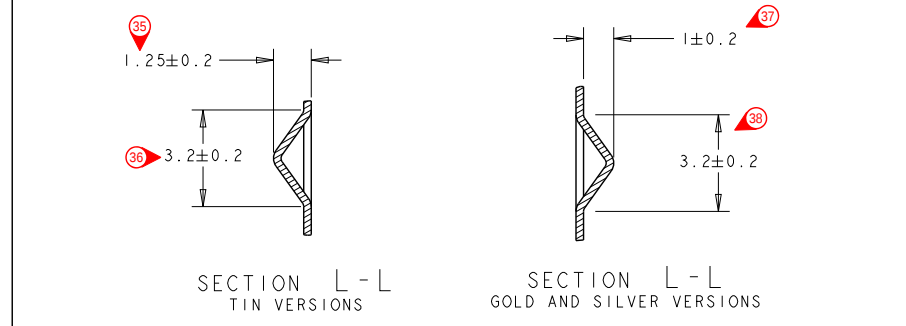
Print Name _____ Customer Tracking Number (optional) _____



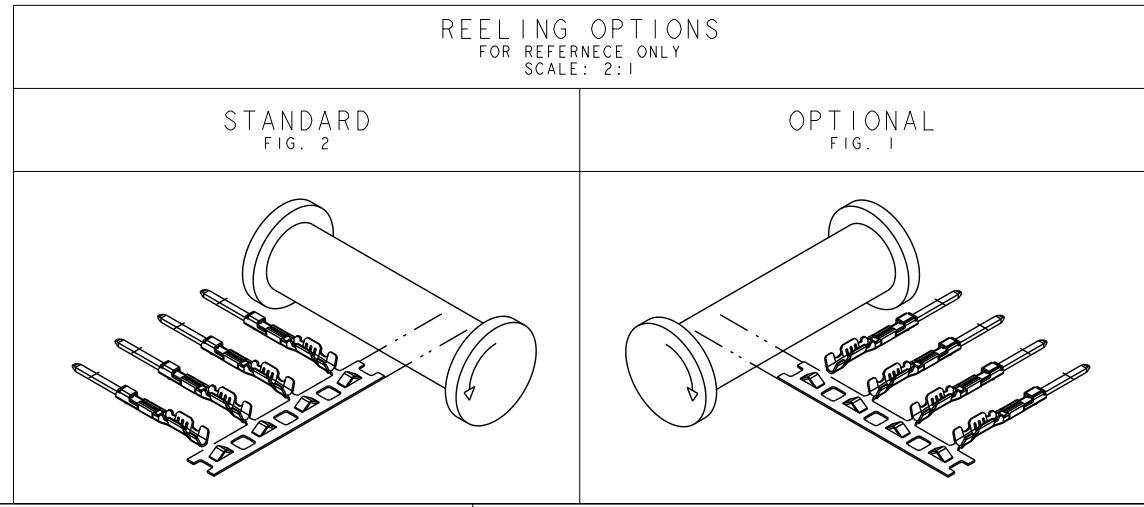
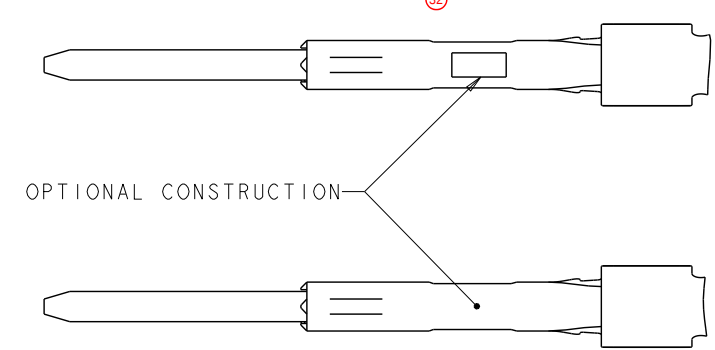
