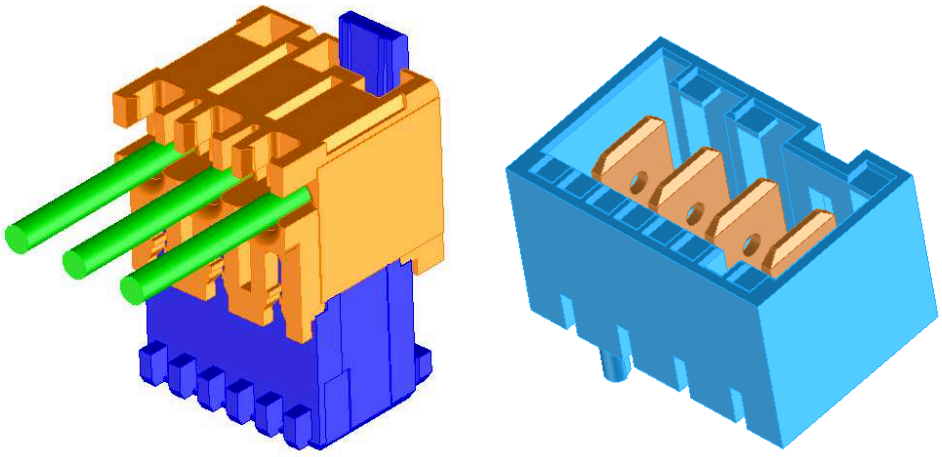
TABLE OF CONTENTS

SECTION **PAGE**



REVISE ON PC ONLY:		TITLE:	APPLIMATE 5.0mm CONNECTOR PRODUCT SPECIFICATION				
S	LRICE: Spec Update ECN IPG2013-0538 15 Oct 2012						
REV.	DESCRIPTION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
DESIGN CONTROL	STATUS	WRITTEN BY:	CHECKED BY:	APPROV'ED BY	DATE: YR/MO/DAY		
MXI	RELEASED	L RICE	B RUTTLE	S GRIFFIN	2005/01/14		
DOCUMENT NUMBER					FILENAME	SHEET	
PS-99020-0037					PS990200037	1 of 25	

1.0 SCOPE

This specification defines the performance for the Molex RAST 5 APPLI-MATE family of connectors

2.0 PRODUCT DESCRIPTION and applicable documents

Series No	Description	Applicable Sales Drawing	Application Specification	Agency Approval	Mating Interface	Packaging Specification
90833	5mm Appli-mate Female IDT Indirect 10 Amp	SD-90833E	ES-99033-0004	UL : E29179 CSA : LR 19980 VDE 8013-1432-1008/A3E T12/gre-na	90858 & 90879 or similar	PK-90833-001
90835	5mm Appli-mate Female IDT Indirect 16 Amp	SD-90835E	As per 90833	As per 90833	Silver plated 90858 or 90879	As per 90833
91338 Silver or Tin	5mm Appli-mate 1ckt 10Amp Female	SD-91338-006	As per 90833	As per 90833	As per 90833	As per 90833
91778	5mm Appli-mate Female IDT Indirect 10 Amp SCHULAMID	SD-91778-001	As per 90833	UL : E29179 CSA : LR 19980 & VDE	As per 90833	As per 90833
91777 Silver or Tin	5mm Appli-mate 1ckt 10Amp Female SCHULAMID	SD-91777-001	As per 90833	UL : E29179 CSA : LR 19980 & VDE	As per 90833	As per 90833
91779	5mm Appli-mate Female IDT Indirect 16 Amp SCHULAMID	SD-91779-001	As per 90833	UL : E29179 CSA : LR 19980 & VDE	As per 90835	As per 90833
90858	5mm Appli-mate Male vertical Header	SD-90858E	N/A	UL : E29179 CSA : LR 19980 & VDE	90833, 90835, 91338, 91777, 91779 similar	PK-90858-001
90879	5mm Appli-mate Male Right angle Header	SDA-90879E	N/A	UL : E29179 CSA : LR 19980 & VDE	As per 90858	As per 90858
90874	5mm Appli-mate Male Guide Frame	SD-90874-001	N/A	N/A	90888 with PCB	As per 90858

PRODUCT DESCRIPTION and applicable documents

Series No	Description	Applicable Sales Drawing	Application Specification	Agency Approval	Mating Interface	Packaging Specification
91999	5mm Appli-mate Male vertical Header	SD-91999-001	N/A	UL : E29179 CSA : LR 19980 & VDE	As per 90858	As per 90858
91954	5mm Appli-mate Female 0.38mm IDT Indirect	SD-91954-001	As per 90833	UL : E29179 CSA : LR 19980 & VDE	90858 & 90879 or similar	PK-90833-001
92000	5mm Appli-mate Female 1.00mm IDT Indirect	SD-92000-001	As per 90833	UL : E29179 CSA : LR 19980 & VDE	90858 & 90879 or similar	PK-90833-001
93003	5mm Appli-mate Male Right angle Header	Sd-93009-001	N/A	UL : E29179 CSA : LR 19980 & VDE	As per 90858	As per 90858
93052	5mm Appli-mate Female IDT Indirect Silver Terminal	SD-93052-001	As per 90833	Pending Application	90858 & 90879 or similar	PK-90833-001
93057	5mm Appli-mate Female IDT Indirect SCHULAMID Silver Terminal	SD-93057-001	As per 90833	Pending Application	90858 & 90879 or similar	PK-90833-001
93210	5mm Appli-mate Female 1.00mm IDT Indirect	SD-93210-001	As per 90833	UL : E29179 CSA : LR 19980 & VDE	90858 & 90879 or similar	PK-90833-001
93213	5mm Appli-mate 1ckt 10Amp Female Latamid	SD-93213-001	As per 90833	UL : E29179 CSA : LR 19980 & VDE	As per 90833	As per 90833
93396	5mm Appli-mate Female 1.00mm IDT Indirect	SD-93396-001	As per 90833	UL : E29179 CSA : LR 19980 & VDE	90858 & 90879 or similar	PK-90833-001

