National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 1 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
Permanent Facility				
1	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	5 Contact Parts per Test Batch shall be Inserted and Disconnected 5 Times	GS 95006, B 5.1
2	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Actuation Forces of the Secondary Lock	LV 214, E 6.4
3	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	All Device under Test (DUT) are Inserted	LV 214, B 5.2
4	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	All Device under Test (DUT) are Inserted	MBN 10384, B 5.2
5	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	All Device under Test (DUT) are Inserted	VW 75174, L 5,2
6	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Circuit Continuity Monitoring	USCAR- 2 Rev 7, 5.1.9
7	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Conditioning	PF 90012,1.8.2
8	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Connector and/or Terminal Cycling	USCAR-2 Rev 7, 5.1.7

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 2 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
9	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Connector and/or Terminal, Mate Cycling	USCAR-37, 5.1.7
10	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Disturbance	IEC 60512-2-5
11	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Engagement Length	GS 95006, E 4.1
12	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Engagement Length	LV 214, E4.1
13	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Engagement Length	MBN 10384, E 4.1
14	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Opening Dimension	GS 95006, E 5,1
15	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Opening Dimension	LV 214, E5.1
16	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Opening Dimension	MBN 10384, E 5
17	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Opening Dimension	VW 75174, P 5.1

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 3 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
18	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Opening Dimension and Surface Analysis	GS 95006, E 14.2
19	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Opening Dimension and Surface Analysis	VW 75174 , P 14.2
20	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Opening Dimension, Surface Analysis	LV 214,E 14.2
21	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Opening Dimension, Surface Analysis	MBN 10384, E 14,2
22	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Overlap	VW 75174, P 4.1
23	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Resistance	GS 95006, E 0.2
24	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Resistance	LV 214, E0.2
25	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Resistance	MBN 10384, E 14,0
26	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Resistance - millivolt Level Method	IEC 60512-2-1

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 4 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
27	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Resistance - Specified Test Current Method	IEC 60512-2-2
28	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Resistance Measurement	GS 95006, E 14.0
29	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Contact Resistance, Continuous Monitoring, Recording and Storing	LV 214, E 14.0
30	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Cross-Section Analysis	USCAR-21 Rev-4, 4.3
31	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dimension (Length)	GS 95006, E 1.1
32	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dimension (Length)	LV 214, E 1.1
33	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dimension (Length)	MBN 10384, E 1.1
34	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dimension (Length)	VW 75174, P 1.1
35	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dimension (Of Processed Components)	GS 95006, E 1.2

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 5 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
36	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dimension (Of Processed Components)	LV 214, E 1.2
37	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dimension (Of Processed Components)	MBN 10384, E 1.2
38	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dimension of Processed Components	VW 75174, P 1.2
39	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dry Circuit Resistance	PF 90012, 6.3.6 A
40	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dry Circuit Resistance	USCAR-2 REV 7, 5.3.1
41	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Dry Circuit Resistance	USCAR-37, 5.3.1
42	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Electrical Resistance Measurement (Dry Circuit and Voltage Drop)	USCAR-38, 4.7
43	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Extracting and Inserting 1X	VW 75174, L 19.8
44	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Extracting and Inserting at -20 °C	VW 75174, L20.4

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 6 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
45	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Function Check	VW 75174, P 21.1
46	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Function of the Primary Lock/ Latch Play	LV 214, E 6.2
47	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Function of the Primary Locking Device/ Latch Play	VW 7514, P 6.2
48	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Function of the Secondary Lock/ Latch Play	LV 214, E 6.3
49	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Function of the Secondary Locking Device/ Latch Play	VW 75174, P 6.3
50	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Functional Test	GS 95006, E 21.1
51	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Functional Test	LV 214, E 21.1
52	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Functional Test	MBN 10384, E 21.1
53	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Group Inserting and Extracting	VW 75174, L 19.0