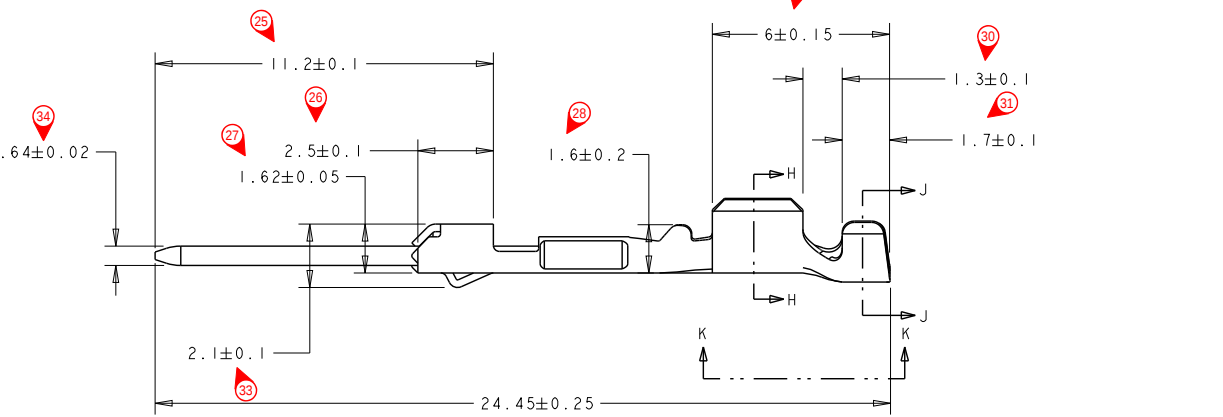
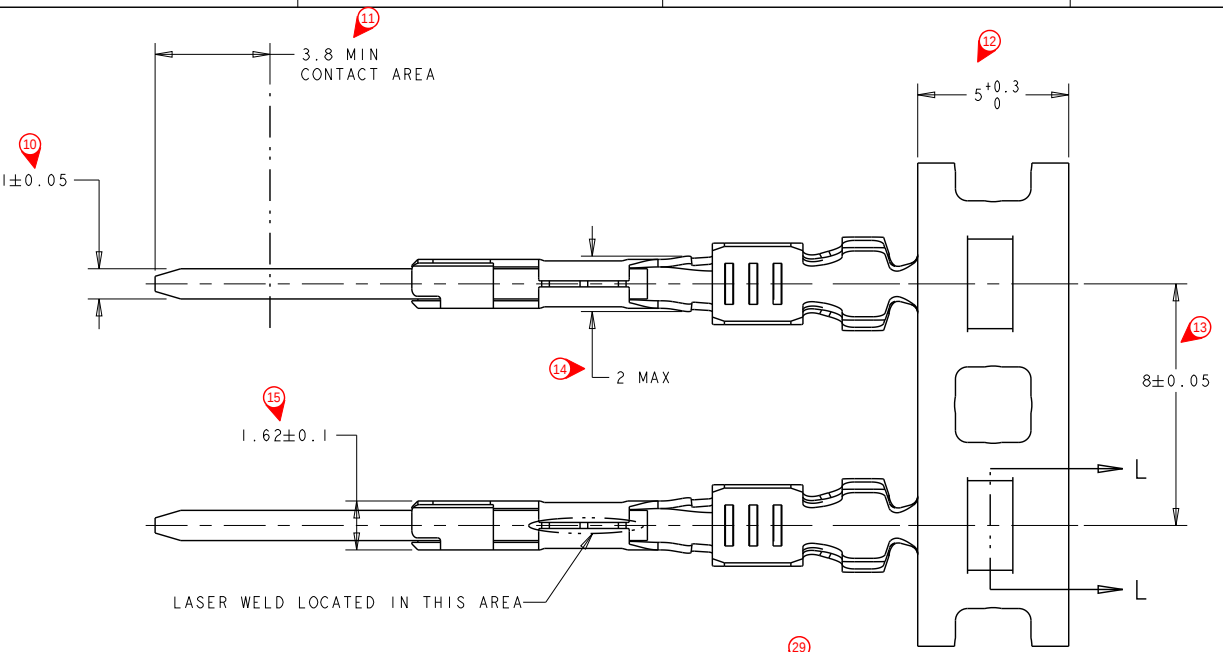
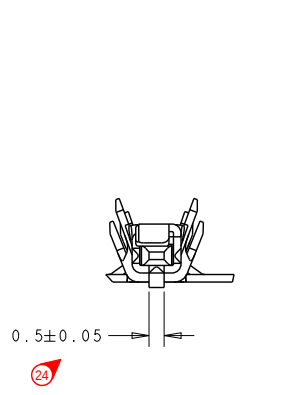
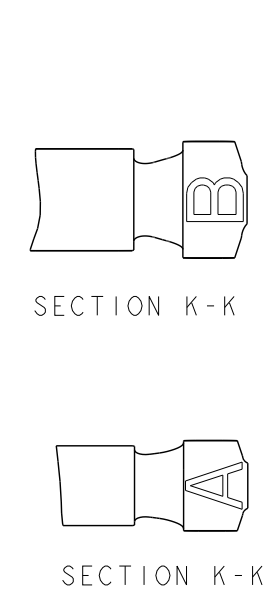
CRIMP B
WIRE CRIMP AREAS



