DaimlerChrysler Ford General Motors

Part Submission Warrant

YAZAKI

Part Name: TRML WIR SNP ON FEM | Cust. Part Number: EU5T-14474-MAA

Shown on Drawing No.: 97BG-14474-ADA | Org. Part Number: 7116-4102-06

Engineering Change Level: AELE-E-11784007-531 | Dated: 16/08/2018

Additional Engineering Changes: N/A | Dated: N/A

Safety and/or Government Regulation: ☐ Yes ☑ No | Purchase Order No.: N/A | Weight (kg): 0,0003

Checking Aid No.: N/A | Checking Aid Engineering Change Level: N/A | Dated: N/A

ORGANIZATION MANUFACTURING INFORMATION

YAZAKI EUROPE LTD 323047696
Organization Name & Supplier/Vendor Code

Richard-Byrd-Strasse 4-6a
Street Address

Cologne | NRW | D-50829 | Germany
City | Region | Postal Code | Country

CUSTOMER SUBMITTAL INFORMATION

NURSAN

FORD
Buyer/Buyer Code

MATERIALS REPORTING

Has customer-required Substances of Concern information been reported? ☑ Yes ☐ No ☐ n/a

Submitted by IMDS or other customer format: IMDS ID: 1239409539 / 1

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

REASON FOR SUBMISSION (Check at least one)

- ☐ Initial submission
- ☐ Engineering Change(s)
- ☐ Tooling: Transfer, Replacement, Refurbishment, or additional
- ☐ Correction of Discrepancy
- ☐ Tooling Inactive > than 1 year
- ☐ Change to Optional Construction or Material
- ☐ Supplier or Material Source Change
- ☐ Change in Part Processing
- ☐ Parts produced at Additional Location
- ☑ Other - please specify below: Customer Request

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 organization's manufacturing location.

SUBMISSION RESULTS

The results for ☑ dimensional measurements ☑ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all drawing and specification requirements: ☑ Yes ☐ NO (If "NO" - Explanation Required)

Mold / Cavity / Production Process: 2D4103

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 **201.600 / 8** hours.

I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.

EXPLANATION/COMMENTS:

Is each Customer Tool properly tagged and numbered? ☐ Yes ☐ No ☑ n/a

Organization Authorized Signature: Cristina Ferreira | Date: 30 November 2023

Print Name: Cristina Ferreira | Phone No. | FAX No.

Title: QE | E-mail: tdc@yazaki-europe.com

FOR CUSTOMER USE ONLY (IF APPLICABLE)

PPAP Warrant Disposition: ☐ Approved ☐ Rejected ☐ Other

Customer Signature | Date

Print Name | Customer Tracking No. (optional)

Sample Component Inspection Report

CUSTOMER PART NO.	EU5T-14474-MAA	CCC PART NO.	7116-4102-06
CUSTOMER	FORD	PART NAME	TRMNL WIR SNP ON FEM
SUPPLIER	Circuit Controls	B/P DATE	8-16-2018
DIE/MOLD NO.	2D4103	ECR/PCR	AELE-E-11784007-531
NUMBER CAVITIES	Progressive Die	☒ PRODUCTION	☐ PROTOTYPE

