



## Product Change Notification

Current Date: 26-Mar-2015

### TE Connectivity

**Product Change Notification:** E-14-009314

**PCN Date:** 25-MAR-15

**Customer:** Future Electronics(0000080100)

**Location:** WORLDWIDE

**Agreement:** Agreement Unknown

TE would like to inform you of the following change(s) to the listed TE Connectivity Product. In case of any further questions about this change(s), please contact your TE Connectivity Sales Engineer. Affected part, drawing and/or specification numbers are listed on the attached sheet(s).

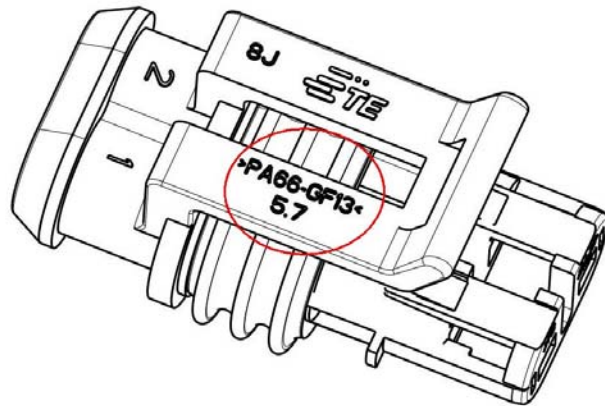
**General Product Description:**

Superseal 1.5 series connector.

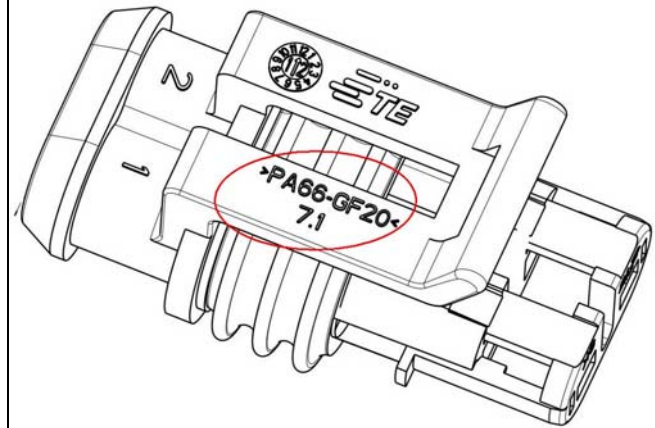
**Description of Changes**

Material change. This change is considered by TE Connectivity as an improvement. Location of change, see material logo.

Product image before change



Product image after change



**Other attachments:**

[Superseal test report](#)

**Reason for Changes:**

Product Improvement. PA66 20% GF material has to be replace the actual one (PA66 13% GF).

**Estimated Dates:**

**Last Order Date** (Obsolete Parts Only):

**First Date To Ship** (Changed Parts Only):

30-APR-2015

**Last Ship Date** (Obsolete Parts Only):

**Last Date for Mixed Shipments:** (Changed Parts Only):

30-JUN-2015

**Part Number(s) being Modified:**

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">282080-1</a>	NO						
<a href="#">282087-1</a>	NO						
<a href="#">282088-1</a>	NO						
<a href="#">282089-1</a>	NO						
<a href="#">282090-1</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

**Customer Drawing(s) Being Modified:**

Drawing Number	Current Revision	New Revision	Related Part Number	Customer Part Number
<a href="#">282080</a>	C6		282089-1, 282087-1, 282088-1, 282090-1, 282080-1	

<a href="#">282087</a>	B5		282089-1, 282087-1, 282088-1, 282090-1, 282080-1
<a href="#">282088</a>	B4		282089-1, 282087-1, 282088-1, 282090-1, 282080-1
<a href="#">282089</a>	C5		282089-1, 282087-1, 282088-1, 282090-1, 282080-1
<a href="#">282090</a>	D2		282089-1, 282087-1, 282088-1, 282090-1, 282080-1

Customer: Future Electronics Ltd( 1273129 )

Location: Egham

Agreement Number: Agreement Unknown

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">282080-1</a>	NO						
<a href="#">282087-1</a>	NO		282087-1-LF				
<a href="#">282088-1</a>	NO		282088-1-LF				

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Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">282080</a>	282087-1, 282088-1, 282080-1	282087-1-LF, 282088-1-LF	C6	
<a href="#">282087</a>	282087-1, 282088-1, 282080-1	282087-1-LF, 282088-1-LF	B5	
<a href="#">282088</a>	282087-1, 282088-1, 282080-1	282087-1-LF, 282088-1-LF	B4	