CRIMP A
WIRE CRIMP AREAS



1-1438299-1	B	0.50/0.75	FIG. 1	SILVER
1-1438299-0	A	0.22/0.35	FIG. 1	SILVER
1438299-8	B	0.50/0.75	FIG. 2	SILVER
1438299-7	A	0.22/0.35	FIG. 2	SILVER
1438299-4	B	0.50/0.75	FIG. 1	TIN
1438299-3	B	0.50/0.75	FIG. 1	GOLD
1438299-2	A	0.22/0.35	FIG. 1	TIN
1438299-1	A	0.22/0.35	FIG. 1	GOLD
2-1419158-5	B	0.50/0.75	FIG. 2	TIN
2-1419158-3	B	0.50/0.75	FIG. 2	GOLD
1-1419158-6	A	0.22/0.35	FIG. 2	TIN
3-1419158-1	A	0.22/0.35	FIG. 2	GOLD
PART NO	WIRE CRIMP CODING	CONDUCTOR WIRE SIZE	REELING	PLATING SPEC.



REVISIONS				
#	LYR	DESCRIPTION	DATE	OWN APVD
F1		REVISED PER ECO-11-005030	11MAR2011	RK HMR
F2		REVISED PER ECO-15-010152	09JUL2015	DD WW

- MATERIAL:
CRIMP: COPPER ALLOY, MATERIAL THICKNESS = 0.25±0.01
PIN: COPPER ALLOY, MATERIAL THICKNESS = 0.64±0.01
MATERIAL WIDTH = 1.00±0.01
- MUST BE FREE OF CRACKS AND BURRS THAT AFFECT FUNCTION.
- WHEN A TIN/GOLD PLATED TERMINAL IS USED ON THE MALE SIDE THEN THE CORRESPONDING PLATING (TIN OR GOLD) MUST BE USED ON THE FEMALE TERMINAL.
- 0.2 MM MAX RADIUS PERMISSIBLE ON EDGES AND FILLETS SHOWN AS SHARP FOR STAMPING PARTS.
- GENERAL TOLERANCES:
.X = ±0.3
.XX = ±0.1
ANGLES = ±3°
- CRIMP SPECIFICATION : 114-13060.
 PLATE: >= 0.8µm Au IN CONTACT AREA OVER NICKEL.
 PLATE 2-4µm SILVER IN CONTACT AREA OVER NICKEL.
- FOR SILVER PLATING: ELECTRICAL PERFORMANCE IS NOT AFFECTED BY GRAY, BROWN OR BLACK TARNISH ON THE SILVER PLATING SURFACES. ACCEPTABLE SILVER SURFACES CAN INCLUDE GRAY, BROWN OR BLACK TARNISH.