3.0 RATINGS

Series No	3.1 Current*	3.2 Voltage	3.3 Durability	3.4 Operating Temperature Range **	3.5 Storage temperature range
90833	10Amp Max	250V AC	10 Cycles	-20°C - +120°C	-20°C - +85°C
90835	16Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
91338 Silver or Tin	10Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
91778	10Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
91777 Silver or Tin	10Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
91779	16Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
90858 Silver or Tin	16Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
90879 Silver or Tin	16Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
90874	N/A	N/A	10 Cycles	As per 90833	As per 90833
91954	4 Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
91999 Silver or Tin	16Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
92000	12 Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
93003 Silver or Tin	16Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
93052	10Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
93057	10Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
93210	12 Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
93213 Silver or Tin	10Amp Max	250V AC	10 Cycles	As per 90833	As per 90833
93396	16 Amp Max	250V AC	10 Cycles	As per 90833	As per 90833

** See Temp / Current De-rating curve

*** Max amps dependent on max operating Temperature, approved cable size, and Series No.**

See Current De-rating curve

Example : 91778 with 0.75mm sq cable @ max temp of 85°C max current 10 amps.

4.0 VISUAL EXAMINATION

Test Ref.	Item	Test Condition	Requirements
4.1	Visual Examination (IEC 512-2-1a)	Parts checked for: Identification, Workmanship, Finish, Markings, Cosmetic issues, Tool marks, etc.	Meets requirements of product drawing. All parts shall be free of hazardous substances. All parts to be free of dirt and grease. No Defects

5.0 ELECTRICAL PERFORMANCE

	5.1 Contact Resistance (IEC 512-2, test 2a)	5.2 Insulation resistance (IEC 512-2 Test 3a) Method C	5.3 Dielectric Withstand Voltage IEC 512-2 Test 4a Method C	5.4 Current Induced Temperature Rise IEC 512-3, Test 5a	5.5 De-rating Curve IEC 512-3, Test 5b
Test Condition / Series No	Low level Contact Resistance 100mA Max 20 mVolts	Unmated connector with 500VDC between adjacent contacts for 1 minute.	Unmated connector with 3000V, 60 sec.	Load all circuits with the rated current for 1 hour at ambient temperature.	See Appendix D
90833	Initial 5mΩ Maximum	10 Mega ohms	No Breakdown Max leakage 2mA	A maximum temperature rise of ≤ 40°C	See Appendix D
90835	As per 90833	As per 90833	As per 90833	≤50°C	As per 90833
91338	As per 90833	As per 90833	As per 90833	As per 90833	As per 90833
91778	As per 90833	As per 90833	As per 90833	As per 90833	As per 90833
91777	As per 90833	As per 90833	As per 90833	As per 90833	As per 90833
91779	As per 90833	As per 90833	As per 90833	≤50°C	As per 90833
90858	As per 90833	As per 90833	As per 90833	As per 90833	N/A
90879	As per 90833	As per 90833	As per 90833	As per 90833	N/A
90874	N/A	As per 90833	As per 90833	N/A	N/A
91999	As per 90833	As per 90833	As per 90833	As per 90833	As per 90833
91954	As per 90833	As per 90833	As per 90833	As per 90833	As per 90833
92000	As per 90833	As per 90833	As per 90833	As per 90833	N/A
93003	As per 90833	As per 90833	As per 90833	As per 90833	N/A
93052	As per 90833	As per 90833	As per 90833	As per 90833	As per 90833
93057	As per 90833	As per 90833	As per 90833	As per 90833	As per 90833
93210	As per 90833	As per 90833	As per 90833	As per 90833	N/A
93213	As per 90833	As per 90833	As per 90833	≤40°C	As per 90833
93396	As per 90833	As per 90833	As per 90833	As per 90833	N/A

REVISE ON PC ONLY:		TITLE:	APPLIMATE 5.0mm CONNECTOR PRODUCT SPECIFICATION
S	See sheet 1		
REV.	DESCRIPTION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	

DOCUMENT NUMBER		FILENAME	SHEET
PS-99020-0037		PS990200037	7 of 25

	6.1 Mating Force	6.2 Un-mating force	6.3 IDT Wire Retention Force	6.4 Vibration (DIN IEC 68-2-6)	6.5 Drop Shock	6.6 Terminal Retention in Connector (IEC 512-8-15a)
Test Condition / Series No	10 cycles. Force measured using a polished pin as per IEC760 section 16	10 cycles. Force measured using a polished pin as per IEC760 section 16	Apply a straight tensile force parallel and at 90° to the direction of the wire at a rate of 25-100mm per minute.	Frequency cycle: 5-500-5Hz Displacement: 7.5mm Acceleration: 2g Duration: 20 Sweep cycles	1/2 sine, 50G, 11 milliseconds 3 shocks in each of 6 directions	Axial load is applied to contacts in housing at a rate of 25mm/min
90833	≤ 4N per Contact for all 10 cycles	≥ 0.5N per contact for all 10 cycles	Parallel to and 90° to Wire 0.50mm^2 ≥ 70N 0.75mm^2 ≥ 100N	Initial contact resistance as per 5.1. Final Rc ≤ 2x initial Rc. No discontinuities greater than 1uSec	Initial contact resistance as per 5.1. Final Rc ≤ 2x initial Rc. No discontinuities greater than 1uSec	N/A
90835	≤15N	As per 90833	1. 0mm^2 ≥ 110N 1.5mm^2 ≥ 150N	As per 90833	As per 90833	N/A
91338	≤ 40N for all 10 cycles	30N-50N for all 10 cycles	As per 90833	As per 90833	As per 90833	N/A
91778	As per 90833	As per 90833	As per 90833	As per 90833	As per 90833	N/A
91777	As per 91338	As per 91338	As per 90833	As per 90833	As per 90833	N/A
91779	As per 90833	As per 90833	As per 90835	As per 90833	As per 90833	N/A
90858	Mate with 90833: ≤ 4N per Contact for all 10 cycles	Mate with 90833≥ 0.5N per Contact for all 10 cycles	N/A	As per 90833	As per 90833	45N per terminal
90879	As per 90858	As per 90858	N/A	As per 90833	As per 90833	As per 90858
90874			N/A		N/A	N/A
91999	As per 90858	As per 90858	N/A	As per 90833	As per 90833	As per 90858
91954	As per 90833	As per 90833	0.35-0.38mm² ≥ 50N	As per 90833	As per 90833	N/A
92000	As per 90833	As per 90833	As per 90835	As per 90833	As per 90833	N/A
93003	As per 90858	As per 90858	N/A	As per 90833	As per 90833	As per 90858
93052	As per 90833	As per 90833	As per 90833	As per 90833 As	As per 90833	N/A
93057	As per 90833	As per 90833	As per 90833	As per 90833	As per 90833	N/A
93210	As per 90833	As per 90833	As per 90835	As per 90833	As per 90833	N/A
93213	As per 91338	As per 91338	As per 90833	As per 90833	As per 90833	N/A
93396	As per 90833	As per 90833	As per 90835	As per 90833	As per 90833	N/A