Customer: Future Electronics Asia Pacific( 2923061 )

Location: Singapore

Agreement Number: Agreement Unknown

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">282080-1</a>	NO						
<a href="#">282087-1</a>	NO						
<a href="#">282088-1</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">282080</a>	282087-1, 282088-1, 282080-1		C6	
<a href="#">282087</a>	282087-1, 282088-1, 282080-1		B5	
<a href="#">282088</a>	282087-1, 282088-1, 282080-1		B4	

Customer: Future Electronics Inc( 1290208 )

Location: Southaven

Agreement Number: FUTAGR001

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">282080-1</a>	NO						
<a href="#">282087-1</a>	NO						
<a href="#">282088-1</a>	NO						
<a href="#">282089-1</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">282080</a>	282089-1, 282087-1, 282088-1, 282080-1		C6	
<a href="#">282087</a>	282089-1, 282087-1, 282088-1, 282080-1		B5	
<a href="#">282088</a>	282089-1, 282087-1, 282088-1, 282080-1		B4	
<a href="#">282089</a>	282089-1, 282087-1, 282088-1, 282080-1		C5	

Customer: Future Electronics UK( 2833922 )

Location: Hayes

Agreement Number: Agreement Unknown

## Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">282090-1</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

## Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">282090</a>	282090-1		D2	

Customer: Future Electronics EDC Services( 2944409 )

Location: Leipzig

Agreement Number: Agreement Unknown

## Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">282080-1</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

## Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">282080</a>	282080-1		C6	

Customer: Future Electronics Ltd( 1307660 )

Location: Egham

Agreement Number: Agreement Unknown

## Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">282080-1</a>	NO						
<a href="#">282087-1</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

## Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">282080</a>	282087-1, 282080-1		C6	
<a href="#">282087</a>	282087-1, 282080-1		B5	

Customer: FUTURE GRAND RAPIDS-SAMPLES( 382949 )

Location: GRAND RAPIDS

Agreement Number: Agreement Unknown

## Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">282080-1</a>	NO						
<a href="#">282087-1</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

## Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">282080</a>	282087-1, 282080-1		C6	
<a href="#">282087</a>	282087-1, 282080-1		B5	

Customer: Future Electronics Inc( 2912438 )

Location: Indianapolis

Agreement Number: Agreement Unknown

## Part Number(s) being Modified:

Part	Part Discontinued per PCN	Customer	Customer Part	Alias Part	Substitute Part	Substitute Alias Part	Description Of

Number	PCN	Drawing	Number	Number(s)	Number	Number(s)	Difference
<a href="#">282088-1</a>	NO						

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## Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">282088</a>	282088-1		B4	

Customer: Future Electronics Incorporate( 591 )

Location: CANADA

Agreement Number: Agreement Unknown

## Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">282080-1</a>	NO						
<a href="#">282087-1</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

## Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">282080</a>	282087-1, 282080-1		C6	
<a href="#">282087</a>	282087-1, 282080-1		B5	

Customer: Future Electronics( 1341463 )

Location: Mississauga

Agreement Number: Agreement Unknown

## Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">282087-1</a>	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

## Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
<a href="#">282087</a>	282087-1		B5	

**TEST REPORT**  
**RESTRICTED FOR CUSTOMER**

TEST COMPLETED: 06/06/2014  
TEST ISSUED: 09/06/2014

**PROGR.:** 12-000005791

**G P L:**

**P.CODE:**

**PART NUMBERS:**

2 POSITIONS AMP SUPERSEAL 1,5 RECEPTACLE ASSY (housing moulded with PA 66 20% G.F. filled)	P/N 282080-1 Rev. C
2 POSITIONS AMP SUPERSEAL 1,5 CAP ASSY	P/N 282104-1 Rev. B
MINI MIC RECEPTACLE CONTACT (Wire section 1,0 mm <sup>2</sup> )	P/N 282110-1 Rev. D
TAB CONTACT (Wire section 0,35 mm <sup>2</sup> )	P/N 282403-1 Rev. B