DIM #	DRAWING DIMENSION	TOLERANCE	1	2	3	4	5
1	Mating effort	4.9N max.	4.3N	4.3N	3.4N	3.3N	4.1N
2	Part free from cracks and burrs		OK	OK	OK	OK	OK
3	Material: Silver Plated Copper Alloy		OK	OK	OK	OK	OK
4	1.50	+/-0.15	1.50	1.50	1.51	1.50	1.51
5	5.15	+/-0.15	5.13	5.13	5.12	5.12	5.13
6	2.75	+/-0.15	2.80	2.81	2.80	2.82	2.81
7	2.50	+/-0.15	2.51	2.51	2.51	2.51	2.50
8	2.50	+/-0.15	2.50	2.50	2.51	2.50	2.50
9	11.45	+/-0.10	11.41	11.40	11.42	11.42	11.42
10	3.65	+/-0.15	3.69	3.70	3.70	3.71	3.72
11	2.85	+0.05/-0.15	2.81	2.81	2.83	2.82	2.81
12	2.60	+0.05/-0.15	2.54	2.54	2.52	2.53	2.53
13	19.85	+/-0.30	19.91	19.93	19.91	19.90	19.91
14	3.75	+/-0.20	3.73	3.70	3.70	3.71	3.71
15	7.50	+/-0.30	7.39	7.40	7.41	7.40	7.42
16	1.50	+/-0.20	1.53	1.52	1.52	1.51	1.53
17	0.55	+/-0.10	0.48	0.48	0.50	0.51	0.49
18	6.15	+/-0.20	6.13	6.15	6.15	6.15	6.12
19	9.60	+/-0.30	9.63	9.64	9.61	9.63	9.63
20	5.25	+0.05/-0.15	5.23	5.23	5.24	5.25	5.25
21	4.25	+0.30/-0.00	4.29	4.30	4.31	4.30	4.29
22	Material thickness t=0.25	+/-0.01	0.25	0.25	0.25	0.25	0.25
23	1.00	+/-0.20	1.04	1.05	1.03	1.04	1.04
24	3.20	+/-0.30	3.23	3.24	3.24	3.25	3.24
25	2.30	+/-0.20	2.42	2.43	2.45	2.43	2.42
26	20°	+/-5°	21°	21°	21°	21°	21°
27	0.45R	+/-0.15	0.47R	0.47R	0.47R	0.47R	0.47R
28	4.75	+/-0.20	4.91	4.87	4.90	4.89	4.90
29	30°	+/-5°	30°	30°	30°	30°	30°
30	1.45R	+/-0.15	1.43R	1.43R	1.43R	1.43R	1.43R
31	3.20	+/-0.30	N/A	N/A	N/A	N/A	N/A
32	1.00	+/-0.20	N/A	N/A	N/A	N/A	N/A
33	Gold ID Marks		N/A	N/A	N/A	N/A	N/A
34	Gold Plating on Ribs		N/A	N/A	N/A	N/A	N/A
35	Gold Plating on Spring Contact		N/A	N/A	N/A	N/A	N/A
36	Gold Plating on Spring Lead		N/A	N/A	N/A	N/A	N/A
37	Solder Plating Area		N/A	N/A	N/A	N/A	N/A
38	Wire Grip Size ID - 1 Detent		1-OK	1-OK	1-OK	1-OK	1-OK
39	13.50	+/-0.20	13.42	13.45	13.44	13.45	13.43

Inspected By: Roger Gillian **Date:** 3/8/23
Q.E. Approval: Gary T. Mason **Date:** 3/24/23

TERMINAL INFORMATION

FORD PART NO.	SUPPLIER PART NO.	DESCRIPTION	TRC (S)	GREASED Y/N	BASE MATERIAL	PLATING MATERIAL	PLATING THICKNESS	TOTAL WEIGHT	MATERIAL THICKNESS	MATERIAL HARDNESS	MAX. AMBIENTE TEMPERATURE	CONDUCTOR MIN/MAX CSA	INSULATION MIN/MAX ΦD	VIBRATION CLASS
97BG-14474-ADA	7116-4102-02	1.5 SYSTEM SEALED FEMALE TERMINAL	G116 G120 G245 G285 B797 B953	N	COPPER ALLOY	TIN	0.8-1.5µm	0.35g	t=0.25±0.01	HV 128	125°C	0.70/0.90	1.10/1.30	V2
97BG-14474-AEA	7116-4103-02							0.35g				1.10/1.40	1.50/1.80	
98BG-14474-AKA	7116-4105-02		G116 G120 G285 B797					0.37g				1.80	2.60	
97BG-14474-AHA	7116-4102-08		G116 G120 G245 G285 B797 B953			GOLD		0.34g				0.70/0.90	1.40/1.60	
97BG-14474-AJA	7116-4103-08							0.35g				1.10/1.40	1.80/2.10	
EU5T-14474-MAA	7116-4102-06					SILVER		0.33g				0.70/0.90	1.10/1.30	
EU5T-14474-NAA	7116-4103-06							0.30g				1.10/1.40	1.80/2.10	

(H3) (L1)