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 7 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
54	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Insert all Contact Parts for Test Batches 2 to 5	GS 95006, B 5.2
55	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Insert and Disconnect the DUTs 2 Time	VW 80332, B 15.1
56	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Insert and Disconnect the Specimens 2 Times	VW 80302, B 15.1
57	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Insert and Disconnect the Specimens according to their Surface Finish	VW 80302, B 11.1
58	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Inserting and Extracting One Half of the Batch Size	VW 7514, L 5.1
59	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Inserting and Removing Groups	LV 214, B 19.0
60	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Insertion and Removal of Half of the Batch Size	LV 214, B 5.1
61	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Insertion and Removal of Half of the Batch Size	MBN 10384, B 5.1
62	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Marking on the Surface	LV 214, E 3.2

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 8 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
63	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Marking on the Surface	MBN 10384, E 3.2
64	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Marking on the Surface	VW 75174, P 3.2
65	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Marking on the Visible Surface	LV 214, E2.2
66	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Marking on the Visible Surface	MBN 10384, E 2.2
67	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Marking on the Visible Surface	VW 75174, P 2.2
68	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Marking on Visible Surface	GS 95006, E 3.2
69	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Marking on Visible Surface	GS 95006, E2.2
70	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Mat Seal Sample Prepration	USCAR-2 REV 7,5.1.10
71	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Mating Cycle Frequency	GS 95006, B 11.1

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 9 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
72	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Mating Cycle Frequency	LV 214, B 11.1
73	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Mating Cycle Frequency	MBN 10384,B 11.1
74	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Measurement Method for Dry Circuit Termination Resistance of Static Contact	USCAR-21 REV-4, 4.5.3
75	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Measurement of Terminal Resistance	PSA B217050, 8.1
76	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Number of Mating Cycles	VW 75174, L 11.1
77	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	One-time Disconnection and Insertion	LV 214, B 19.8
78	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Plugging and Unplugging Once	MBN 10384, B 19.8
79	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Removal and Insertion at -20 °C	LV 214 B 20.4
80	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Removal and Insertion at -20 °C	MBN 10384, B20.4

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 10 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
81	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Removal of the Contact Three times with Original Release Tools	LV 214, B 8.1
82	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Removal of the Contact Three times with Original Release Tools	MBN 10384, B 8.1
83	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Removing the Contacts from the Chamber 3 Times	VW 75174, L 8.1
84	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Resistance of Short Circuit Devices	GMW 3191, 4.5.1
85	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Shielding Volume Resistance	VW 80302, E 0.2.3
86	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Shielding Volume Resistance	VW 80332, E 0.2.3
87	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Terminal Resistance	Renault 36-05-088/--A, 5.3.1
88	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	The DUTs are Inserted and Disconnected 2 Times	MBN 10384, B 15.1
89	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	The DUTs are Inserted 2X an Extracted 2X	VW 75174, L 15.1

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 11 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
90	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	The DUTs are Inserted and Disconnected 2 Times	LV 214, B 15.1
91	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Visual Examination	GMW 3191, 3.4.1
92	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Visual Examination	GS 95006, E 0.1
93	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Visual Examination	IEC 60512-1-1
94	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Visual Examination	LV 214, E 0.1
95	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Visual Examination	MBN 10384, E 0.1
96	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Visual Examination	PF 90012, 6.2.1
97	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Visual Examination	VW 75174, P 0.1
98	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Visual Inspection	USCAR-2 Rev 7, 5.1.8

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 12 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
99	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Visual Inspection	USCAR-21 REV-4,4.2.2
100	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Visual Inspection	USCAR-38, 4.2
101	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Voltage Drop	GMW 3191, 4.3.3
102	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Voltage Drop	PF 90012, 6.3.6.B
103	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Voltage Drop	USCAR -2 Rev 7, 5.3.2
104	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Voltage Drop Measurement Procedure	USCAR-21 REV-4, 4.5.6
105	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Volume Resistance	VW 75174, P 0.2
106	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Cable Harness Components and their Original Products	Welded Termination Cross-section Analysis	USCAR-38, 4.3
107	ELECTRONICS-ELECTRONIC COMPONENTS & EQUIPMENT SUB ASSEMBLIES	Motor Vehicle Connectors Automotive Connectors Wiring Harnesses in Motor Vehicle Plug Connectors	Conditioning	GMW 3191, Clause 3.2.1

