The product described in this document has not been fully tested to ensure conformance to the requirements outlined below. Therefore, TE Connectivity (TE) makes no representation or warranty, express or implied, that the product will comply with these requirements. Further, TE may change these requirements based on the results of additional testing and evaluation. Contact TE Engineering for further details.

MicroBridge – Discrete Wire

Table of Contents

| Indicates Change

1. SCOPE

1.1. Content

This specification describes the requirements, performance and testing for the Insulation Displacement Connector (IDC) system MicroBridge.

The platform is intended for use with discrete wire and has pin counts from 2 to 16 position.

MicroBridge Female connector with cable outlet 180° or 90° in combination with Male connector PCB orientation straight or right angled.

1.2. General Product Description

This Insulation Displacement Connector (IDC) contact system combines the features of high packing density, robust construction and highest functional requirements. Despite its miniaturized design with a pitch of 1,27mm, it fulfills all requirements for a contact system suitable for use in automobiles on a high-performance level.

The electrical contact is made by a rectangle pin with dimension of 0.5mmx0.4mm. The IDC socket contact has two contact points for electrical connection. The contact normal force is generated by a dual beam contact system.

The IDC contact is inseparably attached to the female housing. The IDC supports two different wire sizes. A version for exclusively AWG22/0,35mm² wire or exclusively AWG24/0,22mm² wire is available.

A primary and secondary locking device (TPA) is not needed for IDC connection.

Optionally available is an electrical Connector Position Assurance (eCPA). To implement this eCPA functionality only the appropriate eCPA male header version is required.

Each pole number variant provides 4 mechanical codings each in a different colour.

The connector system is unsealed.

1.3. Qualification

The following guidelines and standards must be used during testing. All tests must be carried out according to the associated inspection plans and drawings.

1.4. Qualification Test Results

The product performs the electrical, mechanical and climatic requirements of Chapter 3.5

2. APPLICABLE DOCUMENTS AND FORMS

The following documents constitute a part of this specification to the extent specified herein. Unless otherwise indicated, the latest edition of the document is applicable.

2.1. TE Documents

- 114-TBD: Application Specification (TBD)
- 501-TBD: Qualification Test Report (TBD)

	Industrial + MIL	Industrial UL	Automotive	Automotive
Specification	IEC60603 EN 60352-2	UL 1977 (USR) UL/CSA	USCAR2 USCAR21	LV214
Test Report No	-	-	-	501-2002-11bc_AE 501-2002-11e_AE 501-2002-25cgh_AE 501-2002-27gh_AE 501-2014-1a_AE 501-2014-25cgh_AE 501-2016-11bc_AE 501-2016-11e_AE 501-2016-27gh_AE 501-2021-25CPA_AE 501-2021-25_Coding_14-pin_green_red_AE 501-2021-25-Coding_2-pin_green_red_AE 501-2021-25_Coding_6-pin_red_AE

2.2. Industry Documents and Standards

- DIN/IEC 60512 Electromechanical components for electrical equipment, basic testing procedures and measuring methods
- DIN EN 60068 Environmental testing
- IPC/JEDEC J-STD-020 Moisture/Reflow Sensitivity Classification for Non-hermetic Solid State Surface Mount Devices
- ISO 6722-1 Road vehicles – 60V and 600V single-core-cables
- LV112 Electrical Cables in Motor Vehicles (VW60306:2018-09)
- LV214 Motor Vehicle Connectors (VW75174:2018-10; VW75174:2010-04)
- LV214-2 Vehicles Contacts, Slow Motion Test (VW75174-2:2008-01; VW75174-2:2020-02)

2.3. Reference Document

- 109-197 Test Specification (TE Test Specification vs EIA and IEC Test Methods)

3. REQUIREMENTS

3.1. Design and Construction

Product shall be of the design, construction, materials and physical dimensions specified on the applicable product drawing.

The product has the following ratings (operating):

	Industrial + MIL	Industrial UL	Automotive	Automotive
Specification	IEC60603	UL 1977 (USR)	USCAR2 USCAR21	LV214
Temperature Class - Au	-	-	-	-40°C to 150°C
Vibration Class - Sinusoidal - Random - Shock	-	-	-	PG17 S2
Sealing Class IP Class Female type P cable outlet 90° Female type A cable outlet 180°	-	-	-	Unsealed IP00 IP30
Operating Voltage (U_{RMS})	-	-		70 VDC*
Durability Mating Cycles - Au	-	-	-	100 cycles
Current Carrying Capability *0,22mm² (FLR2X-0,22sn-A)* *0,22mm² IDC qualification still in progress.* 0,35mm²	-	-	-	*3,80A (2-pole)* *2,35A (14-pole)* *for information only* 6,80A (2-pole) 3,75A (14-pole) 3,70A (16-pole)
Wire Size **	*0,22mm² **** / 0,35mm² *****			
IDC Qualification	-	-	-	LV214-2
Flammability (Connector HSG Components)	UL94 V0			

* Voltage Rating is in accordance with IEC 60 664-1 (DIN VDE 0110) – corresponding to C&C, CTI and Pollution Degree 2

** Only discrete wire 7-standed is applicable

*** Only wire with “reduced” insulation material is applicable (FLR)

**** Only wire with “ultrathin” insulation material is applicable (FLU)

FYI: 0,22mm² IDC qualification still in progress

3.2. Materials

Description	Material	Color * with Mechanical Coding	Characteristics
Female housing	PPA reinforced	black*, blue*, green*, red*	CTI ≥ 600
Cable guide	PPA reinforced		CTI ≥ 600
Female IDC contact	CuNiSi		
Plating connection area	Sn over Ni		
Plating contact area	Au over Ni		
Male housing (angled)	LCP reinforced	black*, blue*, green*, red*	CTI = 175
Male contact (angled)	CuNiSi		
Plating connection area	Sn over Ni		
Plating contact area	Au over Ni		
Male housing (straight)	PPA reinforced	black*, blue*, green*, red*	CTI ≥ 600
Male contact (straight)	CuNiSi		
Plating connection area	Sn over Ni		
Plating contact area	Au over Ni		

3.3. Ratings

Pin count	Voltage Rating (U_{RMS})	Maximum Current[2] (AWG22/0,35mm²)	Ambient Temperature[3] for operation	Maximum Operating temperature[4]
2 – 16	70 VDC[1]	9.0 A at 20 °C 6.0 A at 90 °C 5.1 A at 105°C 3.7 A at 125°C 0.0 A at 150°C	-40 °C to 150 °C Additional restrictions may result from the applied wire.	150 °C with 0 A Additional restrictions may result from the applied wire.

[1] Voltage Rating is in accordance with IEC 60 664-1 (DIN VDE 0110) – corresponding to C&C, CTI and Pollution Degree 2.
[2] Maximum current for 2-pin connector (type A male header 90°& type A female receptacle 180°) on Standard one-layer FR4 PCB. For other number of poles and wire cross section the number of poles and cross section specific derating curve must be applied.
[3] Environmental temperatures wherein the assembly is allowed to operate in.
[4] Maximum operating temperature - including temperature rise of the contacts by applying an electrical current.