TERMINAL CRIMP & GRIP REFERENCE TABLE

FORD PART NO.	WIRE TYPE/ SPECFICATION (Design intent)	WIRE SIZE	Strip Length (mm)	Conductor Crimp info C.C.W. (mm) (+/-x.xx)	Conductor Crimp info C.C.H. (mm) (+/-x.xx)	Insulation crimp info I.C.W. (mm) (+/-x.xx)	Insulation crimp info I.C.H. (mm) (+/-x.xx)	Applicable Wire Seals FORD PART NUMBER	NOTES/ VALIDATION SOURCE
97BG-14474-ADA	WSK-M1L126-A_	0.35 mm²	5.00~5.50	1.75±0.10	0.95±0.05	3.45±0.10	3.50±0.10	97BG-10C930-AA	N/A
97BG-14474-ADA	WSK-M1L126-A_	0.50 mm²	5.00~5.50	1.75±0.10	1.05±0.05	3.45±0.10	3.60±0.10	97BG-10C930-AA	
97BG-14474-ADA	WSK-M1L126-A_	0.35 mm²	5.00~5.50	TBD	TBD	TBD	TBD	LU5T-10C930-BEA	
97BG-14474-ADA	WSK-M1L126-A_	0.50 mm²	5.00~5.50	TBD	TBD	TBD	TBD	LU5T-10C930-BEA	(L3)
97BG-14474-ADA	ESB-M1L123-A_	22 AWG	5.00~5.50	1.75±0.10	0.95±0.05	3.45±0.10	3.60±0.10	97BG-10C930-AA	
97BG-14474-ADA	ESB-M1L123-A_	20 AWG	5.00~5.50	1.75±0.10	1.00±0.05	3.45±0.10	3.60±0.10	97BG-10C930-BA	
97BG-14474-AEA	WSK-M1L126-A_	0.75 mm²	5.00~5.50	2.05±0.10	1.15±0.05	3.45±0.10	3.60±0.10	97BG-10C930-BA	
97BG-14474-AEA	WSK-M1L126-A_	1.00 mm²	5.00~5.50	2.05±0.10	1.25±0.05	3.45±0.10	3.70±0.10	97BG-10C930-BA	(K1)
97BG-14474-AEA	WSK-M1L126-A_	0.75 mm²	5.00~5.50	TBD	TBD	TBD	TBD	LU5T-10C930-BEA	
97BG-14474-AEA	WSK-M1L126-A_	1.00 mm²	5.00~5.50	TBD	TBD	TBD	TBD	LU5T-10C930-BEA	(L3)
97BG-14474-AEA	ESB-M1L123-A_	18 AWG	5.00~5.50	2.05±0.10	1.15±0.05	3.45±0.10	3.70±0.10	97BG-10C930-BA	
97BG-14474-AEA	ESB-M1L123-A_	16 AWG	5.00~5.50	2.05±0.10	1.30±0.05	3.45±0.10	3.70±0.10	97BG-10C930-BA	
98BG-14474-AKA	WSK-M1L126-A_	1.50 mm²	5.00~5.50	2.40±0.10	1.40±0.05	3.75±0.10	3.90±0.10	97BG-10C930-AA	(H2)
98BG-14474-AKA	ESB-M1L123-A_	14 AWG	5.00~5.50	2.40±0.10	1.60±0.05	3.75±0.10	3.80±0.10	97BG-10C930-BA	(H2)
97BG-14474-AHA	WSK-M1L126-A_	0.35 mm²	5.00~5.50	1.75±0.10	0.95±0.05	3.45±0.10	3.50±0.10	97BG-10C930-AA	
97BG-14474-AHA	WSK-M1L126-A_	0.50 mm²	5.00~5.50	1.75±0.10	1.00±0.05	3.45±0.10	3.60±0.10	97BG-10C930-AA	
97BG-14474-AHA	ESB-M1L123-A_	22 AWG	5.00~5.50	1.75±0.10	0.95±0.05	3.45±0.10	3.60±0.10	97BG-10C930-AA	
97BG-14474-AHA	ESB-M1L123-A_	20 AWG	5.00~5.50	1.75±0.10	1.00±0.05	3.45±0.10	3.60±0.10	97BG-10C930-BA	
97BG-14474-AJA	WSK-M1L126-A_	0.75 mm²	5.00~5.50	2.05±0.10	1.15±0.05	3.45±0.10	3.60±0.10	97BG-10C930-BA	
97BG-14474-AJA	WSK-M1L126-A_	1.00 mm²	5.00~5.50	2.05±0.10	1.25±0.05	3.45±0.10	3.70±0.10	97BG-10C930-BA	
97BG-14474-AJA	ESB-M1L123-A_	18 AWG	5.00~5.50	2.05±0.10	1.15±0.05	3.45±0.10	3.70±0.10	97BG-10C930-BA	
97BG-14474-AJA	ESB-M1L123-A_	16 AWG	5.00~5.50	2.05±0.10	1.30±0.05	3.45±0.10	3.80±0.10	97BG-10C930-BA	
EU5T-14474-MAA	WSK-M1L126-A_	0.35 mm²	5.00~5.50	1.75±0.10	0.95±0.05	3.45±0.10	3.50±0.10	97BG-10C930-AA	
EU5T-14474-MAA	WSK-M1L126-A_	0.50 mm²	5.00~5.50	1.75±0.10	1.05±0.05	3.45±0.10	3.60±0.10	97BG-10C930-AA	
EU5T-14474-MAA	ESB-M1L123-A_	22 AWG	5.00~5.50	1.75±0.10	0.95±0.05	3.45±0.10	3.60±0.10	97BG-10C930-AA	
EU5T-14474-MAA	ESB-M1L123-A_	20 AWG	5.00~5.50	1.75±0.10	1.00±0.05	3.45±0.10	3.60±0.10	97BG-10C930-BA	
EU5T-14474 NAA	WSK-M1L126-A_	0.75 mm²	5.00~5.50	2.05±0.10	1.15±0.05	3.45±0.10	3.60±0.10	97BG-10C930-BA	
EU5T-14474 NAA	WSK-M1L126-A_	1.00 mm²	5.00~5.50	2.05±0.10	1.25±0.05	3.45±0.10	3.70±0.10	97BG-10C930-BA	
EU5T-14474 NAA	ESB-M1L123-A_	18 AWG	5.00~5.50	2.05±0.10	1.15±0.05	3.45±0.10	3.70±0.10	97BG-10C930-BA	
EU5T-14474 NAA	ESB-M1L123-A_	16 AWG	5.00~5.50	2.05±0.10	1.30±0.05	3.45±0.10	3.80±0.10	97BG-10C930-BA	