**DESCRIPTION :** AMP SUPERSEAL 1,5 Sr. CONNECTORS

**SCOPE :** VERIFY PRODUCT PERFORMANCE WITH HOUSING MOULDED WITH DIFFERENT MATERIAL  
(Glass Fiber from 13% to 20%)

**TEST CARRIED OUT :** [SEE PAGE 2](#)

**SPECIFICATION :** AMP SPEC. 108- 20090 Rev.C2

**CONCLUSION :** TEST PASSED

**DISTRIBUTION :** M. POLIZZI ENG. AUTO

**TEST ENGINEER :** M. PALMA

**REQUESTED BY :** M. POLIZZI

**LABORAT. MANAGER :** D. MOTTA

**REQUEST OF :** 10/03/2014

**APPENDICES :**

PAGE 1 OF PAGES 12

**TEST SEQUENCE :**

TEST ITEMS	DESCRIPTION	TEST GROUP SEQUENCE							
		A	B	C	D	E	F	G	H
	CONFIRMATION OF PRODUCT AND VISUAL EXAMINATION	1, 5	1, 7	1,5	1,5	1,5	1, 9	1, 9	1, 9
	CONNECTOR MATING FORCE	2	4						
	CONNECTOR UNMATING FORCE	3	5						
	CONTACT WITHDRAWAL FORCE FROM HOUSING	4	6						
	STATIC IMMERSION					2			6
	IPX6K TEST				2			6	
	IPX9K TEST			2			6		
	THERMAL CYCLING		2				4	4	4
	AGEING RESISTANCE		3				5	5	5
	INSULATION RESISTANCE			3	3	3	2, 7	2, 7	2, 7
	DIELECTRIC WITHSTANDIING VOLTAGE			4	4	4	3, 8	3, 8	3, 8

TEST PROCEDURE: Test was performed according to TE spec. 108-20090 Rev.C2

TEST CONDITION: Temperature values were in the range [23° ±5°C]  
Humidity Room Values were in the range [45÷75%]  
Atmospheric Pressure [860÷1060mbar]

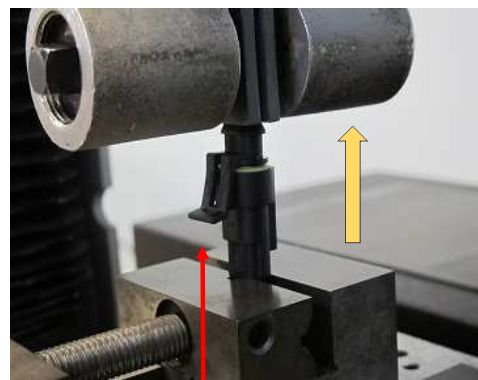
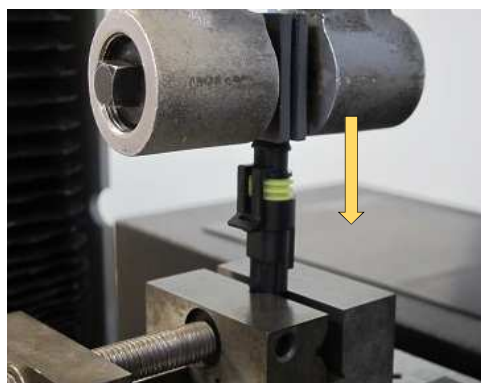
**PRODUCT: AMP SUPERSEAL 1,5 Sr. CONNECTORS**

**GROUP -A-**

**TEST DESCRIPTION: CONNECTOR MATING/UNMATING FORCE**  
Apply a force along the operating direction of the connector mating  
Operation speed 50mm/min.

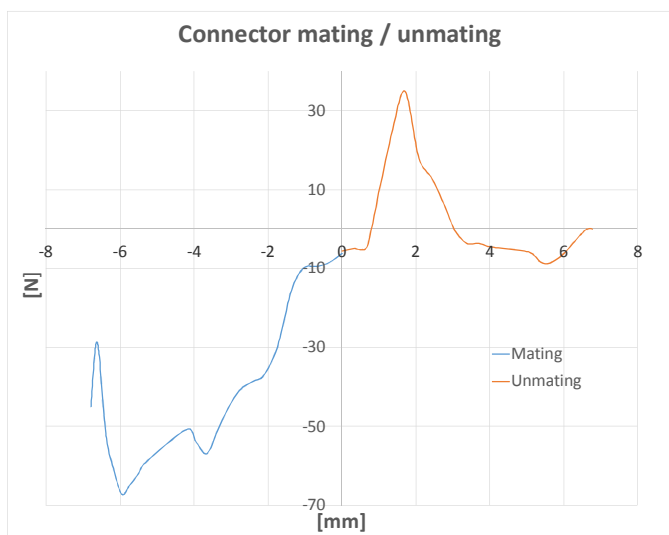
**EQUIPMENT:** Instron Traction-Compression machine static load