6.0 MECHANICAL PERFORMANCE

7.0 ENVIRONMENTAL PERFORMANCE

	7.1 Life test	7.2 Vibration/ Climate Test	7.3 Damp Heat Test (DIN 40046, Part 3)	7.4 Thermal Cycling
Test Condition / Series No	See appendix B for Temp / Time Profile Current. Measure Voltage Drop as per appendix A2.	300 cycles as per diagram in Appendix B profile A (Excl. Humidity Control) Vibrate in chamber as per 6.4 for 100 hrs in each X, Y, Z directions	14 days at 40°C and 93% R.H. No current flow during exposure.	14 cycles: one cycle consists of 16 hours at 80°C followed by 8 hours at 20°C maximum
90833	Indirect thru Header: Temp / Time Profile A for 6,000 cycles. Final Rc ≤ 2 times initial Rc as per 5.1	Final Rc ≤ 2 times initial Rc as per 5.1 No Discontinuity greater than 1uSec Mated with 90858	Final Rc ≤ 2 times initial Rc as per 5.1	Final Rc ≤ 2 times initial Rc as per 5.1
90835	Indirect thru Header: Temp / Time Profile B for 4,000 cycles. Change on contact resistance ≤ 5mΩ	As per 90833	As per 90833	As per 90833
91338	As per 90833 with rated current	As per 90833	As per 90833	As per 90833
91778	As per 90833 with rated current	As per 90833	As per 90833	As per 90833
91777	As per 90833 with rated current	As per 90833	As per 90833	As per 90833
91779	As per 90835 with Rated current	As per 90833	As per 90833	As per 90833
90858	N/A	As per 90833 Mated with 90833	As per 90833	As per 90833
90879	N/A	As per 90858	As per 90833	As per 90833
90874	N/A	N/A	N/A	N/A
91999	N/A	As per 90833 Mated with 90833	As per 90833	As per 90833
91954	As per 90833 with rated current	As per 90833	As per 90833	As per 90833
92000	As per 90835 with Rated current	As per 90833	As per 90833	As per 90833
93003	N/A	As per 90833 Mated with 90833	As per 90833	As per 90833
93052	As per 90833 with rated current	As per 90833	As per 90833	As per 90833
93057	As per 90833 with rated current	As per 90833	As per 90833	As per 90833
93210	As per 90835 with Rated current	As per 90833	As per 90833	As per 90833
93213	As per 90833 with rated current	As per 90833	As per 90833	As per 90833
93396	As per 90835 with Rated current	As per 90833	As per 90833	As per 90833

	7.5 SO_2 (DIN 50018-0, 2s)	7.6 Salt Mist Spray (IEC 68-2-11)	7.7 Cold Exposure (IEC 512-11-10)	7.8 Glow Wire Test (IEC60695-2-11)
Test Condition / Series No	T_{amb} = +40° Deg C SO_2 = 0.2 liter H_2O = 2 liter 8 hours exposure time 16 hours recovery time	Parts mated to PCB. T_{amb} = 35°C Rel. Humidity = 95% NaCl concentrate = 50g/ltr Duration 96 Hrs	2 hours at – -40°C.	Connector subject to rated temp glow wire for 30 seconds on X, Y & Z axis See Appendix E for diagram.
90833	Final Rc ≤ 2 times initial Rc as per 5.1	Final Rc ≤ 2 times initial Rc as per 5.1 No internal corrosion traces. Insulation resistance @ 500V, within 5MΩ min	Final Rc ≤ 2 times initial Rc as per 5.1. No physical damage / evidence	Glow wire temp = 850 °C. Flame must extinguish within 30 seconds. No ignition of paper 300mm under test specimen due to dripping etc.
90835	As per 90833	As per 90833	As per 90833	As per 90833
91338	As per 90833	As per 90833	As per 90833	As per 90833
91778	As per 90833	As per 90833	As per 90833	Glow wire temp = 750 °C. Flame must extinguish within 2 seconds. No ignition of paper 300mm under test specimen due to dripping etc.
91777	As per 90833	As per 90833	As per 90833	As per 91778
91779	As per 90833	As per 90833	As per 90833	As per 91778
90858	As per 90833	As per 90833	As per 90833	As per 91778
90879	As per 90833	As per 90833	As per 90833	As per 91778
90874	N/A	N/A	N/A	N/A
91999	As per 90833	As per 90833	As per 90833	As per 91778
91954	As per 90833	As per 90833	As per 90833	As per 91778
92000	As per 90833	As per 90833	As per 90833	As per 91778
93003	As per 90833	As per 90833	As per 90833	As per 91778
93052	As per 90833	As per 90833	As per 90833	As per 90833
93057	As per 90833	As per 90833	As per 90833	As per 91778
93210	As per 90833	As per 90833	As per 90833	As per 91778
93213	As per 90833	As per 90833	As per 90833	As per 90833
93396	As per 90833	As per 90833	As per 90833	As per 91778

