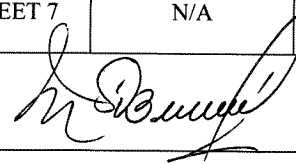

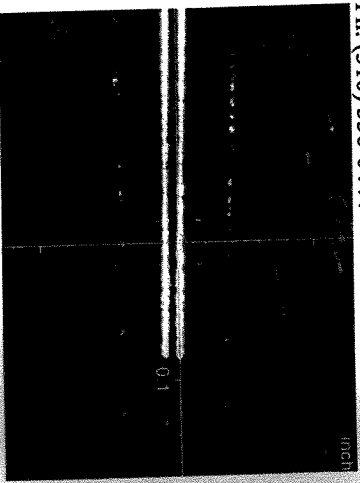


1. Part Number 0460-010-20141 (REF. P/N:C1C-2016-A0988)				2. Part Name CONTACT PIN SIZE 20			3. Serial Number N/A	4. FAIR Number TRI-19-692045
Characteristic Accountability				Inspection / Test Results				
5. Char No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designed/Qualified Tooling	11. Non-Conformance Number	14. Additional Data / Comments	
ALL DIMENSIONS SHOWN ARE IN INCHES, AFTER PLATING.								
1	SHEET 7	N/A	Ø .039 +/- .005	Ø .039	COMPARATOR	N/A		
2	SHEET 7	N/A	.711 +/- .015	.710	COMPARATOR	N/A		
3	SHEET 7	N/A	COLOR BAND	CONFORMED	VISUAL	N/A		
4	SHEET 7	N/A	INSPECTION HOLE	CONFORMED	VISUAL	N/A		
5	SHEET 7	N/A	.166 +/- .010	.167	COMPARATOR	N/A		
6	SHEET 7	N/A	.172 +/- .020	.173	COMPARATOR	N/A		
7	SHEET 7	N/A	.030 +/- .005	.030	COMPARATOR	N/A		
8	SHEET 7	N/A	Ø .101 +/- .005	Ø .100	MICROMETER	N/A		
9	SHEET 7	N/A	Ø .076 +/- .005	Ø .078	MICROMETER	N/A		
10	SHEET 7	N/A	Ø .059 +/- .005	Ø .059	PIN GAGE	N/A		
11	SHEET 7	N/A	NOTE 1	CONFORMED	COMPARATOR MICROMETER	N/A		
12	SHEET 7	N/A	NOTE 2	CONFORMED	N/A	N/A		
13	SHEET 7	N/A	NOTE 3	ACKNOWLEDGE	N/A	N/A		
14	SHEET 7	N/A	NOTE 4	ACKNOWLEDGE	N/A	N/A		
15	SHEET 7	N/A	NOTE 5	CONFORMED	N/A	N/A	CONFORMED DURING PROCESS	
12. Signature:  							13. Date: 07-25-2019	

Tri-Star Electronics International
 2201 Rosecrans Ave., El Segundo, CA 90245
 www.carlisleit.com
 Ph: (310) 536-0444



07-19-19
 C1C-2010-A0988
 TR1-19-692045
 QTY: 19271

Fischerscope® XRAY XDLM 237
 Product: Ni/PbCu
 Lot Number: TRI-19-692045 ✓
 Application: Ni/PbCu

Machine ID: #0628 Date: 7/18/2019
 Time: 5:39:38 AM Operator: 19836

n=	1	Ni 1 =	240 µ"
n=	2	Ni 1 =	239 µ"
n=	3	Ni 1 =	212 µ"
n=	4	Ni 1 =	234 µ"
n=	5	Ni 1 =	230 µ"
n=	6	Ni 1 =	232 µ"
n=	7	Ni 1 =	211 µ"
n=	8	Ni 1 =	243 µ"
n=	9	Ni 1 =	244 µ"
n=	10	Ni 1 =	217 µ"
n=	11	Ni 1 =	228 µ"
n=	12	Ni 1 =	254 µ"
n=	13	Ni 1 =	240 µ"
n=	14	Ni 1 =	251 µ"
n=	15	Ni 1 =	241 µ"
n=	16	Ni 1 =	248 µ"
n=	17	Ni 1 =	218 µ"
n=	18	Ni 1 =	257 µ"
n=	19	Ni 1 =	202 µ"
n=	20	Ni 1 =	245 µ"

Ni 1 µ"

Mean 234.2
 Standard Deviation 15.5
 CoV (%) 6.61
 Minimum 202
 Maximum 257
 Range 54.9

Number of readings 20
 Measuring time 15 sec
 Collimator size 2 = 0.20 Dm.
 Measurement Mode X-Ray Fluorescence