3.4. Quality Assurance Provision

3.4.1. Operation Mode

- Pollution degrees 2 addition: restricted to a non-condensing environment. (IEC 61010-1)
- Overvoltage category 2 (IEC 60664-1)
- Maximum operating altitude 2000 m (IEC 60664-1)
- Condensation: Not permitted
- Icing: Not permitted
- Precipitation, rainfall: Not permitted
- Water (except rainfall): Not permitted
- Moisture: Permitted

3.4.2. Storage Conditions:

- Male connectors: max. Temperature 30°C / max. moisture 60%RH

3.4.3. Technical Cleanliness:

- VDA Band 19 / ISO 16232, max. metallic flitter size: 500µm

3.4.4. Soldering and MSL:

- IPC/JEDEC J-STD-020
- MSL 1* (* stored under conditions 30°C/60%RH)

3.4.5. Test Condition

Unless otherwise specified, all tests shall be performed at ambient environmental conditions.

Temperature	15 – 35 °C
Relative humidity	25 - 75%
Atmospheric pressure	86 – 106 kPa

3.5. Test Requirements and Procedures Summary

Unless otherwise specified, all tests shall be performed at ambient environmental conditions.

Test Coverage:

LV214 Motor vehicles connectors (VW75174:2018-10)

LV214-2 Vehicle Contacts Slow Motion Test (VW75174-2:2008-01; VW75174-2:2020-02)

All specified test groups of LV214 were defined in a qualification matrix in coordination with a premium automotive OEM. All other test groups are valid from the qualification of the MicroBridge product family.

Alle festgelegten Prüfgruppen der LV214 wurden in Abstimmung mit einem premium Automotive OEM in einer Qualifikationsmatrix festgelegt. Alle anderen Prüfgruppen sind aus der Qualifikation der Produktfamilie MicroBridge gültig.

TEST DESCRIPTION	REQUIREMENT	PROCEDURE
VISUAL / GENERAL		
LV214 TG0 / TG1 Initial examination of product / Visual inspection Dimensions	Meets requirements of product drawing (drawing conformity)	VW75174:2018-10 E0.1 / DIN EN 60512-1-1 E1.1 / DIN EN 60512-1-2
LV214 TG1 Dimension of processed components	Meets requirements of product drawing (drawing conformity)	VW75174:2018-10 E1.2 / DIN EN 60512-1-2

	ELECTRICAL	
LV214 – TG0 **Inspection of as-received condition**		VW75174:2018-10
Volume resistance	R < 30mΩ (with 0,35mm²) R < 40mΩ (with 0,22mm²)	E0.2 / DIN EN 60512-2-1 **See Chapter 4.2** Resistance Limits – LV214 Appendix Table D.1
Insulation resistance	R_{ins} > 100MΩ at U=500V, t=60s	E0.3 / DIN EN 60512-3-1
LV214 – TG12 **Current heating, derating**		VW75174:2010-04
Derating without contact housing	Documentation and Determination Nominal current I_{nom} 0,22mm² 3,80A (2-pole) 2,35A (14-pole) 0,35mm² 6,80A (2-pole) 3,75A (14-pole) 3,70A (16-pole)	E12.2 / DIN EN 60512-5-2 without housing n.a., contact parts are inseparably attached to the housing. It is not possible to assemble the wire without a housing. E12.1 / DIN EN 60512-5-1 For nominal current (I_{nom}/I_{test}) a current I [A] is defined by manufacturer.
LV214 – PG13 **Influence of the contact housing on the derating**		VW75174:2010-04 VW75174:2018-10
Derating with contact housing	**See Chapter 4.1** Derating – Number of Pole Specific The number of poles specific derating curve must be applied. The current carrying capacity can be limited by the used wire.	E13.2
LV214 – TG14 **Thermal time constant (current overtemperature at n times the nominal current)**		VW75174:2010-04 /
Thermal time constant	**See Chapter 4.3** Thermal Time Constant - LV214 TG14	E14.1 $I_{nom.}$= 3.80 A Wire Size 0,35mm² T_{max} = 150°C The nominal current is picked from TG13 T= 80°C 14-pole connector, as it is not possible to assemble the wire without a housing.

LV214 – TG15		
Electrical stress test		VW75174:2010-04
Volume resistance	R_{volume} < 30mΩ (0,35mm²)	E0.2 / DIN EN 60512-2-1
	R_{volume} < 40mΩ (0,22mm²)	
	$R_{before/after\ test}$ ≤ 30 mΩ	E0.2 / DIN EN 60512-2-1
Derating (before/after test)	Δ < 20%	E12.2 / DIN EN 60512-5-2 with housing I_{test}: 4,5A (0,35mm²)

	MECHANICAL	
LV214 – TG4 **Contact overlap**		VW75174:2010-04
Contact overlap	First latch position Contact overlap 1.60mm Clearance 1.30mm Second latch position Contact overlap 0.51mm Clearance 2.40mm	E4.1 / CAD determined
LV214 – TG6 **Interaction between contact and contact housing**		VW75174:2010-04
Function of the primary locking device/latch play	n.a., contact parts are inseparably pre-assembled in the housing (state of delivery)	E6.2
Function of the secondary locking device/latch play		E6.3
Actuation forces for the secondary locking device	n.a. IDC connector has no secondary locking	E6.4
Drop test	while drop test the pre-latched parts remain in pre-latched position - transport of unequipped contact housings assembled parts stay assembled - transport of equipped contact housings	B6.1 VW75174:2010-04 Drum, see DIN EN 60068-2-31
LV214 – TG7 **Handling and functional reliability of the contact housings**		VW75174:2010-04
Distinctiveness of the unequipped contact housings (keying/polarization)	$F_{keying} \geq 50$ N (0,5mm blade size)	E7.1 / DIN EN 60512-13-5
Holding force of the contact housing latching/locking	$F_{holding} > 60$N (2 to 16-pin)	E7.2 / DIN EN 60512-15-6
CPA function check	n.a. The connector system has optional eCPA feature	E7.3
Insertion force or actuation force for insertion and extraction aids	$F_{insertion} < 75$N ($max_{actual} < 30$N)	E7.4

LV214 – TG8 **Insertion and holding forces of the contact parts in the contact housing**	n.a., contact parts are inseparably pre-assembled in the housing (state of delivery)	VW75174:2010-04
LV214 – TG9 **Pin insertion angle / misuse-proofing (scoop-proofing)**		VW75174:2010-04
Scoop proof testing of contact housing	Skewed Insertion, that damages the contacts, is not possible. Koshiri-Protection is provided	E9.3 / CAD determined
LV214 – TG10 **Contacts: conductor pull-out strength**		VW75174:2010-04
Conductor pull-out strength (only in connection with crimp)	n.a.	E10.1
Pull-out force from the IDC (only in connection with IDC)	$F_{pull-out}$ > 50N (0,35mm²) $F_{pull-out}$ > 25N (0,22mm²)	E10.2 For each connector, every second cable is pulled-out from the IDC.
LV214 – TG11 **Contacts: insertion and extraction forces, number of mating cycles**		VW75174:2010-04
Insertion and removal force	$F_{insert/extract}$ < 25% Change of insertion / extraction force before and after load 100 mating cycles for gold plated contacts	E11.1
LV214 – TG17 **Dynamic load**		VW75174:2010-04
Volume resistance	$R_{before/after\ test}$ ≤ 30 mΩ	E0.2 / DIN EN 60512-2-1
Volume resistance – continuous monitoring during mechanical loads L17.1 & L17.2	No current interruption (> 1 µs / >7 Ω)	E14.0 Test is performed according to Severity level 2 (body – sealed) **See Chapter 4.4** Dynamic Load - LV214 TG17
Dynamic load, sinusoidal		Connector latching position 1 & 2 B17.1 / DIN EN 600068-2-6 No sine wave load at S2
Dynamic load, broadband noise		B17.2 / DIN EN 60068-2-64 a_{RMS} 27.8m/s²; t = 20h per axis
Shock durability testing		B17.3 / DIN EN 60068-2-27

		a = 30g; t = 6ms; shocks 6000
LV214-2 **Slow Motion Test** Contact resistance changes	$\Delta R_1 \leq 1$ m Ω $\Delta R_2 \leq 3$ m Ω $\Delta R_3 \leq 3$ m Ω	VW75174-2:2008-01