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 13 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
108	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Damp Heat Cycle	VW 75174, L 19.5
109	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Long-term Temperature Aging	VW 80332, PG 21
110	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Low Temperature Aging	VW 75174, L 20.3
111	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Pressure/ Vacuum Leak	USCAR-2 Rev 7,5.6.6
112	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Sealing with High Pressure Wash	PSA B21 7050 Ind E, 8.1.4
113	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature Change	VW 75174, L 19.2
114	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Ageing	ISO 8092-2, 4.18
115	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Shock	USCAR-2 Rev 7, 5.6.1
116	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Accelerated Environmental Exposure (Thermal Shock) Conditioning	USCAR-38, 4.5
117	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Accelerated Temperature/ Humidity Cycle Conditioning-24 hour Cycle Test Procedure	USCAR -21 Rev 04, 4.5.4
118	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing	GS 95006, B 28.1
119	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing	LV 214, B 28.1
120	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing	MBN 10384, B 28.1
121	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat	GS 95006, B 19.3

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 14 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
122	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat	GS 95006, B 20.1
123	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat	GS 95006, B 20.5
124	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat	GS 95006, B 5.3
125	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat	LV 214, B 19.3
126	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat	LV 214, B 20,1
127	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat	LV 214, B 20,5
128	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat	MBN 10384, B 19.3
129	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat	MBN 10384, B 20.5
130	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat, Inserted	LV 214, B 5.3
131	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing in Dry Heat, Inserted	MBN 10384, B 5.3
132	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Ageing	VW 75174, L 28.1
133	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Aging in Damp Heat Constant	VW 75174, L 20.2
134	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Aging in Dry Heat	MBN 10384, B 20.1
135	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Aging in Dry Heat Plugged	VW 75174, L 5.3

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 15 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
136	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Aging in Dry Heat	VW 75174, L 19.3
137	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Aging in Dry Heat	VW 75174, L 20.1
138	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Aging Process (Simulation of the Soldering Process)	VW 75174, 31.1
139	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Change of Temperature	IEC 60068-2-14
140	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Cold	IEC 60068-2-1
141	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Connector Drop Test	PF 90012, 6.4.2 N
142	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Connector Drop Test	USCAR-2 Rev, 7 5.4.8
143	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Damp Heat Cycle (12h+12h Cycle)	IEC 60068-2-30
144	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Damp Heat Cycle	VW 75174, L 15.3
145	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Damp Heat, Steady State	IEC 60068-2-78
146	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Degree of Protection Test/ Pressure Washer Test	GS 95006, B 23.4
147	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Degree of Protection Test/ Pressure Washer Test	LV 214, B 23.4
148	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Degree of Protection Test/ Pressure Washer Test	MBN 10384, B 23.4
149	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Degree of Protection Testing/ Pressure w Washer Test	VW 75174, Clause L 23.4

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 16 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
150	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Degrees of Protection provided by Encloures	IEC 60529
151	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Drop Test	GS 95006, B 6.1
152	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Drop Test	LV 214, B 6.1
153	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Drop Test	MBN 10384, B 6.1
154	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Drop Test	VW 75174, L 6.1
155	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Drop Test	VW 80332, B 6.1
156	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Dry Heat	IEC 60068-2-2
157	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Free Fall	ISO 16750-3, 4.3 (E)
158	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	High Pressure Spray	GMW 3191, 4.4:11
159	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	High Pressure Spray	PF 90012, 5.2.8
160	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	High Pressure Spray	USCAR-2 Rev 7,5.6,7
161	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	High Pressure Wash	14311:022020-076 :5.10
162	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	High Pressure Wash	PSA B21 7130 Ind E, 5.2.4/Cl. 16
163	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	High Pressure Water Jet	JASO D 616 e 6.18