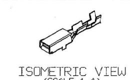
APPLICABLE & MATING COMPONENTS INFORMATION

ITEM DESCRIPTION	COLOUR/ PLATING	FORD PART NO.	YAZAKI PART NO.	MATERIAL
1.5 SYSTEM TERMINAL (M)	TIN	97BG-14421-ADA	7114-4102-02	COPPER ALLOY
1.5 SYSTEM TERMINAL (M)	TIN	97BG-14421-AEA	7114-4103-02	COPPER ALLOY
1.5 SYSTEM TERMINAL (M)	TIN	N/A	7114-4105-02	COPPER ALLOY
1.5 SYSTEM TERMINAL (M)	GOLD	97BG-14421-AHA	7114-4102-08	COPPER ALLOY
1.5 SYSTEM TERMINAL (M)	GOLD	97BG-14421-AJA	7114-4103-08	COPPER ALLOY (H1)
1.5 SYSTEM TERMINAL (M)	SILVER	EU5T-14421-TA	7114-4102-06	COPPER ALLOY
1.5 SYSTEM TERMINAL (M)	SILVER	EU5T-14421-UA	7114-4103-06	COPPER ALLOY
1.5 SYSTEM WIRE SEAL	RED	97BG-10C930-AA	7158-3030-50	SILICONE RUBBER
1.5 SYSTEM WIRE SEAL	BLUE	97BG-10C930-BA	7158-3031-90	SILICONE RUBBER
1.5 SYSTEM WIRE SEAL	GREY	XW4T-14603-MA	7158-3033-40	SILICONE RUBBER
1.5 SYSTEM BLIND PLUG	GREEN	97BG-10C930-DA	7158-3032-60	SILICONE RUBBER
1.5 SYSTEM WIRE SEAL REDUCED PITCH	ORANGE	7M5T-10C930-AA	7158-3376-50	SILICONE RUBBER
1.5 SYSTEM WIRE SEAL REDUCED PITCH	TURQUISE	7M5T-10C930-BA	7158-3374-90	SILICONE RUBBER
1.5 SYSTEM WIRE SEAL REDUCED PITCH	L. BROWN	7M5T-10C930-CA	7158-3375-80	SILICONE RUBBER
1.5 SYSTEM WIRE SEAL	BLACK	LU5T-10C930-BEA	7172-5728-30	SILICONE RUBBER
1.5 SYSTEM WIRE SEAL	BLACK	LU5T-10C930-BEA	7172-5727-30	SILICONE RUBBER (L3)