ORGANIZATION: Tyco Electronics Belgium EC bvba SUPPLIER/VENDOR CODE: INSPECTION FACILITY: QS					PART NUMBER: 1438299-2 PART NAME: 0.64 Get Female in-line terminal (Sn) DESIGN RECORD CHANGE LEVEL: F2 ENGINEERING CHANGE DOCUMENTS:		
ITEM	DIMENSION/SPECIFICATION	SPECIFICATION/ LIMITS	TEST DATE	QTY TESTED	ORGANIZATION MEASUREMENT RESULTS (DATA)	OK	NOT OK
Drawing C-3-1419158-1 rev F2 dd 09/07/2015							
1	(20°) Crimpsize B	±3°	N/A	N/A	N/A		
2	(0,12) Crimpsize B	±0.1	N/A	N/A	N/A		
3	R0.2 ±0,1 Crimpsize B	±0.1	N/A	N/A	N/A		
4	3.1 Crimpsize B	±0.2	N/A	N/A	N/A		
5	1,8 Crimpsize B	±0.1	N/A	N/A	N/A		
6	(20°) Crimpsize B	±3°	N/A	N/A	N/A		
7	(0,12) Crimpsize B	±0.1	N/A	N/A	N/A		
8	R0.6 Crimpsize B	±0.1	N/A	N/A	N/A		
9	2.7 Crimpsize B	±0.2	N/A	N/A	N/A		
10	1	±0.05	26/05/2015	No Marking With Marking	1.00 1.00	X X	
11	3,8 Min Au Plating Area	N/A	N/A	N/A	N/A		
12	5	0.3	26/05/2015	No Marking With Marking	5.19 5.19	X X	
13	8	±0.05	26/05/2015	No Marking With Marking	7,99...8,00 8,00...8,00	X X	
14	2 Max	≤ 2	26/05/2015	No Marking With Marking	1.79 1.79	X X	
15	1.62	±0.1	26/05/2015	No Marking With Marking	1.65 1.65	X X	
16	(20°) Crimp Size A	±3°	26/05/2015	No Marking With Marking	20,00...20,00 20,00...20,00	X X	
17	(0,12) Crimp Size A	±0.1	26/05/2015	No Marking With Marking	0,15...0,16 0,15...0,16	X X	
18	R0.6 Crimp Size A	±0.1	26/05/2015	No Marking With Marking	0.65 0.65	X X	
19	2.4 Crimp Size A	±0.2	26/05/2015	No Marking With Marking	2.60 2.60	X X	

ORGANIZATION: Tyco Electronics Belgium EC bvba SUPPLIER/VENDOR CODE: INSPECTION FACILITY: QS					PART NUMBER: 1438299-2 PART NAME: 0.64 Get Female in-line terminal (Sn) DESIGN RECORD CHANGE LEVEL: F2 ENGINEERING CHANGE DOCUMENTS:		
ITEM	DIMENSION/SPECIFICATION	SPECIFICATION/ LIMITS	TEST DATE	QTY TESTED	ORGANIZATION MEASUREMENT RESULTS (DATA)	OK	NOT OK
20	(20°) Crimp Size A	±3	26/05/2015	No Marking With Marking	19,00...20,00 19,50...20,00	X X	
21	(0.12) Crimp Size A	±0.1	26/05/2015	No Marking With Marking	0,15...0,16 0,15...0,16	X X	
22	R0.45 Crimp Size A	±0.1	26/05/2015	No Marking With Marking	0.45 0.45	X X	
23	2.1 Crimp Size A	±0.2	26/05/2015	No Marking With Marking	2.19 2.18	X X	
24	0.5	±0.05	26/05/2015	No Marking With Marking	0.50 0.49	X X	
25	11.2	±0.1	26/05/2015	No Marking With Marking	11.21 11.20	X X	
26	2.5	±0.1	26/05/2015	No Marking With Marking	2,52...2,54 2,53...2,54	X X	
27	1.62	±0.05	26/05/2015	No Marking With Marking	1.65 1.65	X X	
28	1.6	±0.2	26/05/2015	No Marking With Marking	1,59...1,62 1,60...1,62	X X	
29	6 (Only valid for loose contact)	±0.15	N/A	N/A	N/A		
30	1.3	±0.1	26/05/2015	No Marking With Marking	1,27...1,27 1,27...1,27	X X	
31	1.7 (Only valid for loose contact)	±0.1	N/A	N/A	N/A		
32	24.45 (Only valid for loose contact)	±0.25	N/A	N/A	N/A		
33	2.1	±0.1	26/05/2015	No Marking With Marking	2.12 2.06	X X	
34	0.64	±0.02	26/05/2015	No Marking With Marking	0.64 0.64	X X	
35	1.25	±0.2	26/05/2015	No Marking With Marking	1.12 1.11	x x	
36	3.2 Tin Plating	±0.2	26/05/2015	No Marking With Marking	3.11 3.06	X X	
37	1 Gold Plating	±0.2	N/A	N/A	N/A		
38	3.2 Gold Plating	±0.2	N/A	N/A	N/A		