	7.9 Ball Pressure Test (EN 60998, Part 1, Test 16.3)	7.10 Dry Heat (Storage) (IEC 68-2-2)	7.11 solder-ability Test** (IEC 68-2-20-T)
Test Condition / Series No	Test for 1 hour at +125°C	85°C for 96 hours. Recovery time 2 hours at room temperature	Solder temp= 260°C Immersion & withdrawal speed = 25mm/Min +/- 10% Immersion time = 2s
90833	Diameter of footprint not to exceed 2mm	≤ 2 times change in Rc. Appearance, no damage	N/a
90835	As per 90833	As per 90833	N/a
91338	As per 90833	As per 90833	N/a
91778	As per 90833	As per 90833	N/a
91777	As per 90833	As per 90833	N/a
91779	As per 90833	As per 90833	N/a
90858	As per 90833	As per 90833	Solder Tail completely wetted smooth bright solder. Pin-holes and voids should not be concentrated in one section of wetted area.
90879	As per 90833	As per 90833	As per 90858
90874			As per 90858
91999	As per 90833	As per 90833	As per 90858
91954	As per 90833	As per 90833	N/a
92000	As per 90833	As per 90833	N/a
93003	As per 90833	As per 90833	As per 90858
93052	As per 90833	As per 90833	N/a
93057	As per 90833	As per 90833	N/a
93210	As per 90833	As per 90833	N/a
93213	As per 90833	As per 90833	N/a
93396	As per 90833	As per 90833	N/a

**** = This product is to be soldered by wave solder process only.**

8.0 PACKAGING

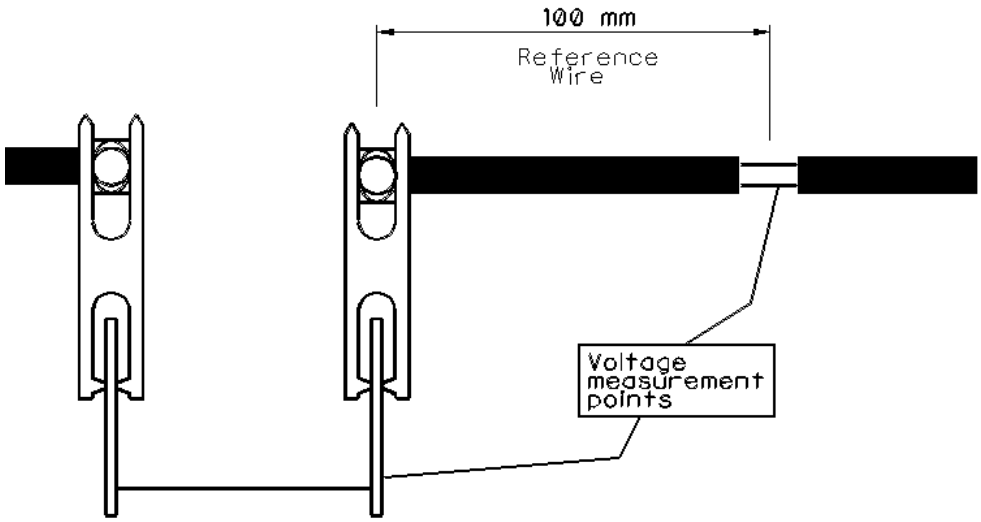
Parts shall be packaged to protect against damage during handling, transit and storage. No Styrofoam shall be used in any packing that comes in direct contact with the connectors.

9.0 TEST GROUPINGS

Test Ref.	Test	A	B	C	D	E	F	G	H	I
4.1	Visual examination	1,5	1,7	1,5	1,9	1,5	1,7	1,5		1,7
5.1	Contact Resistance		2,4,6	2,4	2,6	2,4	2,4,6	2,4		2,6
5.2	Insulation Resistance				3,7					3,5
5.3	Voltage proof				4,8					
5.4	Max temp rise								1	
5.5	De-Rating curve								1	
6.1	Mating Force								1	
6.2	Un-mating Force								1	
6.3	IDT Wire Retention								1	
6.4	Vibration		3							
6.5	Drop Shock		5							
6.6	Terminal Retention								1	
7.1	Life Test	3								
7.2	Vibration/Climate Test			3						
7.3	Damp Heat Test				5					
7.4	Thermal Cycling					3				
7.5	SO_2							3		
7.6	Salt Mist Spray									4
7.7	Cold Exposure						3			
7.8	Dry heat storage						5			
7.9	Ball Pressure test								1	
7.10	Glow Wire test								1	
7.11	Solder-ability Test						5		1	