Density (Ni 1) 8.90 g/cm³
 Calibration Standards Types Foil Standards

See Drawing for Point of Measurement

TRI-STAR Electronics Europe SA (C of C)
 I certify that all articles in this shipment meet the requirements of the
 purchase order and applicable specs. **25 MAR. 2019**
 DATE CODE:

DRY: *[Signature]*
 SIGNATURE: *[Signature]*
 GENERAL MANAGER

TRI-STAR ELECTRONICS EUROPE SA
 Centro Nord-Sud, Stabile 3A
 Via Campagna
 CH-6934 BIOGGIO

BAOSHIDA SUISSMETAL

Inspection certificate 3.1 EN10204

Certif. ID: 10221657-40000202397 creation date: 2018/12/14
 Your customer no.: 1687
 Your order no. / date: 808451 / 20180601
 Our delivery no. / date: 80224040 000010 / 20181219
 Our order no. / date: 0000160621 000010 / 20180601
 Production order / inspection lot / inspection lot creation date
 10221657/40000202397 / 2018/11/12

Weight: 2560,3 KG
 Material: 2-13369-VRCA-1 / C97 BAR RON Ø2.665 L3000
 Product: - C19160 -
 Length: Pointed and chamfered
 Dim 1: 3000 mm +30
 Alloy: 2,665 mm -0,025
 CUNTIPB1P

Characteristics

Baoshida Swissmetal Norm. Results Unit
 Min Max Min Max

Mechanical / physical and other properties
 Tensile Strength 620 700 N/mm2

Yield strength Rp 0.2 % 656
 636
 650
 650
 671
 658

Elongation A 50
LOT # CT
19 - 299010

561 TRI-STAR
 ELECTRONICS EUROPE SA
 Mat. *CA 02665*
 PN *013-2016-0810*
 PO *605606*
 Ship. date *25 MAR. 2019*

N/mm2
 614
 598
 608
 611
 625
 619
 %
 5
 5
 5
 5

This product has been manufactured under our quality-environment-management-system to ISO 9001 / 14001, BVC, SCESm 003,

Baoshida Swissmetal Ltd.,
 Route de Tavannes 4, CH-2732 Reconvilier
 Phone 032 482 0 482 Fax 032 482 0 116 VAT 646771

BAOSHIDA

SUISSMETAL

Delivery position / date
80224040 000010/20181219

TRI-STAR ELECTRONICS EUROPE SA
Centro Nord-Sud, Scablie 3A
Via Campagna
CH-6934 BIOGGIO

Electrical conductivity

50

5
%IACS

58
53
55
54
58

Chemical composition (%)

Element	Value	Rem	Unit
Copper - Remaining	0.8	0.9	%
Lead	0.00	0.00	%
Iron	0.00	0.00	%
Th	0.8	1.0	%
Nickel	0.00	0.03	%
Zinc	0.00	0.00	%
Cadmium	0.15	0.26	%
Phosphor	0.00	0.09	%
Others-C4			

Baoshida Swissmetal Ltd S.Texier. The certificate is electronically made out of SAP and is valid without signature. The products supplied are in compliance with the requirements of the order.