2 POSITIONS AMP SUPERSEAL 1,5 Sr. CONNECTOR		
PLUG HOUSING MOULDED WITH PA 66 20% G.F. FILLED INSTEAD OF PA 66 13% G.F. FILLED		
CONNECTOR MATING/UNMATING		
	1^IN	1^OUT
	[N]	
MIN	59,6	35,2
MAX	79,9	51,2
AVG	<b>68,6</b>	<b>43,8</b>
S.D.	5,46	4,62
<b>AT NEW</b>		



unmatting force : operating the locking lance

**TEST SET-UP**



<b>SPEC. LIMIT</b>	≤ 120 N
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<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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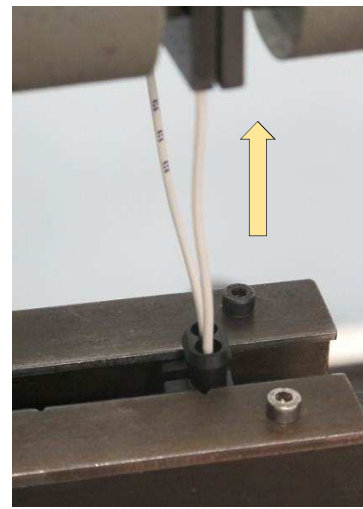
**PRODUCT: AMP SUPERSEAL 1,5 Sr. CONNECTORS**

**GROUP -A-**

**TEST DESCRIPTION: CONTACT WITHDRAWALL FORCE FROM HOUSING**  
Apply an axial force to pull out contacts from relevant housing  
Operation speed 50mm/min.

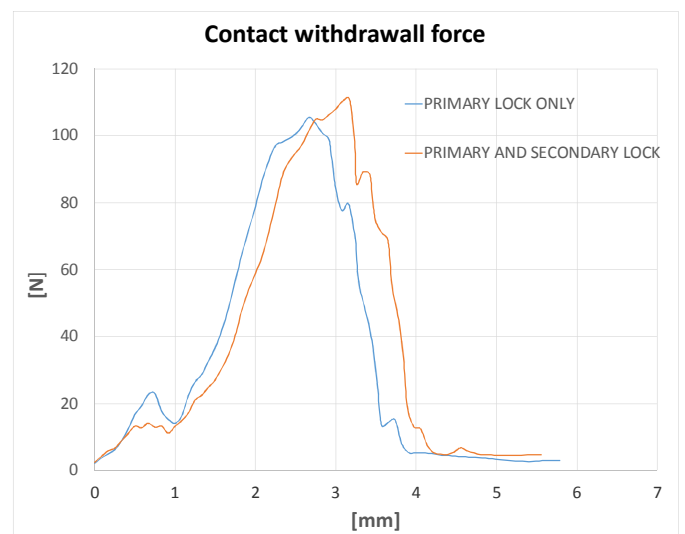
**EQUIPMENT:** Instron Traction-Compression machine static load

<b>2 POSITIONS AMP SUPERSEAL 1,5 Sr. CONNECTOR</b>		
PLUG HOUSING MOULDED WITH PA 66 20% G.F. FILLED INSTEAD OF PA 66 13% G.F. FILLED		
<b>CONTACT WITHDRAWALL FORCE FROM HOUSING</b>		
	<b>PRIMARY LOCK ONLY</b>	<b>PRIMARY AND SECONDARY LOCK</b>
	[N]	
<b>MIN</b>	102,7	103,0
<b>MAX</b>	109,4	111,1
<b>AVG</b>	105,7	106,3
<b>S.D.</b>	1,97	2,55
<b>AT NEW</b>		



**TEST SET-UP**

**Checked samples with ctcs crimped onto wire size 1,0 mm<sup>2</sup> only.**



<b>SPEC. LIMIT</b>	≥ 70 N	primary lock only
	≥ 80 N	primary and sec. lock

**FINAL ANALYSIS**

**TEST PASSED**



**PRODUCT:** AMP SUPERSEAL 1,5 Sr. CONNECTORS

**GROUP -B-**

**TEST DESCRIPTION:**

**CONNECTOR MATING/UNMATING FORCE**

Apply a force along the operating direction of the connector mating  
Operation speed 50mm/min.

**EQUIPMENT:**

Instron Traction-Compression machine static load

**THERMAL CYCLING**

14 cycles composed of: 16 hrs at +40°C, 95% r.h.  
2 hrs at -40°C / 2 hrs at 125°C / 4 hrs at +23°C  
exposure for 24 hrs at +40° C and 95% r.h.