Richard Stenzhorn GmbH
Hochtechnologie Drähte
Rund - Flach - Vierkant - Profil

Richard Stenzhorn GmbH Steinbrink 4-8 D-42555 Velbert

Tyco Electronics
 Belgium EC bvba
 Siemenslaan, 14
 8020 OOSTKAMP
 BELGIUM

Inspection Certificate 3.1

DIN EN 10204 Ausg. Jan. 2005

Our Order-No. K108-1/2015

Our Despatch-No. L-11284/2015

D-42555 Velbert-Langenberg, the 05.05.2015

Your Order_No. 2490471177

from 23.03.2015

Physical Test

Description	desired value	actual value
Flat wire		
Material	CuSn3Zn9	OK
Surface	1-3 µm Ni 2-4 µm Sn	2,20-2,30 µm Ni ✓
	1-3 µm Ni 2-4 µm Sn	3,20-3,30 µm Sn ✓
	Visual examination	OK ✓
	RoHS conform	OK ✓
Tensile Strength Rm	585 - 690 MPa	619-620 ✓
Corner radius	max 0,150 mm (DIN EN 12166)	0,090-0,098 mm
Shape of corner	2 straight edges with 4 corner radii left	OK
Your Item No.	705044-5	
Our Item No.	26162	
Spool	VMV560/127-350 2 spools	OK
0,640 +/- 0,007 x 1,000 +/- 0,007 mm ✓		

Chemical-Composition CuSn3Zn9 ASTM B591 (C425 nach 2.2 DIN EN 10204 Ausg. 2005

Heat-Number	Cu %	Sn %	Zn %	P %	Fe %	Pb %				
19853C/425	88,7300 ✓	2,0800 ✓	Rest ✓	<0,0004 ✓	<0,0040 ✓	<0,0012 ✓				

Attestation of conformity

As manufacturer we declare that the products described herein comply with the specifications agreed with the purchaser, with the a.m. standards, descriptions, and the data indicated in this certificate.

RICHARD STENZHORN GmbH

Supervisor

total net weight 284,50 KG

QM-807-B

Telefon: 02052/9139-0
 Telefax: 02052/9139-39
 e-mail: rst@rst-wire.de
 Internet: www.rst-wire.de

Commerzbank (BLZ 430 800 83) Kto.Nr. 08 704 090 00 IBAN: DE39 4308 0083 0870 4090 00 BIC: DRESDEFF334
 Sparkasse HRV (BLZ 334 500 00) Kto.Nr. 26281360 IBAN: DE87 3345 0000 0026 2813 60 BIC: WELADED1VEL
 Postbank (BLZ 360 100 43) Kto.Nr. 29 1179-436 IBAN: DE73 3601 0043 0291 1794 36 BIC: PBNKDEFF

managing director U. Silvanus, C. Silvanus Amtsgericht Wuppertal HRB 17447

Steuer-Nr 139/5824/0301 USt-IdNr.: DE 121 490 401

Richard Stenzhorn GmbH
Hochtechnologie Drähte
Steinbrink 4-8
D-42555 Velbert

Tel 0049 (0) 2052 / 9139-0
Fax 0049 (0) 2052 / 9139-39
e-mail rst@rst-wire.de
Internet www.rst-wire.de

Entry Certificate

Your Order: 2490471177
Our order acknowledgement: K108-1/2015
Our consignment dated: 05.05.2015
Our invoice number: R-1544/2015

Dear Sirs,

For the purpose of Value Added Tax we would like to ask you to confirm the entry of the object of an intra-Community supply (mentioned below) into another EU Member state with your signature. Please complete this form where indicated with **X** and return this Entry Certificate to our address.