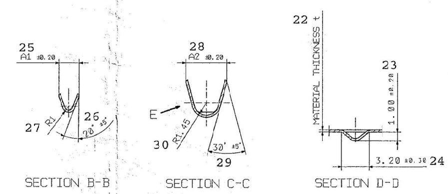
NOTES:

1. PART MUST CONFORM TO THE ELECTRICAL CONNECTION SYSTEM DESIGN SPECIFICATION (SDS), REVISION 8.0, DATED 20-NOV-00, WITH THE FOLLOWING EXCEPTION: EL-0072.
2. PART MUST CONFORM TO ENGINEERING SPECIFICATION S96FG-14A464-AA, DATED 94/09/23, AND ENGINEERING SPECIFICATION ES-F8DB-14A229-A*/B*/C*/D*
3. (1 J1) MAXIMUM MATING FORCE:
   - FOR A SINGLE TIN PLATED TERMINAL MAX: 4.5 [N]
   - FOR A SINGLE GOLD PLATED TERMINA MAX: 3.5 [N]
   - FOR A SINGLE SILVER PLATED TERMINAL MAX: 4.9 [N].
4. MATING TERMINALS: 7114-4102-02; 7114-4103-02; 7114-4102-08; 7114-4103-08; 7114-4102-06; 7114-4103-06.
5. PART MUST CONFORM TO ENGINEERING SPECIFICATION ES-F8DB-14A464-AA (USCAR), DATED 95/07/08. FOR COMPONENT TEMPERATURE CLASS 3.
6. FOR ENGINEERING APPROVED SOURCE SEE ENGINEERING RELEASE.
7. ENGINEERING APPROVAL REQUIRED FOR ALL SOURCING AND TOOLING OF THIS PART.
8. ENGINEERING APPROVAL OF SAMPLE FROM EACH SUPPLIER IS REQUIRED PRIOR TO AUTHORIZATION OF PART PRODUCTION.
9. CHANGES IN DESIGN, COMPOSITION OR PROCESSING FROM THE PART PREVIOUSLY APPROVED FOR PART PRODUCTION REQUIRES PRIOR ENGINEERING APPROVAL.
10. GENERAL TOLERANCE: REFER TO GENERAL TOLERANCE TABLE.
11. (2) PART MUST BE FREE OF DISCOLORATION, CRACKS AND BURRS THAT AFFECT FUNCTION, FIT AND SAFE HANDLING.
12. (3 L2) TERMINAL MATERIAL: SEE TABLE.
13. WHEN A TIN, GOLD OR SILVER PLATED TERMINAL IS USED, THEN THE SAME PLATING (TIN, GOLD OR SILVER) MUST BE USED ON MATING SIDE.
14. MAXIMUM APPLIED CURRENT ON 1.0 mm² WIRE SHOULD NOT EXCEED 14 / 23 A. MAXIMUM APPLIED CURRENT RECOMMENDATION BASED ON BENCH-TEST RESULTS ONLY. TEST CONDITIONS: SINGLE CIRCUIT, 20℃ AMBIENT, OPEN AIR, 1.0 mm² WIRE, 20℃ / 55℃ ROA (RISE OVER AMBIENT). APPROPRIATE DERATING SHOULD BE CONSIDERED BASED ON SPECIFIC APPLICATION REQUIREMENTS (AMBIENT TEMPERATURE, WIRE SIZE, POLE QUANTITY, DURATION OF CURRENT FLOW etc.).
15. THE CRIMP AND CRIMP TOOL DIMENSIONS HAVE BEEN ESTABLISHED AND VALIDATED ON AND FOR YAZAKI TOOLS, MACHINES AND PROCESSES. THE DIMENSIONS SHOWN ARE FOR REFERENCE.
16. ◇ PIPC DIMENSION: 1 LOCATION.
17. ⊠ PIST DIMENSION: 5 LOCATIONS.
18. TERMINAL 98BG-14474-AKA (7116-4105-02) SHOULD BE USED ONLT FOR THOSE APPLICATIONS WHERE EXCESSIVE VOLTAGE DROP IN A SMALLER SIZE WIRE MAY ADVERSELY AFFECT THE FUNCTION OF THE CIRCUIT. MAXIMUM APPLIED CURRENT ON 1.5 mm² WIRE SHOULD NOT EXCEED THE LIMITS DESCRIBED IN NOTE 15.
19. THIS NOTE IS APPLICABLE TO THE CRIMP TABLE - CRIMP DIMENSIONS LISTED IN THIS TABLE WERE CERTIFIED TO USCAR-21 (ISSUED MAY, 2002) OR A FORD APPROVED ALTERNATE SPECIFICATION.