**EQUIPMENT:**

Climatic Test Chamber

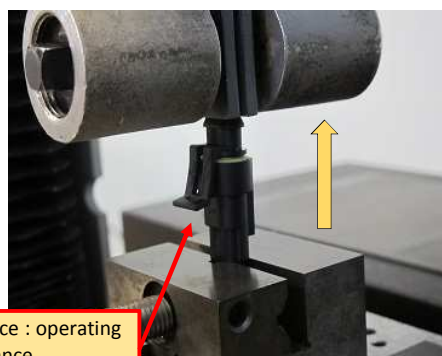
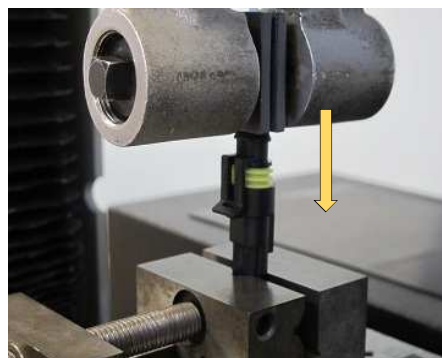
**AGEING RESISTANCE**

100 hrs. at +125°C±2°C

**EQUIPMENT:**

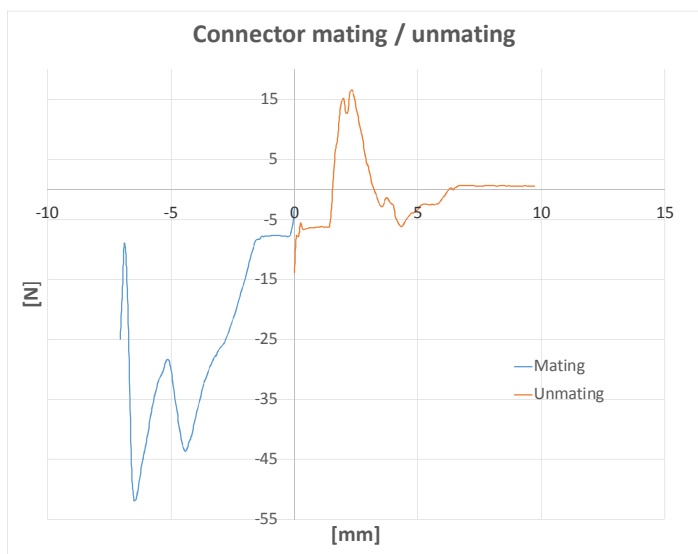
Ceast oven with hood exhaust funnel

2 POSITIONS AMP SUPERSEAL 1,5 Sr. CONNECTOR		
PLUG HOUSING MOULDED WITH PA 66 20% G.F. FILLED INSTEAD OF PA 66 13% G.F. FILLED		
CONNECTOR MATING/UNMATING		
	1^IN	1^OUT
	[N]	
MIN	41,0	13,8
MAX	51,9	21,0
AVG	46,4	17,2
S.D.	3,67	2,52
AFTER AGEING		



unmating force : operating the locking lance

**TEST SET-UP**



<b>SPEC. LIMIT</b>	≤ 120 N
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<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
-----------------------	--------------------

**PRODUCT:** AMP SUPERSEAL 1,5 Sr. CONNECTORS

**GROUP -B-**

**TEST DESCRIPTION:**

**CONTACT WITHDRAWALL FORCE FROM HOUSING**

Apply an axial force to pull out contacts from relevant housing  
Operation speed 50mm/min.

**EQUIPMENT:**

Instron Traction-Compression machine static load

**THERMAL CYCLING**

14 cycles composed of: 16 hrs at +40°C, 95% r.h.  
2 hrs at -40°C / 2 hrs at 125°C / 4 hrs at +23°C  
exposure for 24 hrs at +40° C and 95% r.h.