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 17 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
164	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	High Pressure Water Jet	SMTC 3862001 7.6.3
165	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	High Temperature Exposure	PF 90012, 5.2.3
166	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	High Temperature Exposure	USCAR-2 REV 7, 5.6.3
167	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humid Heat Constant	GS 95006, B 20.2
168	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humid Heat Constant (HHCO)	GMW 3191, 4.4.4
169	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humid Heat Cyclic Test	GS 95006, B 15.3
170	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humid Heat Cyclic Test	GS 95006, B 19.5
171	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humid Heat Cyclic Test	LV 214, B 15.3
172	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humid Heat Cyclic Test	LV 214, B 19.5
173	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humid Heat Cyclic Test	MBN 10384, B 15.3
174	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humid Heat Cyclic Test	MBN 10384, B 19.5
175	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humid Heat, Constant	LV 214, B 20.2
176	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humid Heat, Constant	MBN 10384, B 20.2
177	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Humidity Heat Cyclic	GMW 3191, 4.4.3

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 18 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
178	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Immersion with Pressure Difference	GS 95006, B 23.1
179	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Long-term Ageing in Dry Heat	GS 95006, B 21.1
180	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Long-term Ageing in Dry Heat	LV 214, B 21.1
181	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Long-term Ageing in Dry Heat	MBN 10384, B 21.1
182	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Long-term Aging in Dry Heat	VW 75174, L 21.1
183	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Low Temperature Ageing	GS 95006, B 20.3
184	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Low Temperature Ageing	GS 95006, B 20.3
185	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Low Temperature Ageing	LV 214, B 20.3
186	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Low Temperature Ageing	MBN 10384, B 20.3
187	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Pressure/ Vacuum Leak	GMW 3191, 4.4.10
188	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Rapid Change of Temperature	IEC 60512-11-4
189	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Road Vehicles "Degrees of Protection (IP Code)" Protection of Electrical Equipment against Foreign Objects, Water and Access	ISO 20653
190	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Submersion	USCAR-2 Rev 7, 5.6.5

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 19 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
191	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature Cycle	LV 214, B 19.2
192	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature Cycle	MBN 10384, B 19.2
193	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature Cycle (All Groups)	GS 95006, B 19.2
194	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature Humidity	PF 90012, 5.2.2
195	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature Humidity Cycling	USCAR-2 Rev 7, 5.6.2
196	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature Shock	GS 95006, B 19.1
197	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature Shock	LV 214, B 19 .1
198	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature Shock	MBN 10384, B 19.1
199	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature/ Humidity Cycling	ISO 8092-2, 4.10
200	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Temperature/Current Cycle Endurance Test	GS 95006, B 15.2
201	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Ageing	GMW 3191, 4.4.1
202	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Shock	GMW 3191, 4.4.2
203	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Shock	PF 90012, 5.2.1
204	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Shock Conditioning Procedure	USCAR-21 Rev-4,4.5.5

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 20 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
205	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Shock Test	GS 95006, B 23.3
206	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Shock Test	LV 214, B 23.3
207	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Shock Test	MBN 10384, B 23.3
208	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Shock	VW 75174, L 19.1
209	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Shock	VW 75174, L 23.3
210	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Time Constant	GS 95006, E 14.1
211	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Time Constant	LV 214, E 14.1
212	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Time Constant	MBN 10384, E 14.1
213	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Thermal Time Constant	VW 75174, P 14.1
214	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Water Submersion	GMW 3191, 4.4.9
215	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Water Submersion	PF 90012, 5.2.6
216	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Water Tightness	VW 80302, PG 23
217	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Cable Harness Components and their Original Products	Water Tightness	VW 80332, PG 23
218	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	1008 hour Current Cycling	PF 90012, 6 .3.6 E

SCOPE OF ACCREDITATION

Laboratory Name :	APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-11350	**Page No**	21 of 31
Validity	01/02/2023 to 31/01/2025	**Last Amended on**	-