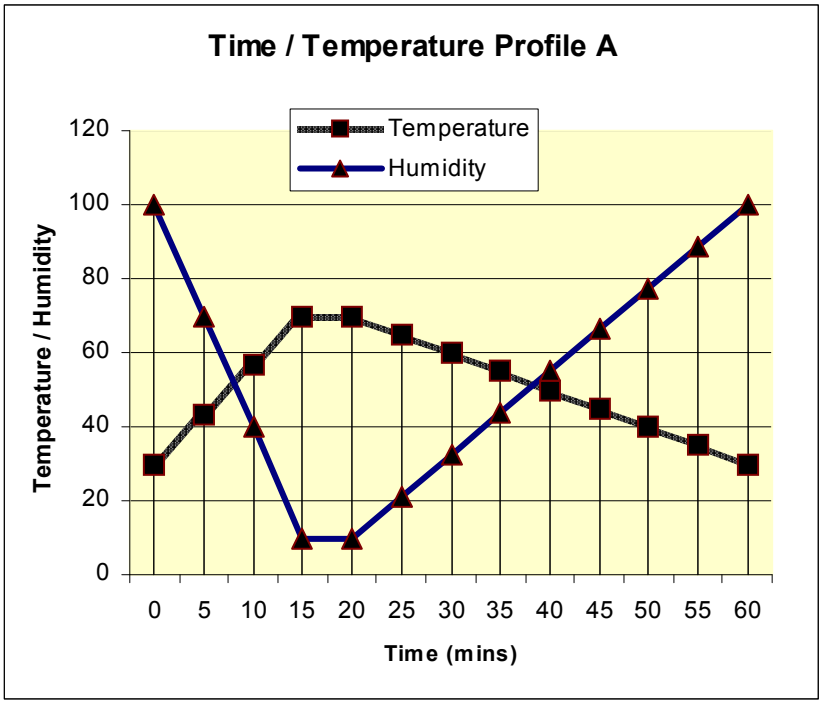
APPENDIX A

CONTACT RESISTANCE MEASUREMENT



APPENDIX B

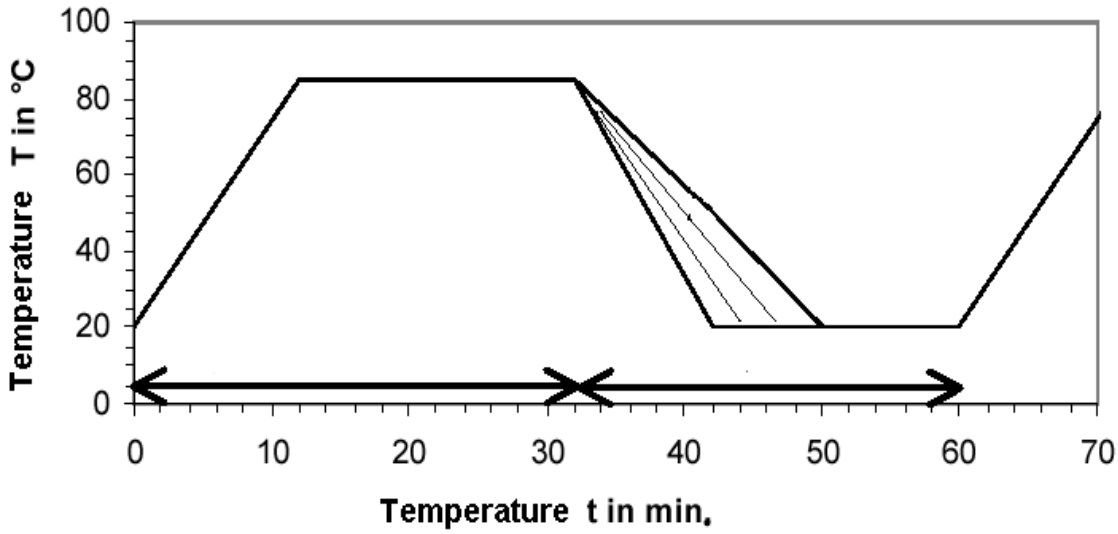
LIFE TEST- TEMPERATURE – TIME PROFILE A



During the 6,000 hours life test, all test specimens must undergo the following:

- Power on at rated current for 0-20 mins, Power Off for 20-60mins
- Voltage drop Measurements at rated current: as per IEC 512, Part 2 Every 100 hours of the life-test. Up to 1000 hr and every 200 hrs of life test for remainder

LIFE TEST- TEMPERATURE – TIME PROFILE B



Prior to 4,000 hours life test, all test specimens must undergo the following:

- Mating Cycles: 5 mating and un-mating cycles with PCB
- Pre-Conditioning: 2 cycles in Condensed Water as per DIN 50017, Test KFW: 8 hours condensation at 40°C. 16 hours recovery at room temperature.
- Voltage drop Measurements at rated current: as per IEC 512, Part 2 at an ambient temperature of 85°C on each of the following:
  - All new parts
  - After 5 mating and un-mating cycles with PCB
  - After pre-conditioning
  - Every 100 hours of the life-test.

- Requirment $\Delta R \leq 5\ m\Omega$

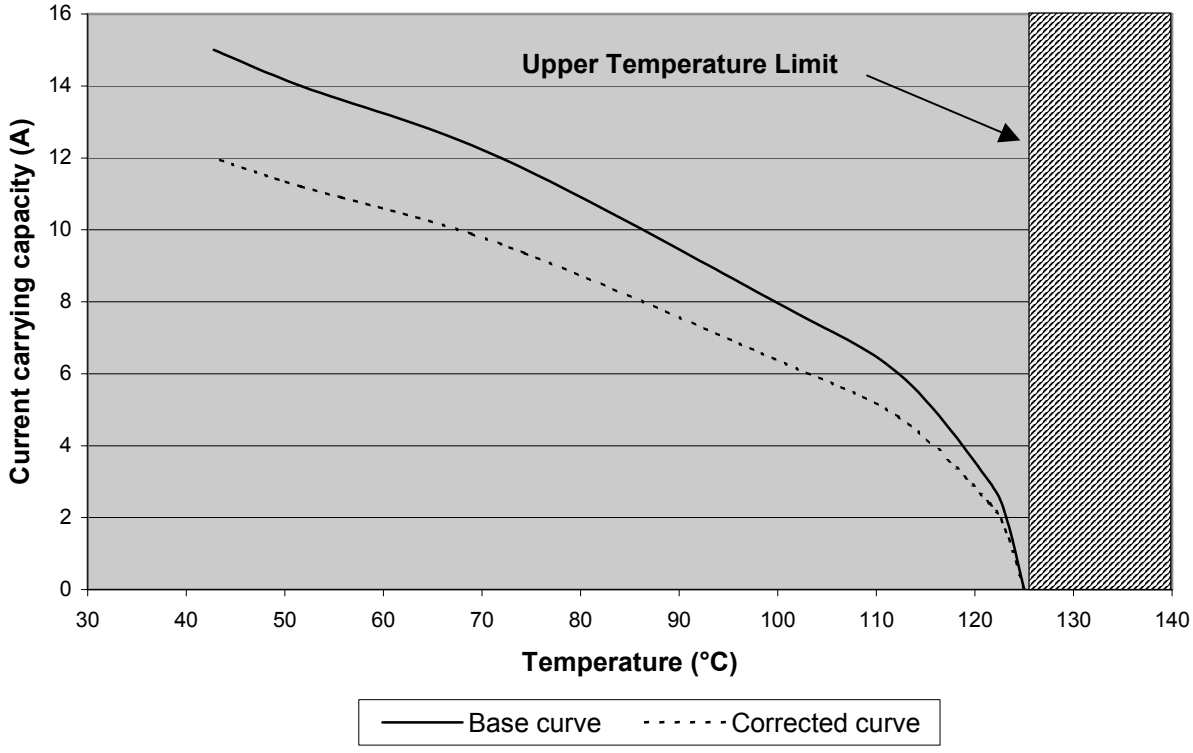
APPENDIX D

Current De-Rating Curves.