**EQUIPMENT:**

Climatic Test Chamber

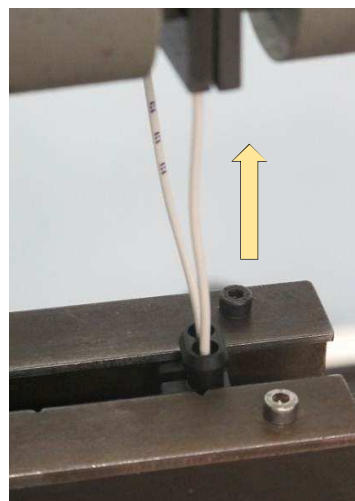
**AGEING RESISTANCE**

100 hrs. at +125°C±2°C

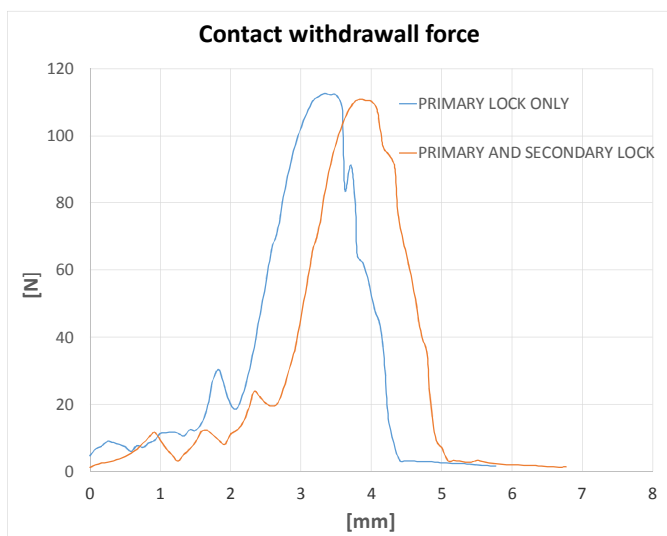
**EQUIPMENT:**

Ceast oven with hood exhaust funnel

2 POSITIONS AMP SUPERSEAL 1,5 Sr. CONNECTOR		
PLUG HOUSING MOULDED WITH PA 66 20% G.F. FILLED INSTEAD OF PA 66 13% G.F. FILLED		
CONTACT WITHDRAWALL FORCE FROM HOUSING		
	PRIMARY LOCK ONLY	PRIMARY AND SECONDARY LOCK
	[N]	
MIN	110,3	108,4
MAX	115,1	114,6
AVG	112,5	110,3
S.D.	1,50	1,80
AFTER AGEING		



**TEST SET-UP**



Checked samples with ctcs crimped onto wire size 1,0 mm<sup>2</sup> only.

<b>SPEC. LIMIT</b>	≥ 70 N	primary lock only
	≥ 80 N	primary and sec. lock

<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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**PRODUCT:** AMP SUPERSEAL 1,5 Sr. CONNECTORS

**GROUP -C-**

**TEST DESCRIPTION:**

**WATER RESISTANCE IP9K**

According to IEC 529 - Sample mated onto relevant counterpart  
Duration 30 sec per position

**NO AGEING  
CONDITIONING**

**INSULATION RESISTANCE**

Between two adjacent contacts apply 500V dc for 1 minute

EQUIPMENT:

Avo Megaohmmeter RM170

**DIELECTRIC BREAKDOWN RESISTANCE**

Between two adjacent contacts apply voltage for 1 minute

EQUIPMENT:

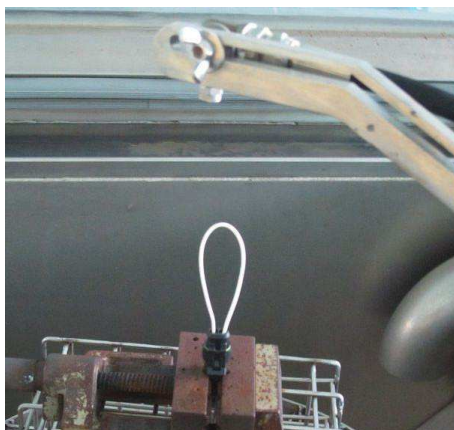
Dielectric tester EDC 8170F (5kV)

INSULATION RESISTANCE
AT NEW
[GΩ]
> 10 x 10 <sup>3</sup>

INSULATION RESISTANCE
AFTER TEST
[MΩ]
> 500

**Tested:**

5 samples with ctcs crimped onto wire size 0,35 mm<sup>2</sup>  
5 samples with ctcs crimped onto wire size 1,0 mm<sup>2</sup>



**TEST SET-UP**

<b>SPEC. LIMIT</b>	≥ 200MΩ	<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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DIELECTRIC BREAKDOWN RESISTANCE
AFTER TEST
[Vrms]
1500V a.c. for 1 min

<b>SPEC. LIMIT</b>	No breakdow or flashes	<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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**PRODUCT: AMP SUPERSEAL 1,5 Sr. CONNECTORS**

**GROUP -D-**

**TEST DESCRIPTION:**

**WATER RESISTANCE IP 6K TEST (MODIFIED)**

connectors completaly loaded, water jet with following parameters:  
Duration 5 min, nozzle 6,3 mm dia, pressure 250 kPa