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
219	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Actuation Forces for a Secondary Lock	GS 95006, E 6.4
220	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Conductor Crimp Pull Out Force Test	USCAR-21 Rev-4,4.4
221	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Conductor Pull Out Strength (Only in Connection with Crimp)	MBN 10384, E 10.1
222	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Conductor Pull-out Strength	VW 75174, PG 10
223	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Conductor/ Terminal Attachment Pull Out Force	USCAR-37, 5.2.3
224	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Lock Mechanical Overstress (Wire Snagging)	GMW 3191, 4.2.14
225	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Mounting Feature Mechanical Strength	GMW 3191, 4.2.12
226	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Mounting Feature Mechanical Strength	PF 90012, 6.4.2 O
227	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Mounting Feature Mechanical Strength	USCAR-2 Rev 7,5.4.11
228	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Position Assurance (CPA) Functional Test	LV 214, E 7.3
229	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector to Connector Mate/ Unmate Force (Mechanical Assist) Unmating Force	USCAR-2 REV 7, 5.4.3
230	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector to Connector Mating and Un-mating Force (Connectors with Mechanical Assist)	PF 90012, 6.4.2.E
231	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector-connector Mating/ Un-mating/ Retention/ Lock Deflection Forces (Non-assist) Unmating/ Retention Force	USCAR-2 Rev 7,5.4.2 B
232	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector-connector Mating/Un-mating Force (Non-mechanical Assist)	PF 90012, 6.4.2 D
233	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Contact Removal Force from the Housing	LV 214, E 8.2
234	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Contact Removal Force from the Housing	MBN 10384, E 8.2

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 22 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
235	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	CPA Function Test	MBN 10384, E 7.3
236	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Crimp Strength	PF 90012, 6.4.1.D
237	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Current Excess Temperature with Housing	GS 95006, E 13.1
238	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Current Excess Temperature with Housing	LV 214, E 13.1
239	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Current Excess Temperature	LV 214, E 12.1
240	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Current Excess Temperature	MBN 10384 , E 12.1
241	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Determination of the Retention Force of the Blind Plugs p max	GS 95006, E 29.2
242	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Determining the Contact Insertion Forces	VW 75174, P 8.1
243	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Error-proof Design of Housings	LV 214, E 7.1
244	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Error-proof Design of Housings	MBN 10384, E 7.1
245	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Fixing Clip	PF 90012, 6.4.2 P
246	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Function of the Secondary Lock (Latch Play)	GS 95006, E 6.3
247	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Header Pin Retention	USCAR-2 Rev 7, 5.7.1
248	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insertion and Extraction Force, Without Additional Lubricants (Disengage)	VW 75174, P 11.1
249	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	ISO 16750-2, 4.12
250	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	PSA B217050, 8.2
251	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	Renault 36-05-088/--A, 5.3.3
252	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	LV 214, E 0.3

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 23 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
253	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Load Contact/ Plug Connection Derating	VW 80332, E 13.2 (13.14.1)
254	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Locked Connector Disengagement Force	GMW 3191, 4.2.18
255	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Mating and Unmating Force	Renault 36-05-088/--A, 5.2.1
256	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Mechanical Assist Integrity (Connectors with Mechanical Assist only)	USCAR-2 Rev 7, 5.4.12
257	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Mechanical Assist Robustness (Prior to Mate)	GMW 3191, 4.2.11
258	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Peel Strength Test Procedure	USCAR-38, Clause 4.4.4
259	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Plugging and Removal Force, without Additional Lubricant (Disengage)	LV 214, E 11.1
260	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Protection against Contact	VW 80302, PG 51
261	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Protection against Contact	VW 80332, PG 51
262	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Pull-out Force from the Insulation Displacement Connection (Only in Connection with Insulation Displacement Connection - IDC)	LV 214, E 10.2
263	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Shield Termination Ferrule Retention Test (Mechanical)	USCAR-37, 5.2.4
264	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Temperature Cycle Endurance Test/ Current Cycle Endurance Test	GS 95006, B 15.2
265	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Temperature Raise	IEC 60512- 5-1
266	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Tensile Strength Test Procedure	USCAR-38-1, Clause 4.4.5
267	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Bent Resistance	PF 90012, 6.4.1 B
268	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Push Out Force (Male Pins)	GMW 3191, 4.5.2
269	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal to Terminal Engage/ Disengage Force	PF 90012, 6.4.1 A