De-rating data and Curve for RAST 5, P/N 90833 terminated with 0.5mm^2 wire:

Current (Amps)	Tb	Tu	Delta T	Tm-delta	Current 20%
0			0	125	0
2	23.7	21.9	1.8	123.2	1.6
3	26.7	23.2	3.5	121.5	2.4
6	38.4	25.7	12.7	112.3	4.8
8	49.9	24.6	25.3	99.7	6.4
12	80.9	27.8	53.1	72.0	9.6
14	101.9	28.5	73.4	51.7	11.2
15	114.3	32.1	82.2	42.8	12

Derating curve P/N 90833
0.5 mm sq wire

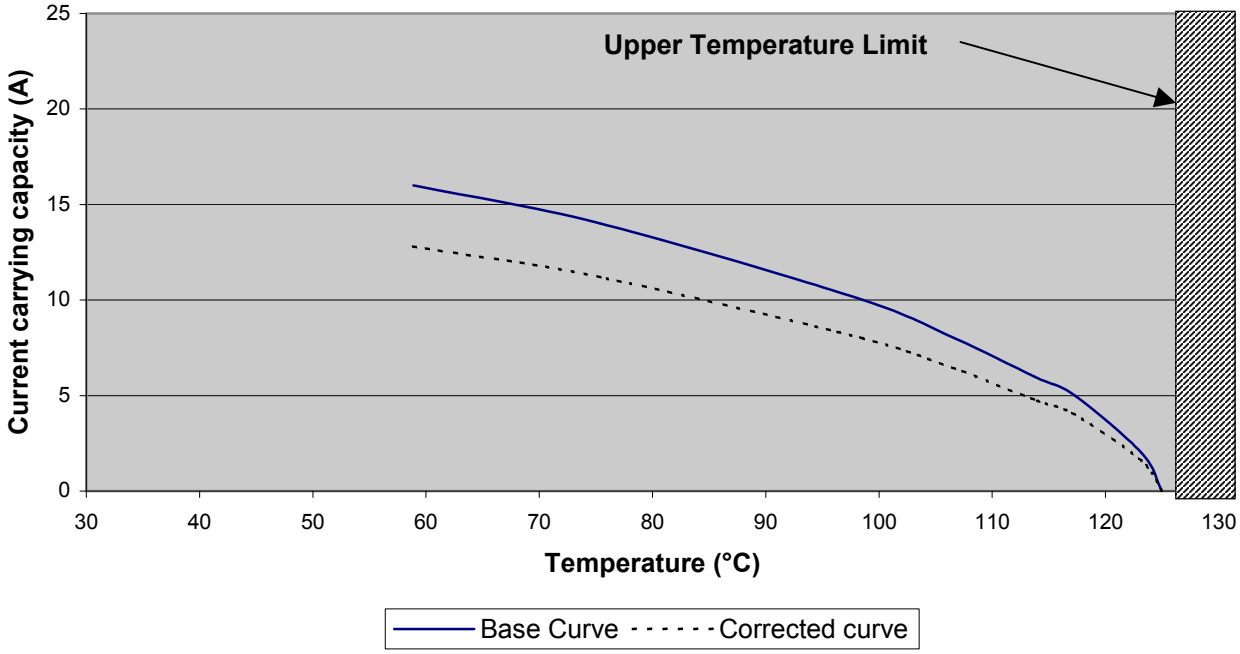


Tb	Measured Temperature
Tu	Room Temperature
Delta T	Tb-Tu
Tm	Upper temp limit of material

De-rating data and Curve for RAST 5, P/N 90833 terminated with 0.75mm^2 wire:

Current (Amps)	Tb	Tu	Delta T	Tm-delta	Current 20%
0			**0**	**125**	**0**
2	23.4	21.6	1.8	123.2	1.6
5	30.4	22.7	7.7	117.3	4.0
6	33.1	21.8	11.3	113.7	4.8
8	40.5	22.2	18.3	106.7	6.4
10	49.0	22.6	26.4	98.6	8.0
14	72.4	22.8	49.6	75.4	11.2
16	88.9	22.8	66.1	58.9	12.8

Derating Curve, P/N 90833
0.75mm sq wire

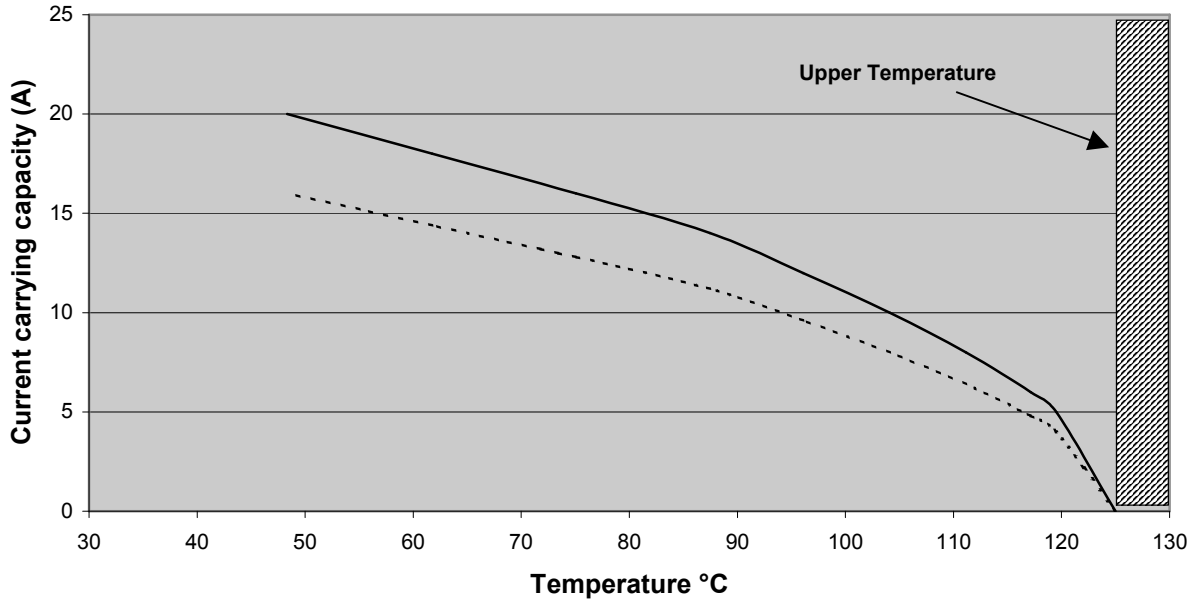


Tb	Measured Temperature
Tu	Room Temperature
Delta T	Tb-Tu
Tm	Upper temp limit of material