ENVIRONMENTAL		
LV214 TG5 **Mechanical and thermal relaxation behaviour**		VW75174:2010-04
Contact normal force Unused	≥ 0,3 N	E5.2
After B5.3 aging in dry heat	≥ 0,3 N	E5.2 B5.3 / DIN EN 60068-2-2 /Test B 1000 h @ 150 °C
LV214 TG15 **Electrical stress test**		VW75174:2010-04
Contact resistance:	$R_{initial} \leq 15$ mΩ	E0.2 / DIN EN 60512-2-1
Derating	$\Delta < 20\%$ (before/after test)	E12.2 / DIN EN 60512-5-2 with housing
Temperature/ current cycle endurance test:		B15.2 / 60 cycl. -40°C/T_o=150°C I_{test}= 4,5A (0,35mm² / 14-pole)
Humidity heat, cyclic:		B15.3 / DIN EN 60068-2-30 21x1day @ 25°C/55°C @ 95%RH
Temperature/ current cycle endurance test:		B15.2
Contact resistance:	$R_{final} \leq 15$ mΩ	E0.2 / DIN EN 60512-2-1
LV214 – TG18A **Coastal climate load**		
Volume resistance	$R_{before/after\ test} \leq 30$ mΩ	E0.2 / DIN EN 60512-2-1
Salt spray, cyclic		B 18.2 / DIN EN 60068-2-52 Severity 3
LV214 – PG19 **Environmental simulation**		VW75174:2010-04
Volume resistance	$R_{before/after\ test} \leq 30$ mΩ	E0.2 / DIN EN 60512-2-1
Temperature shock		B19.1 DIN EN 60068-2-14, Test Na Duration: 144 cycles (72h) Temperature: -40 °C/130°C (a 15min; ↕10s)
Temperature change		B19.2 / DIN EN 60068-2-14, Test Nb Duration: 20 cycles Temperature: -40 °C/130°C (a 3h; ↕ 2h)
Aging in dry heat		B19.3 / DIN EN 60068-2-2, Test B Duration: 120 h Temperature: 130°C

Industrial climate (multi-component climate)		B19.4 / DIN EN 60512-11-7 Duration: 21d SO2, 0,2 ppm H2S, 0,01 ppm NO2, 0,2 ppm Cl2 0,01 ppm Temperature: 25°C Humidity: 75% RH Flow rate: 1 m³/h
Damp heat, cyclic		B19.5 / DIN EN 60068-2-30, variant 2 Duration: 10 cycles of 24h each T_u = 25 °C, T_o = 55 °C Relative humidity: 95% constant
Dynamic load, Broadband noise		B19.6 / DIN EN 60068-2-64 a_{RMS} 13.9m/s²; t = 6h per axis
Mechanical shock testing (individual shocks)		B19.7 / DIN EN 60068-2-27 a = 30g; t = 6ms; shocks 50 per axis
LV214 – PG20 **Climate load of the housing**	Conformity to TestGroup specific functional requirements.	VW75174:2010-04
Aging in dry heat		B20.1 / DIN EN 60068-2-2, Test B Duration: 120 h Temperature: 150°C
Aging in damp heat		B20.2 / DIN EN 60068-2-30 Duration: 10 days Temperature: 40°C Relative humidity: 95 %
Low-temperature aging		B20.3 / DIN EN 60068-2-1 Duration: 48 h Temperature: -40°C
Extracting and inserting at -20°C		B20.4
Aging in dry heat		B20.5 / DIN EN 60068-2-2, Test B Duration: 48 h Temperature: 80°C
Drop test in the unplugged state		B6.1 / VW75174:2010-04

LV214 – TG21 **Long-term temperature aging**		VW75174:2010-04
Volume resistance	$R_{before/after\ test}$ ≤ 30 mΩ Conformity to TestGroup specific functional requirements	E0.2 / DIN EN 60512-2-1
Long-term aging in dry heat		B21.1 / DIN EN 60068-2-2, Test B Duration: 1000 h Temperature: 150°C Subsequent aging: 48h at RT
Drop test		B 6.1 / VW75174:2010-04
LV214 – TG22A **Chemical resistance**		
Insulation resistance	$R_{ins\ before/after\ test}$ > 100MΩ at U=500V, t=60s Conformity to TestGroup specific material & functional requirements	E0.3 / DIN EN 60512-3-1
Resistance to agents		B22.1A / VW75174:2018-10 Appendix E.1 media list Duration: 48h Temperature: media specific

3.6. Product Qualification and Requalification Test Sequence

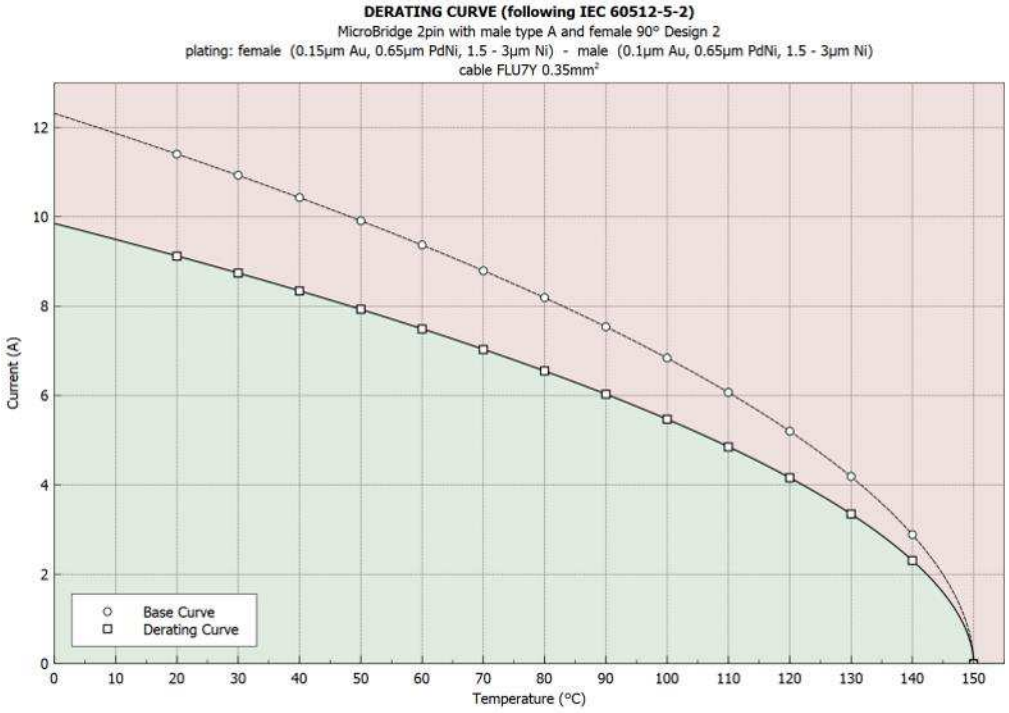
For the product qualification all test groups and sequences are carried out in accordance with the OEM specification LV214 as per Chapter 3.5.