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 24 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
270	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Withstand Voltage	ISO 8092-2, 4.13
271	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	1008 h Current Cycling	GMW 3191, 4.3.4
272	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Actuation Forces for a Secondary Lock	MBN 10384, E 6.4
273	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Actuation Forces of the Secondary Locking Device	VW 75174, P 6.4
274	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Applied Cable Seal Retention	USCAR AR-21 Rev-4,4.6
275	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Cavity Damage Susceptibility	USCAR-2 Rev 7,5.4.9
276	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Conductor Pull Out Strength (Only in Connection with Crimp)	LV 214, E 10.1
277	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connection and Disconnection	ISO 8092-2, 4.3
278	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Polarization (Coding) and Mis-Mating Feature Effectiveness	GMW 3191, 4.2.20
279	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Position Assurance (CPA)	PF 90012, 6.4.2 J
280	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Seal Retention	PF 90012, 6.4.2 H
281	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Seal Retention: Mated Connector	GMW 3191, 4.2.16
282	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Seal Retention: Mated Connector	USCAR-2 Rev-7, 5.4.1.4
283	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Seal Retention: Unmated Connector	GMW 3191, 4.2.17
284	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector Seal Retention-unmated Connector	USCAR-2 Rev 7,5.4.13
285	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector to Connector Engagement Force	GMW 3191, 4.2.8
286	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector-connector Mating/ Un-mating/ Retention/ Lock Deflection Forces (Non-assist) (Lock Deflection Force)	USCAR-2 Rev 7,5.4.2 C

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 25 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
287	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Connector-connector Mating/ Un-mating/ Retention/ Lock Deflection Forces (Non-assist) (Mating Force)	USCAR-2 Rev 7,5.4.2 A
288	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Contact Insertion, Release and Extraction Force (Extraction)	IEC 60512-15-4
289	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Contact Removal Force from the Housing	GS 95006, E 8.2
290	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Contact Resistance Continuos Monitoring Recording and Storing	MBN 10384, E 14.0
291	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Contact Retention in Insert	IEC 60512-15-4
292	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Contact with Pull-out Strength from the Contact Housing	VW 75174, P 8.2
293	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Contact: Conductor Pull-out Strength	VW 80332, PG 10
294	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Contact-Bending Strength	IEC 60512-16-3
295	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	CPA Forces	GMW 3191, 4.2.15
296	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	CPA Function Check	VW 75174, P 7.3
297	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	CPA Function Test	GS 95006, E 7.3
298	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Crimp/ Weld Integrity	GMW 3191, 4.2.2
299	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Current Cycling	USCAR-2 Rev 7, 5.3.4
300	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Current Excess Temperature with Hhousing	MBN 10384, E 13.1
301	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Current Over Temperature with Contact Housing	VW 75174, P 13.1
302	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Current Over Temperature	GS 95006, E 12.1
303	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Current Over Temperature	VW 75174, P 12.1
304	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Current-Temperature Derating	IEC 60512-5-2