LOT# CT

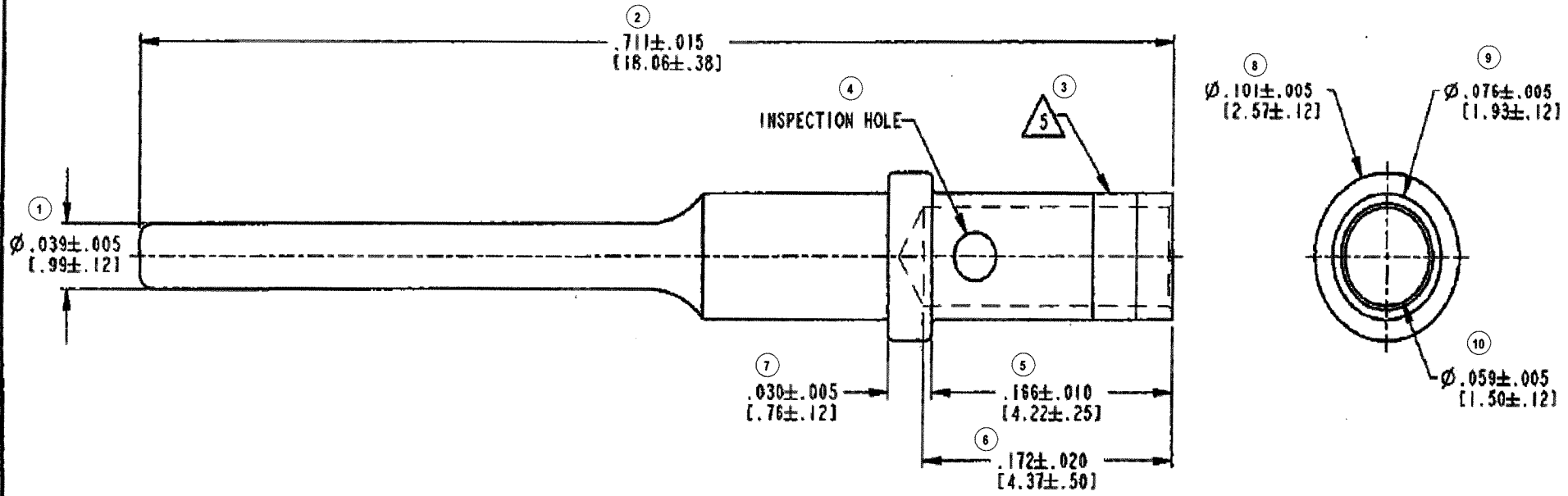
19-299010

This product has been manufactured under our quality-environment-management-system to ISO 9001 / 14001, BVC SCE3m 003.

Baoshida Swissmetal Ltd,
Roule de Tavannes 4, CH-2732 Reconvilier
Phone 032 482 0 482 Fax 032 482 0 116 VAT 646771

REV
NC 0460-010-20 **

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
NC	NEW RELEASE PER E.O. P19622	9-19-07	DA



- 15 **5** PIN CONTACT IS IDENTIFIED BY A SINGE PURPLE STRIPE.
- 14 4. FOR CONTACT PERFORMANCE AND APPLICATION CHARACTERISTICS SEE DRAWING 0425-015-0000.
- 13 3. THIS CONTACT MAY BE CRIMPED WITH HDP-400 POWER PRESS OR HDT-48-00 HAND TOOL. SEE DRAWING 0425-205-0000 FOR APPLICABLE WIRE SIZE AND CRIMPING INFORMATION.
- 12 2. PLATING IS **NICKEL**
- 11 1. DIMENSIONS ARE IN INCHES [mm]

NOTES: UNLESS OTHERWISE SPECIFIED

SIGNATURE & DATE		CONTACT PIN SIZE 20 16-18 AWG	EP	INTL. CODE
DR	D. MEYER 08-22-07		3650 INDUSTRIAL AVE. HEMET, CA 92545	
CHK	<i>[Signature]</i> 9/19/07	CVG P/N 135363	DEUTSCH INDUSTRIAL	
PE	<i>[Signature]</i> 9/14/07		B 0460-010-20/41	
APPD	<i>[Signature]</i> 9-19-07	ENVELOPE	DWG. SIZE	CODE 1113a
SCALE	NONE	WT	SHEET	OF

REV P 0425-015-0000

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVED
L	REVISED PER E.O. P19436	12-18-06	R.D.R.
M	REVISED PER E.O. P19666	11-6-07	R.D.R.
N	REVISED PER E.O. P19847	5-14-08	R.D.R.
P	REVISED PER E.O. P20416	1-8-10	DR

SOLID CONT. SIZE	SOLID CONTACT PART NO'S (PARTIAL LIST)		WIRE SIZE AWG [mm ²]	RECOMMENDED STRIP LENGTH INCHES [mm]	MIN CONT. RETENTION LBS [N]	REF CRIMP TENSILE LBS [N]	MAX RATED AMPS @ 125°C CONTINUOUS
	PIN	SOCKET					
4	5960-203-04**	5962-203-04**	4 [21.0]	.430-.492 [10.92-12.50]	35 [156]	300 [1334]	100
4	0460-204-04**	0462-203-04**	6 [13.0]	.430-.492 [10.92-12.50]	35 [156]	300 [1334]	100
8	0460-204-08**	0462-203-08**	8-10 [8.0-5.0]	.430-.492 [10.92-12.50]	35 [156]	125-90 [556-400]	60
12	0460-204-12**	0462-203-12**	12-14 [3.0-2.0]	.222-.284 [5.64-7.21]	30 [134]	75-70 [334-311]	25
16	0460-002-16**	0462-004-16**	16-20 [1.5-0.5]	.250-.312 [6.35-7.92]	25 [111]	35-20 [156-89]	13
16	0460-215-16**	0462-209-16**	14 [2.0]	.250-.312 [6.35-7.92]	25 [111]	70 [311]	13
16	0460-202-16**	0462-201-16**	16-20 [1.5-0.5]	.250-.312 [6.35-7.92]	25 [111]	35-20 [156-89]	13
20	0460-010-20**	0462-005-20**	16-18 [1.0-0.75]	.156-.218 [3.96-5.54]	20 [89]	20 [89]	7.5
20	0460-202-20**	0462-201-20**	20 [0.5]	.156-.218 [3.96-5.54]	20 [89]	20 [89]	7.5