**INSULATION RESISTANCE**

Between two adjacent contacts apply 500V dc for 1 minute

EQUIPMENT:

Avo Megaohmmeter RM170

**DIELECTRIC BREAKDOWN RESISTANCE**

Between two adjacent contacts apply voltage for 1 min

EQUIPMENT:

Dielectric tester EDC 8170F (5kV)

**NO AGEING  
CONDITIONING**

INSULATION RESISTANCE
AT NEW
[GΩ]
> 10 x 10 <sup>3</sup>

INSULATION RESISTANCE
AFTER TEST
[MΩ]
> 500

**Tested:**

5 samples with ctcs crimped onto wire size 0,35 mm<sup>2</sup>  
5 samples with ctcs crimped onto wire size 1,0 mm<sup>2</sup>

**TEST SET-UP**



<b>SPEC. LIMIT</b>	≥ 200MΩ
--------------------	---------

<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
-----------------------	--------------------

DIELECTRIC BREAKDOWN RESISTANCE
AFTER TEST
[Vrms]
1500V a.c. for 1 min

<b>SPEC. LIMIT</b>	No breakdow or flashes
--------------------	------------------------

<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
-----------------------	--------------------

**PRODUCT: AMP SUPERSEAL 1,5 Sr. CONNECTORS**

**GROUP -E-**

**TEST DESCRIPTION:**

**STATIC IMMERSION**

Immersed in water under pressure of 0,01 bar at temperature 23°C  
Duration 1 hrs min

**INSULATION RESISTANCE**

Between two adjacent contacts apply 500V dc for 1 minute

**NO AGEING  
CONDITIONING**

EQUIPMENT:

Avo Megaohmmeter RM170

**DIELECTRIC BREAKDOWN RESISTANCE**

Between two adjacent contacts apply voltage for 1 minute

EQUIPMENT:

Dielectric tester EDC 8170F (5kV)

INSULATION RESISTANCE
AT NEW
[GΩ]
> 10 x 10 <sup>3</sup>

INSULATION RESISTANCE
AFTER TEST
[MΩ]
> 500

**Tested:**

5 samples with ctcs crimped onto wire size 0,35 mm<sup>2</sup>  
5 samples with ctcs crimped onto wire size 1,0 mm<sup>2</sup>



**TEST SET-UP**

<b>SPEC. LIMIT</b>	≥ 200MΩ
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<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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DIELECTRIC BREAKDOWN RESISTANCE
AFTER TEST
[Vrms]
1500V a.c. for 1 min

<b>SPEC. LIMIT</b>	No breakdow or flashes
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<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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**PRODUCT:** AMP SUPERSEAL 1,5 Sr. CONNECTORS

**GROUP -F-**

**TEST DESCRIPTION:** **THERMAL CYCLING RESISTANCE**  
 14 cycles (without thermal shock): 16 hrs. at +40°C±2°C and 95% r.h.,  
 2 hrs. at -40°C±2°C, 2 hrs. at +125°C±2°C, 2 hrs. at +23°C±2°C  
 24 hrs. at +40°C±2°C and 95% r.h..

**EQUIPMENT:** Climatic Test Chamber

**THERMAL AGEING RESISTANCE**

100 hrs at +125°C

Ceas oven with hood exaust funnel

**WATER RESISTANCE IP9K**

According to IEC 529 - Sample mated onto relevant counterpart

Duration 30 sec per position

**INSULATION RESISTANCE**

Between two adjacent contacts apply 500V dc for 1 minute

**EQUIPMENT:** Avo Megaohmmeter RM170

**DIELECTRIC BREAKDOWN RESISTANCE**

Between two adjacent contacts apply voltage for 1 mimute

**EQUIPMENT:** Dielectric tester EDC 8170F (5kV)

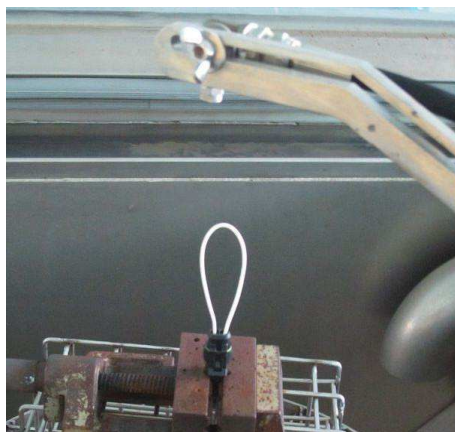
INSULATION RESISTANCE
AT NEW
[MΩ]
> 10 x 10 <sup>3</sup>