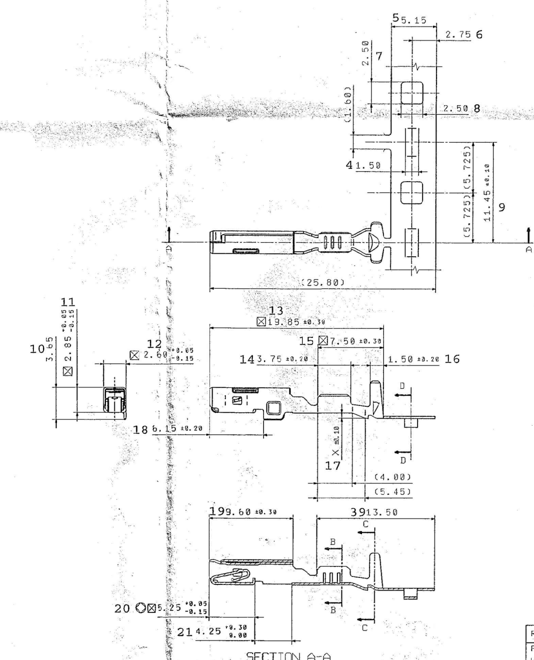
FORD PART NO.	YAZAKI PART NO.	A_1	A_2	R_1	X	t
97BG-14474-ADA	7116-4102-02	2.30	4.75	0.45	0.55	0.25
97BG-14474-AEA	7116-4103-02	3.00	4.90	0.60	0.70	0.25
98BG-14474-AKA	7116-4105-02	3.40	4.95	0.80	1.10	0.25
97BG-14474-AHA	7116-4102-08	2.30	4.75	0.45	0.55	0.25
97BG-14474-AJA	7116-4103-08	3.00	4.90	0.60	0.70	0.25
EU5T-14474-MAA	7116-4102-06	2.30	4.75	0.45	0.55	0.25
EU5T-14474 NAA	7116-4103-06	3.00	4.90	0.60	0.70	0.25



ISOMETRIC VIEW
(SCALE 1:1)



SECTION B-B SECTION C-C SECTION D-D



SECTION A-A

LTRS	REVISIONS		
ORIGINATOR	CHECKER	ENGR APP	MATL APP
RELEASED EE00-I-10474662-000 (P) 941129 CAD: Y			
YAZAKI		RODERIGO	
REDRAWN TO LATEST DRAWING STANDARDS AFTER REVISION G H1 WAS 7116-4103-03 (TYPING MISTAKE) H2 ADDED CRIMP PARAMETARS FOR 98BG-14474-AKA H3 REMOVED SEALS FROM TERMINAL INFORMATION TABLE AELE-E-11784007-345 20151127			
YAZAKI	WMACZEWS	JPITTEN1	
J1 CHANGED NOTE 3, SILVER PLATED TERMINAL WAS MAX: 4.0 [N] AELE-E-11784007-375 20160617			
YAZAKI	WMACZEWS	JPITTEN1	
K1 CORRECTED CONDUCTOR CRIMP INFO AELE-E-11784007-400 20161205			
YAZAKI	WMACZEWS	JPITTEN1	
L1 ADDED B953 TRC CODE L2 NOTES UPDATED L3 ADDED WIRE SEALS AELE-E-11784007-531 20180816			
YAZAKI	WMACZEWS	JPITTEN1	