Thank you for your cooperation.

Kind regards,

Richard Stenzhorn GmbH
D-42555 Velbert

Jähner, Carina
RICHARD STENZHORN GMBH

Tyco Electronis Belgium EC bvba
Siemenslaan, 14
8020 OOSTKAMP (BELGIUM)

(Name and address of the customer of the intra-Community supply)

I as the customer hereby certify my receipt of the following object of an intra-Community supply

Material: CuSn3Zn9
Dimensions: 0,64 x 1 mm
Quantity: 2 Spools = 284,50 kg

(Standard commercial description and quantity of the object of the supply)

on

X

(Date the object of the supply was received in the Member state of entry if the supplying trader transported or dispatched the object of the supply or if the customer dispatched the object of the supply)

(Date the transportation ended if the customer transported the object of the supply himself or herself)

at

X

BELGIUM / 8020 Oostkamp

(EU Member state and place of entry as part of the transport or dispatch of the object)

X

(Date of issue of the certificate)

X

(Signature of the customer or of the authorised representative as well as the signatory's name in capitals and company stamp)

Wieland-Werke AG D-89070 Ulm

Tyco Electronics Belgium EC bvba
Siemenslaan 14
8020 OOSTKAMP
BELGIEN

Verladezone/Verladenr.

000031/20438565

Ihre Bestell-Nr.	: 2490892831
vom	: 18.05.2015
Ihre Materialnummer	: 3-705042-9 ✓

Unsere Auftrags-Nr.	: 11671184 001
Unsere Fertigungsauftrags-Nr.	: **36412096**
Unsere Prüflös-Nr.	: 040004116548
Unsere Lieferschein-Nr.	: 81788038 010 ✓
Liefermenge	: 534,0 KG ✓
Datum	: 29.07.2015

Abnahmeprüfzeugnis 3.1 nach EN 10204 : 2004

Halbzeug:
230 Band verzinkt SnPUR®
Werkstoff:
Wieland S12 C42500
Ausführung: 270 halbhart

Abmessungen:

Maß A:	0,25 mm	-0,01	+0,01
Maß B:	22,5 mm ✓	-0,05	+0,05
Maß C:			
Maß D:			

Spezifikation:

Revision/Ausgabedatum

1. R405 - H02S
2. acc. TEC-100-299 Rev. L1 ✓
3. tinned acc. TEC-112-20-1
4. Rev. AB

Bemerkungen:

Ihre Material-Nr.: 3-705042-9

Chemische Zusammensetzung nach 3.1 EN 10204 : 2004

Cu Kupfer-Gehalt	Fe Eisen-Gehalt	Pb Blei-Gehalt				
P Phosphor-Gehalt	Sn Zinn-Gehalt	Zn Zink-Gehalt				
Prüfmerkmal	CU	FE	PB	P	SN	ZN
Einheit	%	%	%	%	%	%
Minimum /Richtwert(R)	87				1,5	
Maximum/Richtwert(R)	90	0,05	0,05	0,35	3	
Meßwerte:						
Gussnummer						
19242	88,6 ✓	0,01 ✓	0,01 ✓	< 0,35 ✓	2,2 ✓	Rest

Abnahmeprüfzeugnis 3.1 nach EN 10204 : 2004

Tyco Electronics Belgium EC bvba

Ihre Bestell-Nr.	: 2490892831
vom	: 18.05.2015
Ihre Materialnummer	: 3-705042-9

Unsere Auftrags-Nr.	: 11671184 001
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Unsere Lieferschein-Nr.	: 81788038 010
Liefermenge	: 534,0 KG
Datum	: 29.07.2015