A product requalification is performed in accordance with LV214 annually with at least one selected connector type of a product family. Every requalification includes tests to ensure the functionality and dimensional accuracy of the products. Unless otherwise specified by TE, a requalification test will be carried out at the same revision level as specified in Chapter 3.5.

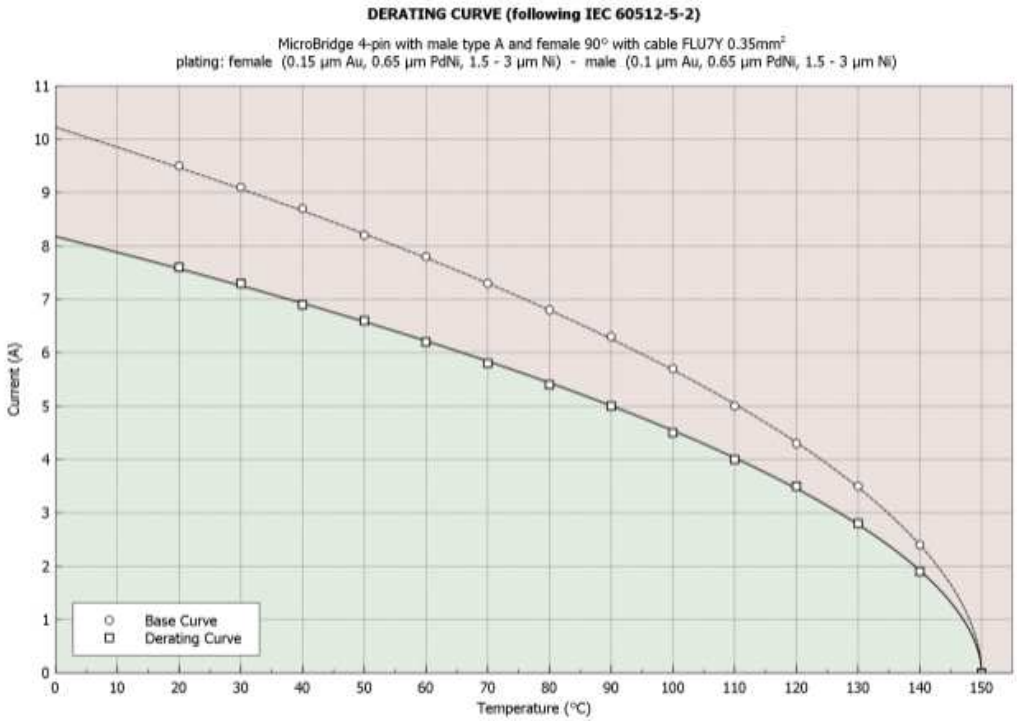
4. APPENDIX

4.1. Derating – Number of Pole Specific

4.1.1. Wire Size 0,35mm²



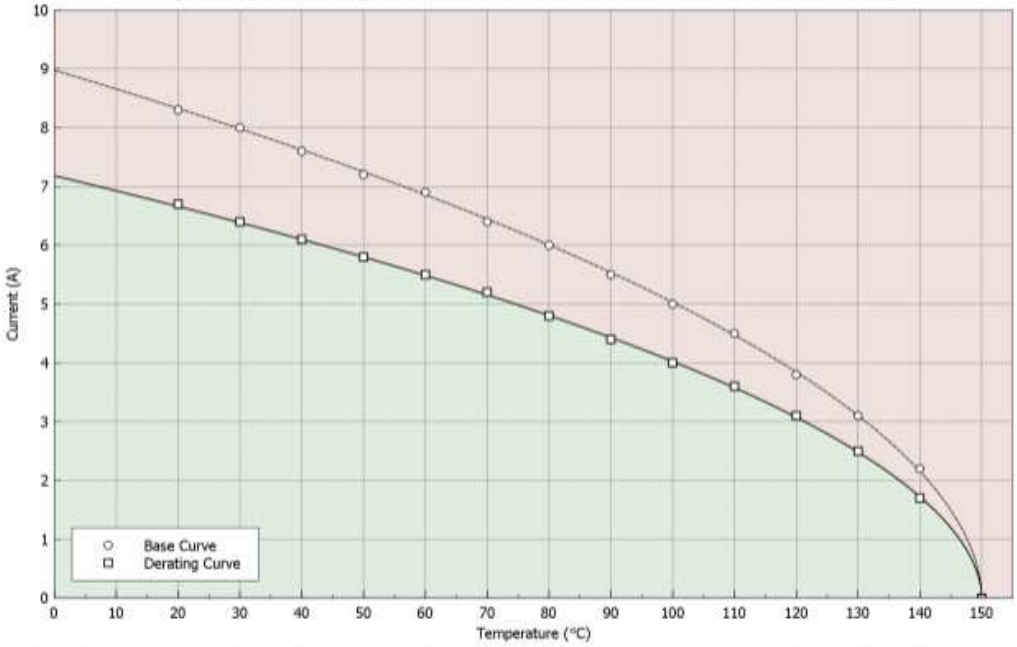
Base Current (A)	11.4	10.93	10.43	9.91	9.37	8.79	8.19	7.54	6.84	6.07	5.2	4.19	2.89	0
Derating Current (A)	9.12	8.74	8.34	7.93	7.49	7.03	6.55	6.03	5.47	4.85	4.16	3.35	2.31	0



Base Current (A)	9,5	9,1	8,7	8,2	7,8	7,3	6,8	6,3	5,7	5	4,3	3,5	2,4	0
Derating Current (A)	7,6	7,3	6,9	6,6	6,2	5,8	5,4	5	4,5	4	3,5	2,8	1,9	0

DERATING CURVE (following IEC 60512-5-2)