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 26 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
305	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Derating with Contact Housing	VW 75174, P 13.2
306	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Derating with Housing	LV 214, E 13.2
307	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Derating with Housing	GS 95006, E 13.2
308	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Derating with Housing	MBN 10384, E 13.2
309	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Derating without Contact Housing	VW 75174, P 12.2
310	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Derating without Housing	GS 95006, E 12.2
311	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Derating without Housing	LV 214, E 12.2
312	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Derating without Housing	MBN 10384, E 12.2
313	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Determination of the Contact Insertion Forces	GS 95006, E 8.1
314	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Determination of the Contact Insertion Forces	LV 214, E 8.1
315	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Determination of the Retention Force of the Blind Plugs p max	MBN 10384, E 29.2
316	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Dielectric Rigidity	PSA B217050, 8.3
317	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Dielectric Strength	GMW 3191, 4.3.6
318	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Dielectric Strength	PF 90012, 6,3.7 B
319	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Dielectric Strength	Renault 36-05-088/--A, 5.3.2
320	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Dielectric Strength	VW 80302, E 0.4
321	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Dielectric Strength	VW 80332, E 0.4
322	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Dielectric withstand Voltage Test	USCAR-37, 5.5.2
323	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Distinctiveness of the Contact Housing	VW 74174, P 7.1

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 27 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
324	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Distinctiveness of the Retention Force the Blind Plugs p max	LV 214, E 29.2
325	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Electric Current Cycling Test (ECC)	USCAR-21 Rev-4, 4.5.1
326	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Engaging and Separating Forces	IEC 60512-13-1
327	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Error-proof Design of Housings	GS 95006, E 7.1
328	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Function of Primary Lock (Latch Play)	GS 95006, E 6.2
329	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Function of Primary Lock/ Latch Play	MBN 10384, E 6.2
330	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Function of the Secondary Lock/ Latch Play	MBN 10384, E 6.3
331	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Header Pin Retention	PF 90012, 6.4.3 A
332	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Heavy Duty Cycle Continuous Loading Test	GMW 3191, 4. 4.5
333	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Heavy Duty Test	PF 90012, 5.2.4
334	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Holding Force of the Contact Housing Latch/ Lock	VW 75174, P 7.2
335	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Independent Secondary Lock (ISL) or Terminal Position Assuarance (TPA)	PF 90012, 6.4.2 I
336	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Inserting and Removing Groups	MBN 10384, B 19.0
337	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	insertion and Extraction Force, Without Additional Lubricants (Engage)	VW 75174, P 11.1
338	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insertion Force or Actuation Force for Insertion and Extraction Aids	VW 75174, P 7.4
339	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insertion Force or Actuation Force for Insertion and Removal Aids	GS 95006, E 7.4
340	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insertion Force or Actuation Force for Insertion and Removal Aids	LV 214, E 7.4

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 28 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
341	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insertion Force or Actuation Force for Insertion and Removal Aids	MBN 10384, E 7.4
342	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	GS 95006, E 0.3
343	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	MBN 10384, E 0.3
344	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	PF 90012, 6.3.7 A
345	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	IEC 60512 -3-1
346	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	USCAR-2 Rev 7,5.5.1
347	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	VW 75174, P 0.3
348	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	VW 80302, E 0.3
349	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Insulation Resistance	VW 80332, E 0.3
350	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Isolation Resistance	GMW 3191, 4.3.5
351	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Lever/ Slide Blocking Force (Open Position)	GMW 3191, 4.2.10
352	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Mating and Unmating	ISO 19072-2, 4.3
353	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Mating Force	PSA B217050, 9.2.1
354	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Maximum Current Rating	GMW 3191, 4.3.1
355	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Maximum Test Current Capability	PF 90012, 6.3.6 D
356	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Maximum Test Current Capability	USCAR-2 Rev 7, 5.3.3
357	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Mechanical Assist Integrity (Connectors with Mechanical Assist only)	PF 90012, 6.4.2 Q
358	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Miscellaneous Component Engage/ Disengage Force	USCAR-2 Rev 7, 5.4.5