CONTACT RESISTANCE STRENGTH				MATERIAL SPECIFICATION AND PLATING ** CODES	
WIRE AWG	TEST CURRENT	MILLIVOLT DROP SOLID	MILLIVOLT DROP S & F		
4	100	60	N/A	PIN: COPPER ALLOY SOCKET: COPPER ALLOY with STAINLESS STEEL SLEEVE	
8	60	60	N/A	SOLID PLATING OPTIONS: 7	
10	40	60	N/A	31-GOLD*	
10	25	N/A	100	90-NICKEL SIZE 4 [6 AWG] PIN ONLY	
12	25	60	100	141-NICKEL	
14	18	60	100	S & F PLATING OPTIONS: 7	
16	13	60	100	22-NICKEL	
18	10	60	100	44-GOLD*	
20	7.5	60	100	66-TIN/NICKEL	
LESS REFERENCE (DROP-THRU) WIRE				77-TIN	
				88-SELECTIVE GOLD*	

GOLD*=PLATING IS AVAILABLE (RECOMMENDED) FOR DRY (<5V) CIRCUIT APPLICATIONS

MATERIALS AND PLATINGS ARE RoHS COMPLIANT

- 9 DEUTSCH PERFORMANCE SPECIFICATIONS REQUIRE THE USE OF DEUTSCH APPROVED TOOLING.
- 8. SEE SHEET 2 FOR STAMPED AND FORMED CONTACTS.
- 7 CONTACT FACTORY FOR AVAILABLE PLATING FOR SPECIFIC CONTACTS.
- 6 NOTED MAXIMUM RATED CURRENT DEPENDS ON CONTACT SIZE. ACTUAL RATED CURRENT DEPENDS ON WIRE SIZE.
- 5 WIRE AND INSULATION RANGES ARE FOR REFERENCE ONLY. ACTUAL INSULATION RANGE DEPENDS ON CONNECTOR GROMMET. THE FOLLOWING CRIMP INFORMATION DRAWINGS ARE THE CONTROLLING DOCUMENTS:

"SOLID" CONTACTS:	SIZE	"STAMPED" CONTACTS:	SIZE
0425-205-0000	4-20	0425-041-0000	12
		0425-208-0000	12
		0425-039-0000	16
		0425-068-0000	16
		0425-203-0000	16
		0425-059-0000	16/20
		0425-207-0000	20
- 4 PULL RATE OF 1.0 INCH [25.4] PER MINUTE MAXIMUM. ACTUAL STRENGTH DEPENDS ON WIRE SIZE.
- 3 THIS CONTACT IS A SLEEVELESS SOCKET DESIGN.
- 2. DIMENSIONS ARE IN INCHES [mm]. FORCES ARE IN "LBS" (POUNDS) AND "[N]" (NEWTONS).
- 1 CONSULT FACTORY FOR MORE INFORMATION. SEE CRIMP INFORMATION DRAWINGS FOR MORE PART NUMBERS.

- 14. FOR HIGH TEMPERATURE CONNECTOR CONTACT INFORMATION SEE INFORMATION DRAWING 0425-075-0000.
- 13 THIS CONTACT IS IDENTIFIED BY ONE PURPLE STRIPE.
- 12 THIS CONTACT IS USED FOR HIGH DURABILITY APPLICATIONS. IDENTIFIED BY ONE BLUE STRIPE.
- 11 THIS CONTACT IS AN ULTRASONIC DESIGN.
- 10 0460-204-12** COMES IN NICKEL PLATE ONLY. USE 0460-220-12** FOR GOLD PLATE.

SIGNATURE & DATE	
DR	B. BYFORD 5/26/00
CHK	D. M... 7/10
PE	D. M... 7/10
APPD	R. K... 8-10
SCALE	NONE
WT	

PERFORMANCE AND APPLICATION CHARACTERISTICS OF SOLID OR STAMPED AND FORMED CONTACTS AND APPLICABLE WIRE RANGES

EP	MATL. CODE
3850 INDUSTRIAL AVE. HEMET, CA 92545	
DEUTSCH INDUSTRIAL	
B 0425-015-0000	
DWG. SIZE	SHEET 1 OF 2

N/A: Not Applicable

INFORMATION