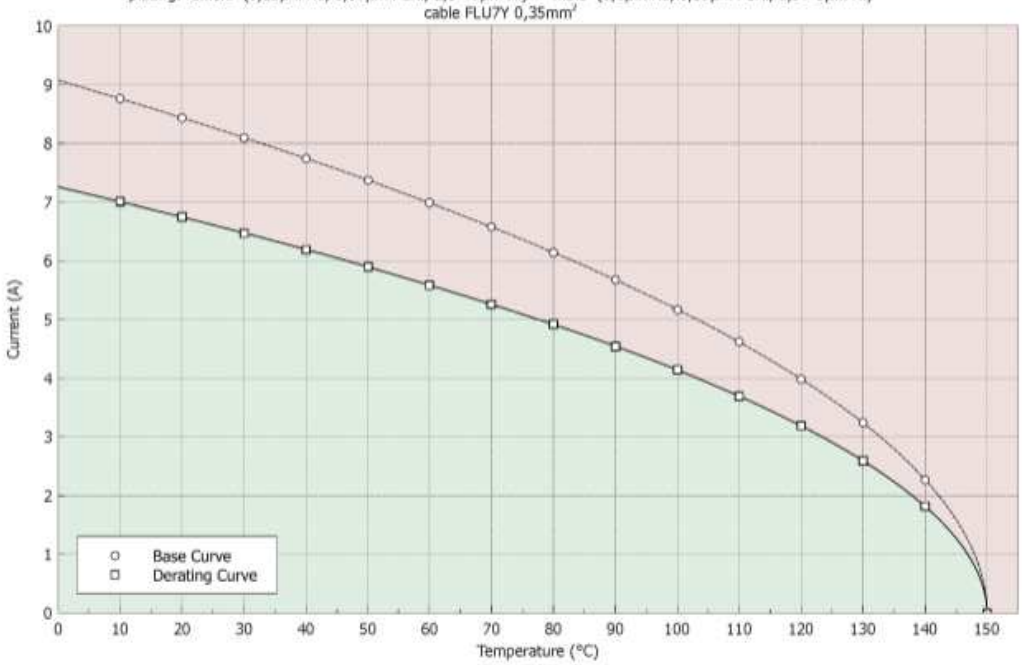
MicroBridge 5-pin with male type A and female 90° with cable FLU7Y 0.35mm²
plating: female (0.15 µm Au, 0.65 µm PdNi, 1.5 - 3 µm Ni) - male (0.1 µm Au, 0.65 µm PdNi, 1.5 - 3 µm Ni)



Base Current (A)	8,3	8	7,6	7,2	6,9	6,4	6	5,5	5	4,5	3,8	3,1	2,2	0
Derating Current (A)	6,7	6,4	6,1	5,8	5,5	5,2	4,8	4,4	4	3,6	3,1	2,5	1,7	0

DERATING CURVE (following IEC 60512-5-2)

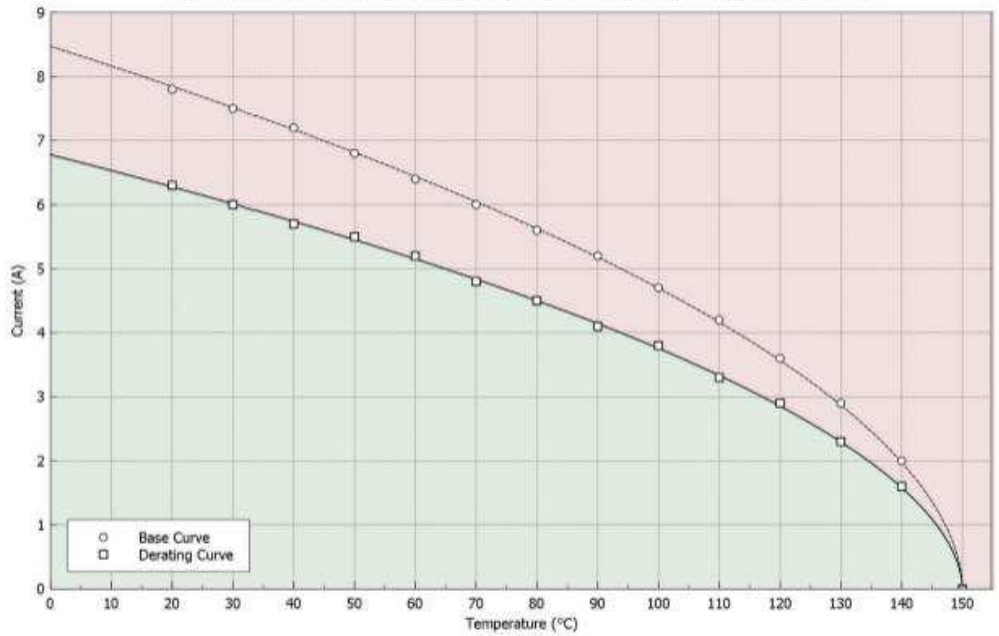
MicroBridge 6pin with male type A and female 90°
plating: female (0,15µm Au, 0,65µm PdNi, 1,5 - 3µm Ni) - male (0,1µm Au, 0,65µm PdNi, 1,5 - 3µm Ni)
cable FLU7Y 0,35mm²



Base Current (A)	8.76	8.43	8.09	7.74	7.37	6.99	6.58	6.14	5.68	5.17	4.62	3.98	3.24	2.27	0
Derating Current (A)	7.01	6.75	6.47	6.19	5.9	5.59	5.26	4.92	4.54	4.14	3.69	3.19	2.59	1.82	0

DERATING CURVE (following IEC 60512-5-2)

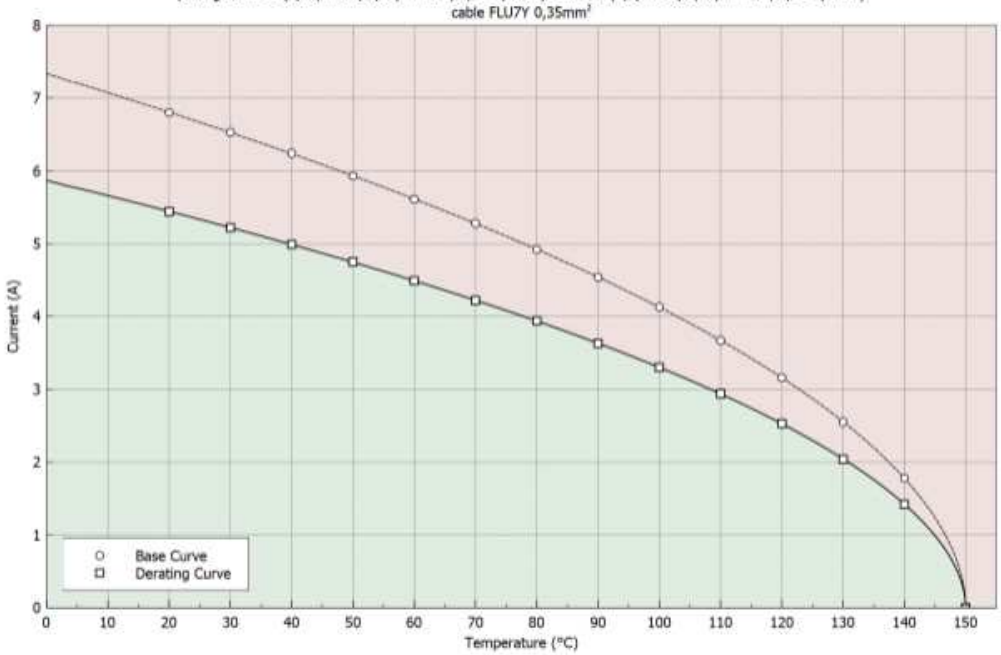
MicroBridge 8-pin with male type A and female 90° with cable FLU7Y 0.35mm²
plating: ferrale (0.15 µm Au, 0.65 µm PdNi, 1.5 - 3 µm Ni) - male (0.1 µm Au, 0.65 µm PdNi, 1.5 - 3 µm Ni)



Base Current (A)	7,8	7,5	7,2	6,8	6,4	6	5,6	5,2	4,7	4,2	3,6	2,9	2	0
Derating Current (A)	6,3	6	5,7	5,5	5,2	4,8	4,5	4,1	3,8	3,3	2,9	2,3	1,6	0

DERATING CURVE (following IEC 60512-5-2)