CIRCUIT CONTROLS CORPORATION
APR 1 0 2019
ENGINEERING DEPARTMENT
CONTROLLED COPY

REFERENCE: 1.5mm TERMINAL, YAZAKI NORTH AMERICA (7040)

PART MUST COMPLY WITH RESTRICTED SUBSTANCE MANAGEMENT STANDARD WSS-M99P9999-A1 TO SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT

DRAFTED IN ACCORDANCE WITH FORD MOTOR COMPANY ENGINEERING CAD AND DRAFTING STANDARDS VERSION 28.1 — 3RD ANGLE PROJ — DIMENSIONS ARE IN MILLIMETERS

THE MASTER SOURCE OF INFORMATION FOR THIS DRAWING IS IN A PE COMPUTER DATABASE. CHANGES ARE NOT PERMITTED WITHOUT PRIOR CONSENT OF THE RELEVANT ENGINEERING CAD ACTIVITY.

GENERAL TOLERANCE	10MAX	50MAX	100MAX	250MAX	2500VR	ANGLE	ECCENT
(A)	±0.15	±0.2	±0.3	±0.5	±0.75	±30'	±0.1
B	±0.2	±0.3	±0.55	±0.95	±1.4	±30'	±0.1
C	±0.3	±0.5	±0.8	±1.4	±2	±30'	±0.15

EU5T-14474-MAA	CAD TYPE K-CATIA5	CAD LOC. TCe	CAD FILE DRW 97BG-14474-AD-DWG-01	DTMC IS MASTER
EU5T-14474 NAA	OPER. NO. N/A	UNIT N/A	DRAWING 97BG-14474-ADA	
98BG-14474-AKA	DESIGN YAZAKI	DETAIL SIKANIC	TITLE TRMNL WIR SNP ON FEM	SHT 1 OF 2
97BG-14474-AJA	CHECKED WMACZEWS	SAFETY N/A		RH/LH N/A
97BG-14474-AHA	SCALE 5:1	DATE 20130925	DIVISION N/A PLANT N/A	
97BG-14474-AEA	FORD MOTOR COMPANY			

232117

CERTIFICATION REPORT

Aurubis

SOLD TO	SHIP TO	ENTRY - BOL
CIRCUIT CONTROLS CORP. 2277 M-119 HIGHWAY PETOSKEY, MI 49770	CIRCUIT CONTROLS CORP. 2277 M-119 HIGHWAY PETOSKEY, MI 49770	39848-465917
		ALLOY: KLF5

PRODUCT DESCRIPTION	QUANTITY ORDERED		CUSTOMER ORDER NO.
1.2950 .00980 H04 PHOS BRONZE KLF-5 STRIP P/N 1794-2500-3290 DATED 1/30/08	PCS. LBS. 999003	PCS. 1 LBS. 2174 DATE 10/10/2023 TIME 11:46:26 AM	OUTO-3/PULL GOVT CONTRACT NO.

COIL NUMBER	468121AA					MIN	MAX
COMPOSITION - %							
Copper	97.63					REM	
Iron	.098					.08	.12
Phosphorous	.031					.025	.040
Tin	2.02					1.8	2.2
PROPERTIES							
Tensile Str. (N/mm²)	558					541	640
Elongation (%)	8.3					8.0	
Grain Size (RTF) in mm	.005						.020
Vickers	184					170	200
Bend Test (L)	OK					180	
Bend Test (T)	OK					180	
Elec. Cond. (%) IACS	38.00					30.00	40.00
RA Side-A (µm)	.14						.20
RA Side-B (µm)	.10						.20
Spring Limit (N/mm²)	445.6					440.7	540.0
Gauge in mm	.245					.240	.260

WE HEREBY CERTIFY that these test results were obtained from samples taken from coil(s), which were produced for the purchase order stated. These samples have been subjected to the tests called for by the customer and /or ASTM specification(s).

This product was manufactured in compliance with all applicable government and safety constraints on restricted, toxic, and hazardous materials and complies to the Restriction of Hazardous Substances RoHS 3 (EU Directive 2015/863) and the Consumer Product Safety Improvement Act of 2008. Aurubis Buffalo, Inc. product Safety Data Sheets (SDS) provides component information for all hazardous materials in conformance with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Lawrence Wypij

Technical Department - Lawrence Wypij