Mechanische Prüfmerkmale

<i>RP0,2</i>		<i>Dehngrenze 0,2 %</i>		<i>RM</i>		<i>Zugfestigkeit Rm</i>	
<i>A50</i>		<i>Bruchdehnung A50</i>		<i>HR30T</i>		<i>Härte Rockwell HR30T</i>	
Prüfmerkmal		RP0,2	RM	A50	HR30T		
Einheit		MPa	MPa	%			
Minimum /Richtwert(R)			405	10,0	65	R	
Maximum/Richtwert(R)			475		69	R	

Meßwerte:

Probennummer

T1924	420	444 ✓	19,9 ✓	61
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Weitere Prüfungen

Prüfmerkmal	Einheit	Soll-Werte bzw.		Ist-Werte		
		Richtwert (R)				
		Min.	Max.	Min.	Max.	
elektrische Leitfähigkeit - Resistomat	MS/m	14,5		15,5	15,5	✓
Korngröße	µm		15	5	5	✓
Biegebarkeit 180 Grad parallel	Ergebnis gut					
Biegebarkeit 180 Grad quer	Ergebnis gut					
Schichtdicke, Feuerverzinnung Reinzinn	µm	1	2	1	1,9	

RA Ra - arithm. Mittenrauhwert

Prüfmerkmal	RA
Einheit	µm
Minimum /Richtwert(R)	
Maximum/Richtwert(R)	0,300

Meßwerte:

Probennummer

T1924_O	0,103	✓
T1924_U	0,102	

Abnahmeprüfzeugnis 3.1 nach EN 10204 : 2004

Tyco Electronics Belgium EC bvba

Ihre Bestell-Nr.	: 2490892831
vom	: 18.05.2015
Ihre Materialnummer	: 3-705042-9

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Unsere Lieferschein-Nr.	: 81788038 010
Liefermenge	: 534,0 KG
Datum	: 29.07.2015

Maßprüfungen

Prüfmerkmal	Einheit	Soll-Werte bzw. Richtwert (R)		Ist-Werte	
		Min.	Max.	Min.	Max.
Breite	mm	22,45	22,55	22,495	22,502 ✓
Dicke	mm	0,24	0,26	0,249	0,249 ✓
Säbelförmigkeit auf 1000mm	mm		2	0,18	0,77 ✓
Rollkrümmung hängend auf 900 mm	mm		225	20	25 ✓

Konformitätserklärung

Wir erklären als Hersteller, daß die hier beschriebene Ware den mit dem Käufer vereinbarten Spezifikationen sowie den oben aufgeführten Normen und normativen Vorschriften, der angegebenen Beschreibung, der genannten Menge und den in diesem Zeugnis gemachten Angaben entspricht.

Diese Ware wurde unter einem zertifizierten Qualitätsmanagementsystem nach ISO/TS 16949:2009 hergestellt. Unser Qualitätsmanagementsystem wird laufend überwacht (IATF Zertifikats Nr. 150049).

Die Prüfergebnisse zur chemischen Analyse, zu den mechanisch-technologischen und physikalischen Prüfverfahren wurden durch ein zertifiziertes und / oder akkreditiertes Prüflabor festgestellt.

Die Lieferung erfolgt bezüglich Cd und Pb konform nach RoHS, ELV und WEEE.

In Bändern und Blechen aus Kupfer und Kupferlegierungen nicht enthalten sind: Cr(VI) und seine Verbindungen CFC, HCFC, PCB, PCN, CP, Mirex, PBB, BDE, PBDE, TBBP - A - bis, organische Zinnverbindungen, Asbest und Azo-Verbindungen, Hg - Analysen an Muster zeigen Werte < 0.0005% (m/m).

i.A. Wolfgang Baur (Abnahmebeauftragter des Herstellers)

Telefon: +49-731-944-3637 Fax: +49-731-944-43637

e-mail: wolfgang.baur@wieland.de

Maschinell erstelltes Abnahmeprüfzeugnis