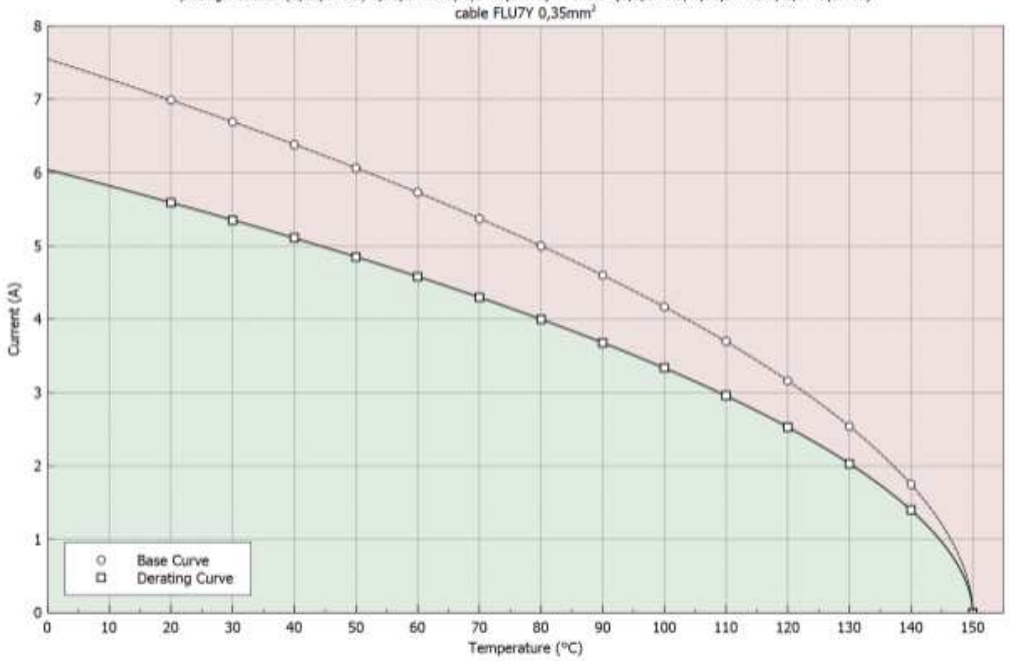
MicroBridge 9pin with male type A and female 180°
plating: female (0,15µm Au, 0,65µm PdNi, 1,5 - 3µm Ni) - male (0,1µm Au, 0,65µm PdNi, 1,5 - 3µm Ni)
cable FLU7Y 0,35mm²



Base Current (A)	6,8	6,53	6,24	5,93	5,61	5,28	4,92	4,54	4,13	3,67	3,16	2,55	1,78	0
Derating Current (A)	5,44	5,22	4,99	4,75	4,49	4,22	3,94	3,63	3,3	2,94	2,53	2,04	1,42	0

DERATING CURVE (following IEC 60512-5-2)

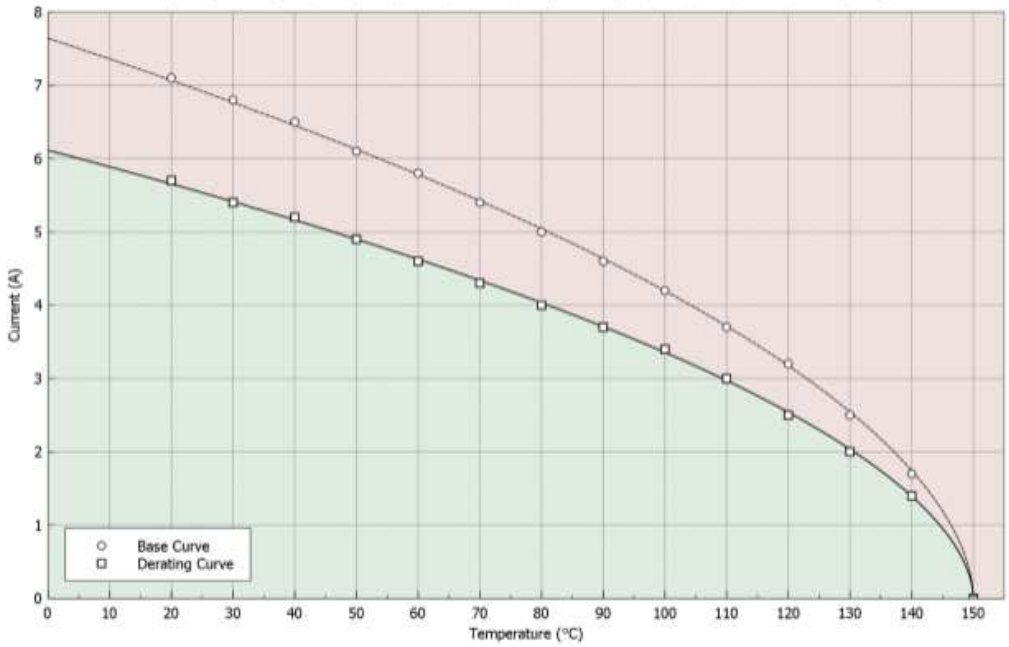
MicroBridge 10pin with male type A and female 90°
plating: female (0,15µm Au, 0,65µm PdNi, 1,5 - 3µm Ni) - male (0,1µm Au, 0,65µm PdNi, 1,5 - 3µm Ni)
cable FLU7Y 0,35mm²



Base Current (A)	6,99	6,69	6,38	6,06	5,73	5,37	5	4,6	4,17	3,7	3,16	2,54	1,75	0
Derating Current (A)	5,59	5,35	5,11	4,85	4,58	4,3	4	3,68	3,34	2,96	2,53	2,03	1,4	0

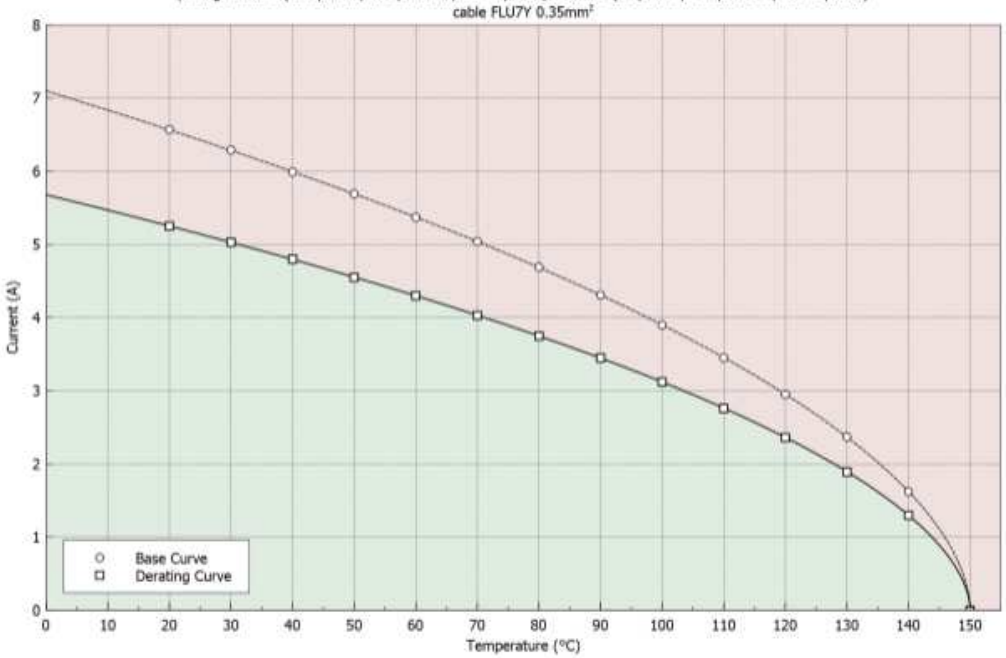
DERATING CURVE (following IEC 60512-5-2)