INSULATION RESISTANCE
AFTER TEST
[MΩ]
> 500

**Tested:**

5 samples with ctcs crimped onto wire size 0,35 mm<sup>2</sup>

5 samples with ctcs crimped onto wire size 1,0 mm<sup>2</sup>



**TEST SET-UP**

<b>SPEC. LIMIT</b>	≥ 200MΩ	<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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DIELECTRIC BREAKDOWN RESISTANCE
AFTER TEST
[Vrms]
1500V a.c. for 1 min

<b>SPEC. LIMIT</b>	No breakdow or flashes	<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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**PRODUCT: AMP SUPERSEAL 1,5 Sr. CONNECTORS**

**GROUP -G-**

**TEST DESCRIPTION:** **THERMAL CYCLING RESISTANCE**  
 14 cycles (without thermal shock): 16 hrs. at +40°C±2°C and 95% r.h.,  
 2 hrs. at -40°C±2°C, 2 hrs. at +125°C±2°C, 2 hrs. at +23°C±2°C  
 24 hrs. at +40°C±2°C and 95% r.h..

**EQUIPMENT:** Climatic Test Chamber

**THERMAL AGEING RESISTANCE**

100 hrs at +125°C

Ceasat oven with hood exhaust funnel

**WATER RESISTANCE IP 6K TEST (MODIFIED)**

connectors completaly loaded, water jet with following parameters:

Duration 5 min, nozzle 6,3 mm dia, pressure 250 kPa

**INSULATION RESISTANCE**

Between two adjacent contacts apply 500V dc for 1 minute

**EQUIPMENT:** Avo Megaohmmeter RM170

**DIELECTRIC BREAKDOWN RESISTANCE**

Between two adjacent contacts apply voltage for 1 mimute

**EQUIPMENT:** Dielectric tester EDC 8170F (5kV)

INSULATION RESISTANCE
AT NEW
[GΩ]
> 10 x 10 <sup>3</sup>

INSULATION RESISTANCE
AFTER TEST
[MΩ]
> 500

**Tested:**

5 samples with ctcs crimped onto

wire size 0,35 mm2

5 samples with ctcs crimped onto

wire size 1,0 mm2

**TEST SET-UP**



<b>SPEC. LIMIT</b>	≥ 200MΩ
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<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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DIELECTRIC BREAKDOWN RESISTANCE
AFTER TEST
[Vrms]
1500V a.c. for 1 min

<b>SPEC. LIMIT</b>	No breakdow or flashes
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<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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**PRODUCT: AMP SUPERSEAL 1,5 Sr. CONNECTORS**

**GROUP -H-**

**TEST DESCRIPTION:**

**THERMAL CYCLING RESISTANCE**

14 cycles (without thermal shock): 16 hrs. at +40°C±2°C and 95% r.h.,  
2 hrs. at -40°C±2°C, 2 hrs. at +125°C±2°C, 2 hrs. at +23°C±2°C  
24 hrs. at +40°C±2°C and 95% r.h..

EQUIPMENT:

Climatic Test Chamber

**THERMAL AGEING RESISTANCE**

100 hrs at +125°C

Ceast oven with hood exhaust funnel

**STATIC IMMERSION**

Immersed in water under pressure of 0,01 bar at temperature 23°C  
Duration 1 hrs min

EQUIPMENT:

Avo Megaohmmeter RM170

**DIELECTRIC BREAKDOWN RESISTANCE**

Between two adjacent contacts apply voltage for 1 min

EQUIPMENT:

Dielectric tester EDC 8170F (5kV)

INSULATION RESISTANCE
AT NEW
[GΩ]
> 10 x 10 <sup>3</sup>

INSULATION RESISTANCE
AFTER TEST
[MΩ]
> 500

**Tested:**

5 samples with ctcs crimped onto  
wire size 0,35 mm<sup>2</sup>

5 samples with ctcs crimped onto  
wire size 1,0 mm<sup>2</sup>



**TEST SET-UP**

<b>SPEC. LIMIT</b>	≥ 200MΩ
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<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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DIELECTRIC BREAKDOWN RESISTANCE
AFTER TEST
[Vrms]
1500V a.c. for 1 min

<b>SPEC. LIMIT</b>	No breakdow or flashes
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<b>FINAL ANALYSIS</b>	<b>TEST PASSED</b>
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