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 29 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
359	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Pin/ Blade Holding Force	VW 75174, P 31.1
360	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Plugging and Pull-off Force (Without Additional Lubricant) (Disengage)	GS 95006, E 11.1
361	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Plugging and Pull-off Force (without Additional Lubricants) (Engage)	GS 95006, E 11.1
362	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Plugging and Removal Force, without Additional Lubricants (Engage)	LV 214, E 11.1
363	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Pluging and Removal Force, without Additional Lubricants (Disengage)	MBN 10384, E 11.1
364	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Pluging and Removal Force, without Additional Lubricants (Engage)	MNB 10384, E 11.1
365	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Polarization Feature Effectiveness	PF 90012, 6.4.2 F
366	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Polarization Feature Effectiveness	USCAR-2 Rev 7, 5.4.4
367	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Polarizing and Keying Method	IEC 60512-13-5
368	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Pull-out Force from the Insulation Displacement Connection (Only in Connection with Insulation Displacement Connection-IDC)	MBN 10384, E 10.2
369	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Pull-out Force from the Insulation Displacement Connection	GS 95006, E 10.2
370	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Pull-out Strength from the Insulation Displacement Connector (Only in Connection with Insulation Displacement Connector)	VW 75174, P 10.1
371	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Retention Force of the Housing Latch/ Lock	GS 95006 E,7.2
372	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Retention Force of the Housing Latch/ Lock	LV 214, E 7.2

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 30 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
373	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Retention Force of the Housing Latch/ Lock	MBN 10384, E 7.2
374	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Scoop Proofing	PF 0012, 6.4.2 G
375	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Shield Termination Isolation Resistance Test (Electrical)	USCAR- 37, 5.2.5
376	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Shielding Derating	VW 80332, E 13.3 (13.4.2)
377	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Temperature Cycle Endurance Test/ Current Cycle Endurance Test	MBN 10384, B 15.2
378	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Temperature Cycle Endurance Test/ Current Cycle Endurance Test	LV 214, B 15.2
379	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Temperature Cycle/ Current Cycle Durability Testing	VW 75174, L 15.2
380	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Tensile and Compressive Strength Fixed Male Tabs	IEC 60512-16-17
381	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Tensile Strength (Crimped Connections)	IEC 60512-16-4
382	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Bent Resistance	GMW 3191, 4.2.7
383	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Bent Resistance	USCAR-2 Rev 7,5.2.2
384	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Blade Bend Resistance	GMW 3191, 4.2.22
385	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Cavity Polarization Effectiveness	GMW 3191, 4.2.6
386	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Connector Insertion/ Retention and Forword Stop Force (Insertion Force)	USCAR-2 Rev 7 5.4.1.A
387	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Connector Insertion/ Retention and Forword Stop Force (Retention Force)	USCAR-2 Rev 7,5.4.1.B
388	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal from Connector Extraction force	GMW 3191, 4.2.5
389	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Insertion Force into Connector	PF 90012, 6.4.2 A

SCOPE OF ACCREDITATION

Laboratory Name : APTIV CONNECTION SYSTEMS INDIA PRIVATE LIMITED ENGINEERING LAB, 7/60-A & 60-B, ARAKKUNNAM PULIKKAMALI ROAD, ERNAKULAM, KERALA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-11350 **Page No** 31 of 31

Validity 01/02/2023 to 31/01/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
390	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Mechanical Overstress	PF 900012, 6.4.1 C
391	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal Retention Force from Connector	PF 90012, 6.4.2 B
392	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal to Connector Engagment Force (TPA in Open Position)	GMW 3191, 4.2.4
393	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal to Terminal Engage/ Disengage Force (Disengage Force)	USCAR-2 Rev 7, 5.2.1
394	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal to Terminal Engage/ Disengage Force (Engage Force)	USACR-2 Rev 7 5.2.1
395	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal to Terminal Engagement Force	GMW 3191, 4.2.3
396	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal/ Cavity Polarization Test	PF 90012, 6.4.2 C
397	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Terminal/ Cavity Polarization Test	USCAR-2 Rev 7 5.4.10
398	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	TPA Forces	GMW 3191, 4.2.9
399	ELECTRONICS- SAFETY TESTING FACILITY	Cable Harness Components and their Original Products	Unlocked Connector Disengagement Force	GMW 3191, 4.2.19