MicroBridge 12-pin with male type A and female 90° with cable FLU7Y 0.35mm²
plating: female (0.15 µm Au, 0.65 µm PdNi, 1.5 - 3 µm Ni) - male (0.1 µm Au, 0.65 µm PdNi, 1.5 - 3 µm Ni)



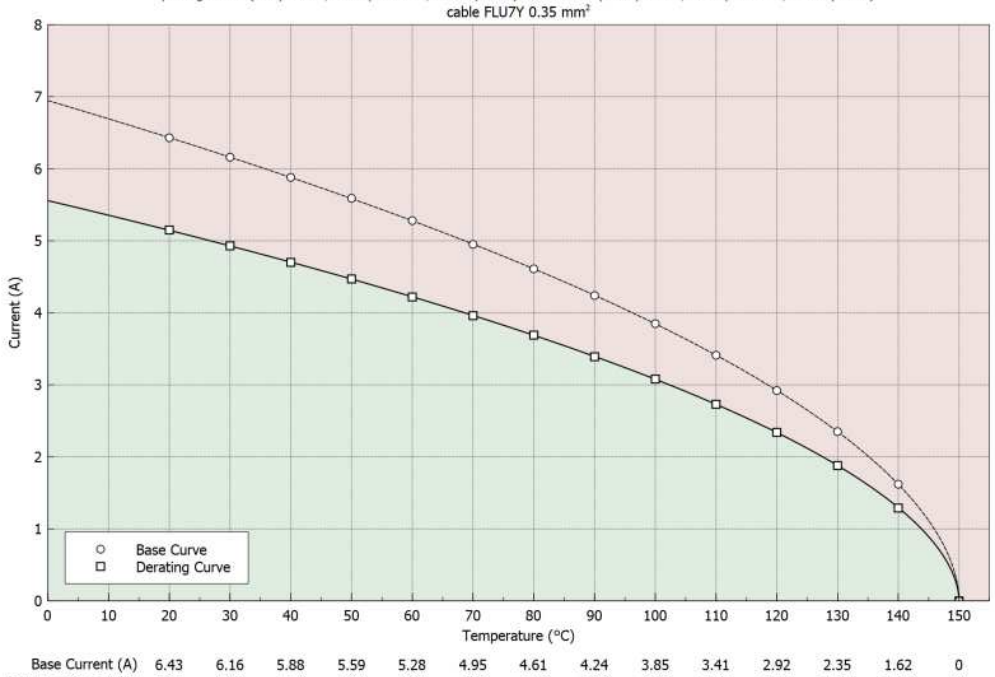
Base Current (A)	7,1	6,8	6,5	6,1	5,8	5,4	5	4,6	4,2	3,7	3,2	2,5	1,7	0
Derating Current (A)	5,7	5,4	5,2	4,9	4,6	4,3	4	3,7	3,4	3	2,5	2	1,4	0

DERATING CURVE (following IEC 60512-5-2)
MicroBridge 14pin with male type A and female 90°
plating: female (0.15µm Au, 0.65µm PdNi, 1.5 - 3µm Ni) - male (0.1µm Au, 0.65µm PdNi, 1.5 - 3µm Ni)
cable FLU7Y 0.35mm²



Base Current (A)	6.57	6.29	5.99	5.69	5.37	5.04	4.69	4.31	3.9	3.45	2.95	2.37	1.62	0
Derating Current (A)	5.25	5.03	4.8	4.55	4.3	4.03	3.75	3.45	3.12	2.76	2.36	1.89	1.3	0

DERATING CURVE (following IEC 60512-5-2)
MicroBridge 16pin with male type A 90° and female type A 180° Design 2
plating: male (0.1 µm Au / 0.65 µm PdNi / 1.5-3 µm Ni) or female (0.15 µm Au / 0.65 µm PdNi / 1.5-3 µm Ni)
cable FLU7Y 0.35 mm²



Base Current (A)	6.43	6.16	5.88	5.59	5.28	4.95	4.61	4.24	3.85	3.41	2.92	2.35	1.62	0
Derating Current (A)	5.15	4.93	4.7	4.47	4.22	3.96	3.69	3.39	3.08	2.73	2.34	1.88	1.29	0

4.1.2. Wire Size ,022mm²

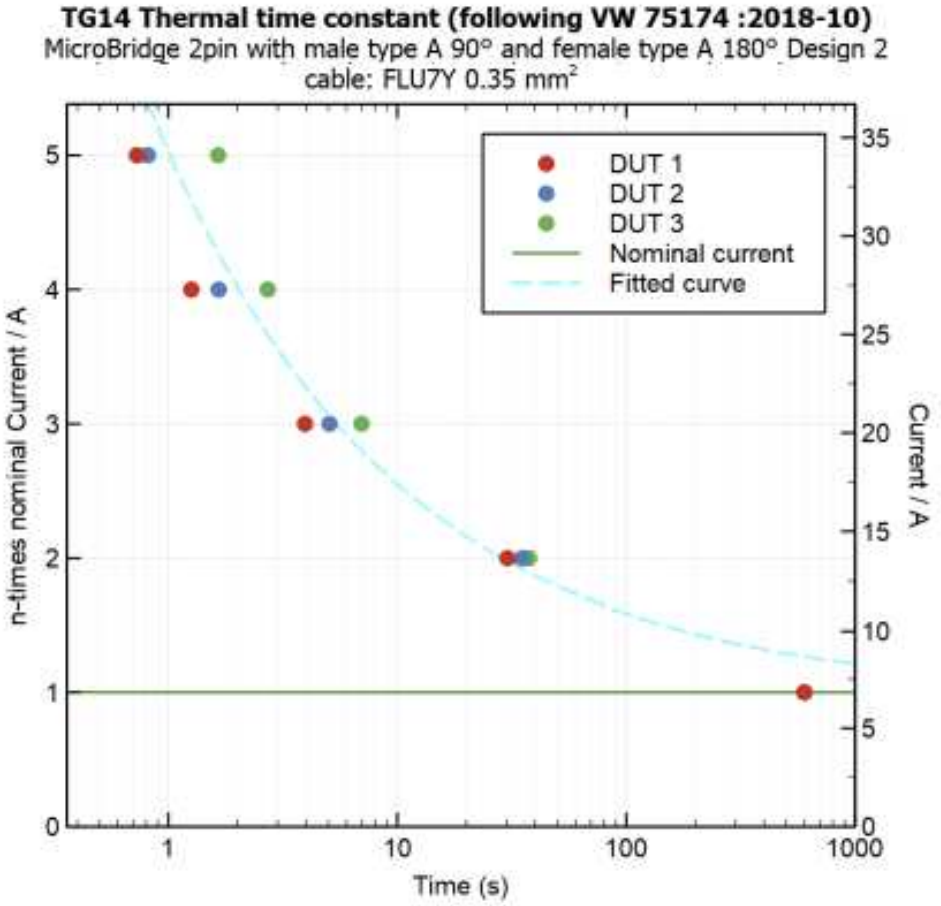
Qualification Test of 0,22mm² IDC still in progress.

4.2. Resistance Limits – LV214 Appendix Table D.1

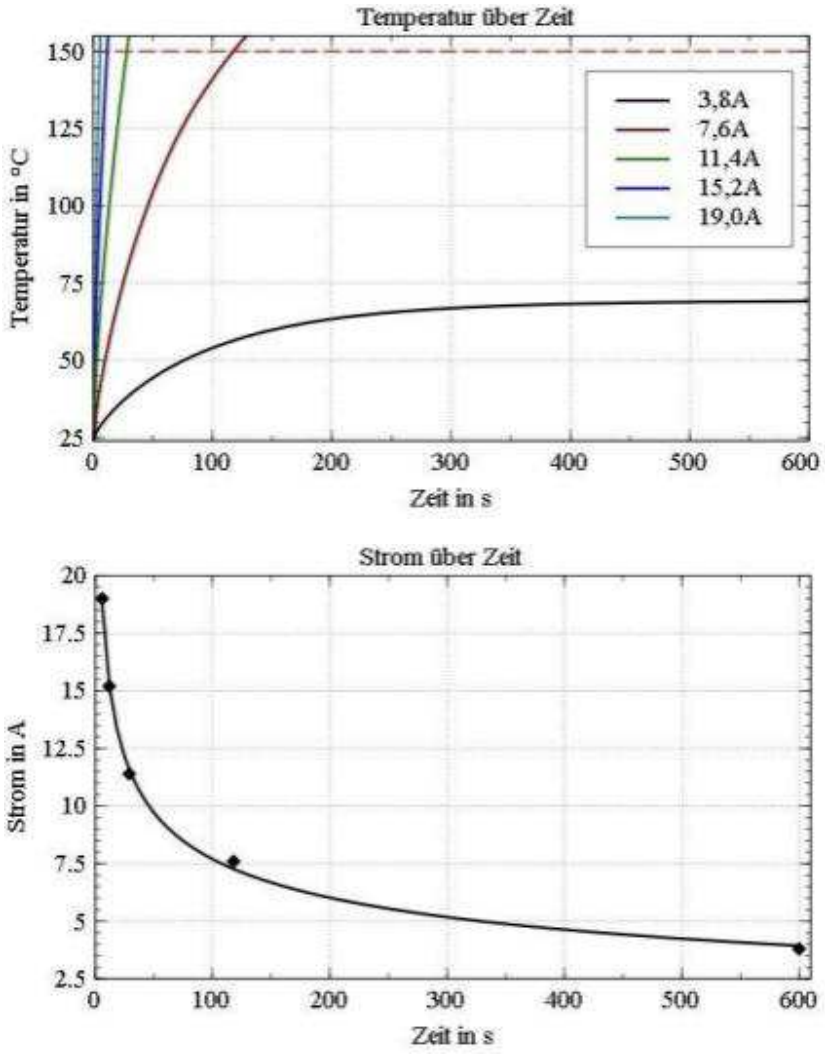
	Group 1						Group 2					Group 3	
Conductor cross section in mm²/contact size in mm	0.13	0.22	0.35	0.5	0.75	1	1.5	2.5	4	6	10	16	> 16
0.5	50	40	30	-	-	-	-	-	-	-	-	-	-
0.63	30	30	15	15	15	-	-	-	-	-	-	-	-
1.2	20	20	15	15	15	15	10	-	-	-	-	-	-
1.5	15	15	15	15	15	15	10	10	-	-	-	-	-
2.8	15	15	15	15	15	10	10	10	5	-	-	-	-
4.8 – 6.3	10	10	10	8	8	8	5	5	3	3	2	-	-
8	-	-	-	-	-	-	-	3	3	3	2	2	-
9.5 – 12	-	-	-	-	-	-	-	-	3	2	2	1	1

4.3. Thermal Time Constant - LV214 TG14

4.3.1. 2-pole Wire Size ,035mm²



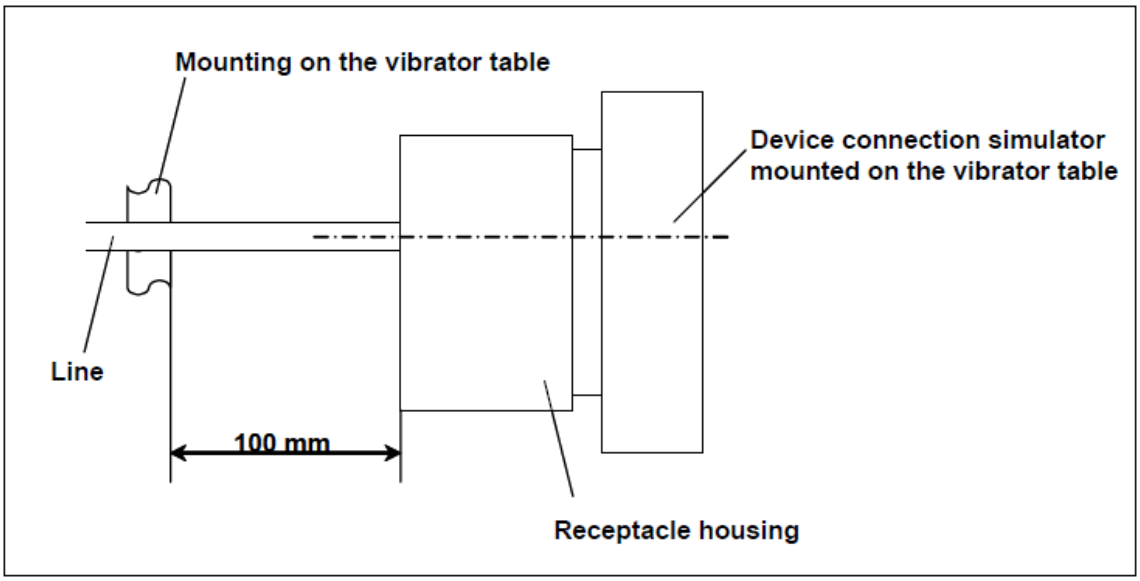
4.3.2. 14-pole Wire Size ,035mm²



4.4. Dynamic Load - LV214 TG17

Severity	TC (temperature cycle)	Random vibration with TC		Sine wave with TC	No. of shocks
2) "Body" sealed	0 min/20 °C 60 min/-40 °C 150 min/-40 °C 300 min/120 °C 420 min/120 °C 480 min/20 °C	20 h per axis RMS value of acceleration 27,8 m/s²		No sine wave	A = 30 g T = 6 ms sinusoidal half-wave No. of shocks: 6 000
		Hz	(m/s²)²/Hz		
		10	20		
		55	6,5		
		180	0,25		
		300	0,25		
		360	0,14		
		1 000	0,14		

4.5. Shaker Table Mounting – LV214 Appendix B



5. REVISION HISTORY TABLE

REV	Revision record	Drafted	Approved	Signature	Date
A	Revision 1 published to PDM Link & DSD	Thomas Lengenfelder	Stephen Kaminski		18 January 2023
A2	Editorial amendment	Thomas Lengenfelder	Stephen Kaminski		21 March 2024