De-rating data and Curve for RAST 5, P/N 90835 terminated with 1.0mm^2 wire:

Current (Amps)	Tb	Tu	Delta T	Tm-delta	Current 20%
0			0	130	0
5	27.7	22.2	5.5	119.5	4.0
6	30.0	22.2	7.8	117.2	4.8
8	36.2	22.4	13.8	111.2	6.4
10	43.5	22.6	20.9	104.1	8.0
12	51.7	22.8	28.9	96.1	9.6
14	61.4	23.9	37.5	87.5	11.2
16	73.5	23.6	49.9	75.1	12.8
18	88.1	24.9	63.2	61.8	14.4
20	100.1	23.4	76.7	48.3	16.0

Derating Curve, P/N90835
1.0mm sq cable

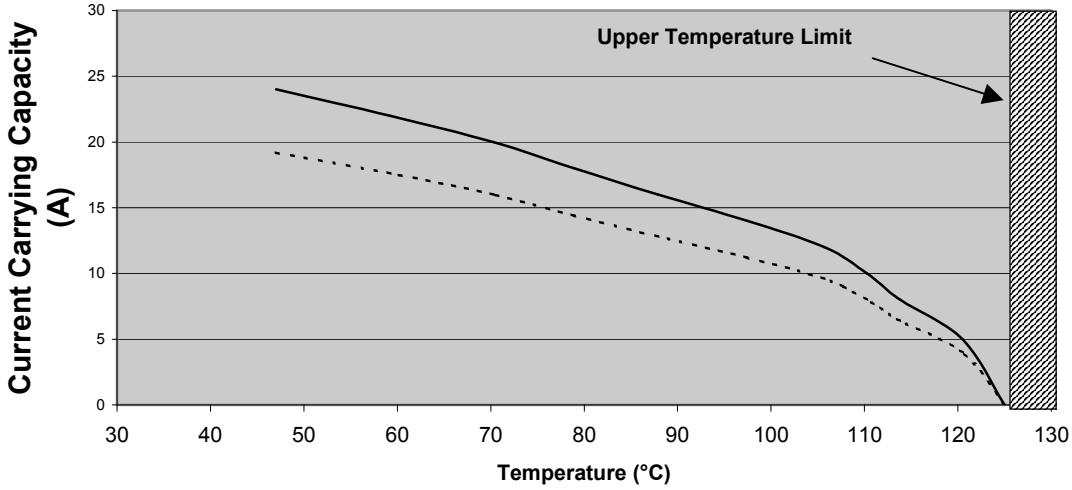


Tb	Measured Temperature
Tu	Room Temperature
Delta T	Tb-Tu
Tm	Upper temp limit of material

De-rating data and Curve for RAST 5, P/N 90835 terminated with 1.5mm^2 wire:

Current (Amps)	Tb	Tu	Delta T	Tm-delta	Current 20%
0			0	125	0
5	26.0	21.5	4.5	120.5	4.0
8	32.8	21.6	11.2	113.8	6.4
10	36.8	22.1	14.7	110.3	8.0
12	42.7	23.4	19.3	105.7	9.6
14	50.4	22.9	27.5	97.5	11.2
16	60.0	22.9	37.1	87.9	12.8
18	69.2	23.2	46.0	79.0	14.4
20	78.01429	23.3	54.7	70.3	16.0
22	89.15714	23.4	65.8	59.2	17.6
24	101.1714	23.2	78.0	47.0	19.2

Derating curve P/N 90835
1.5mm sq cable

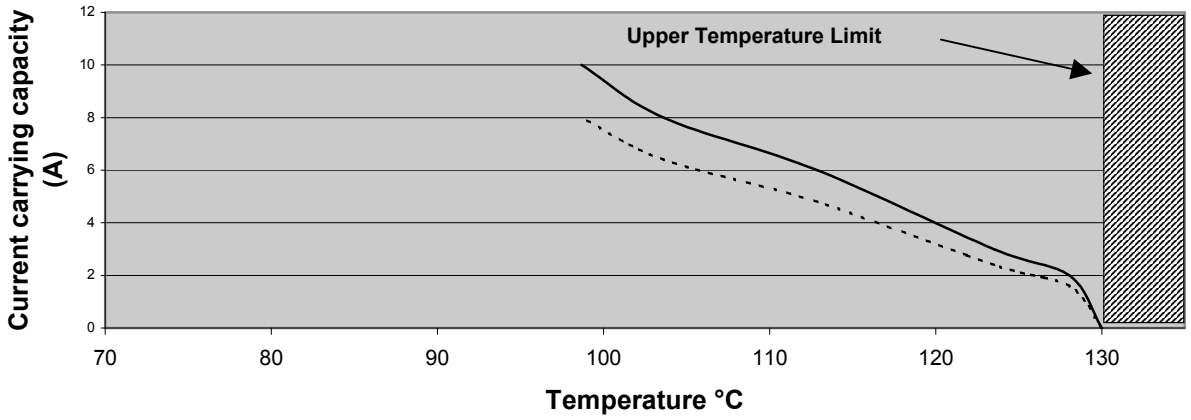


Tb	Measured Temperature
Tu	Room Temperature
Delta T	Tb-Tu
Tm	Upper temp limit of material

De-rating data and Curve for RAST 5, P/N 91778 terminated with 0.5mm^2 wire:

Current (Amps)	Tb	Tu	Delta T	Tm-delta	Current 20%
0			0	130	0
2	22.73	20.80	1.93	128.07	2
3	27.58	21.10	6.48	123.52	2
6	38.22	21.10	17.12	112.88	5
8	47.68	21.30	26.38	103.62	6
10	53.03	21.70	31.33	98.67	8

Derating curve, P/N 91778
0.5mm sq wire

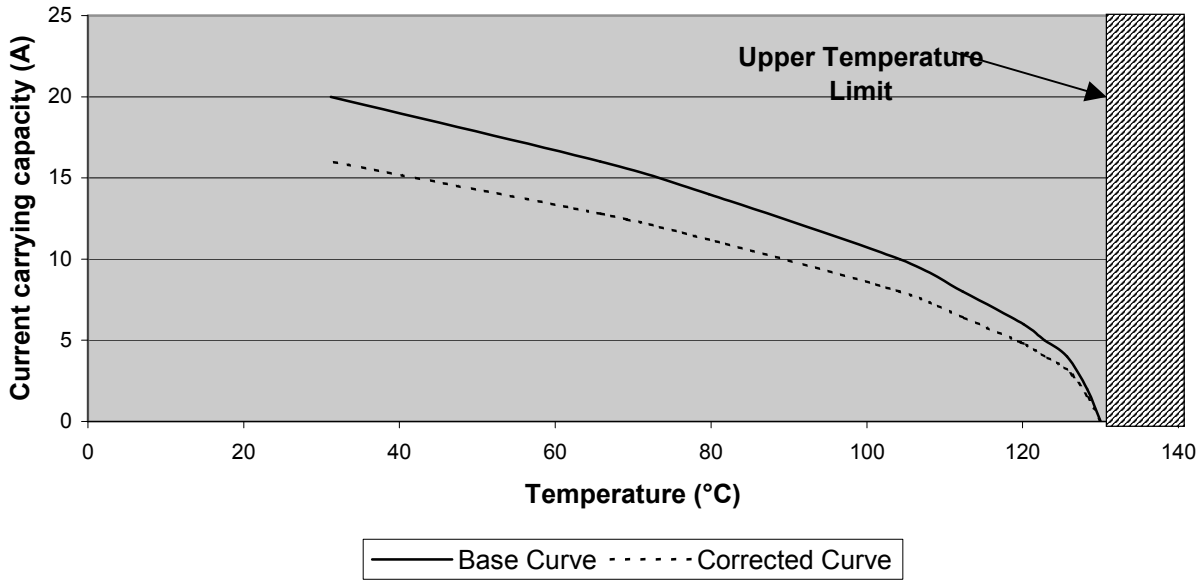


Tb	Measured Temperature
Tu	Room Temperature
Delta T	Tb-Tu
Tm	Upper temp limit of material

De-rating data and Curve for RAST 5, P/N 91778 terminated with 0.75mm^2 wire:

	Tb	Tu	Delta T	Tm-delta	Corrected
0			0	130	0
2	23.3	21.6	1.7	128.3	1.6
4	26.6	22.3	4.3	125.7	3.2
5	29.9	22.7	7.2	122.8	4
6	31.7	21.8	9.9	120.1	4.8
8	39.9	22.2	17.7	112.3	6.4
10	48.4	22.6	25.8	104.2	8
14	73.1	22.8	50.3	79.7	11.2
16	87	22.8	64.2	65.8	12.8
20	122.1	23.3	98.8	31.2	16

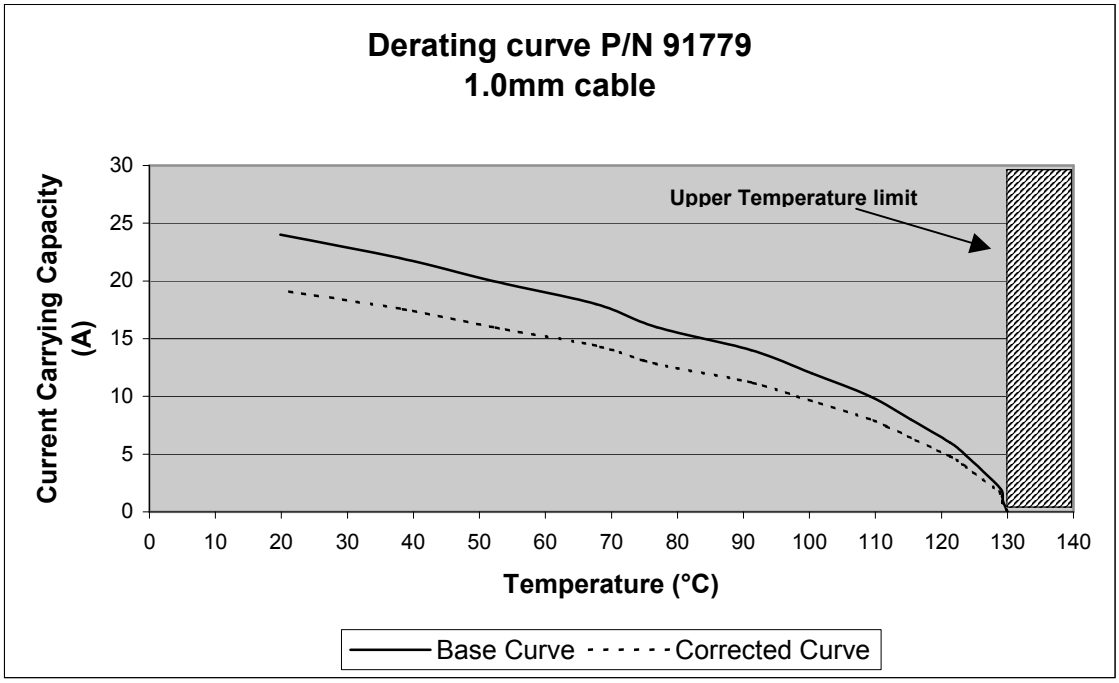
Derating curve P/N 91778
0.75sq wire



Tb	Measured Temperature
Tu	Room Temperature
Delta T	Tb-Tu
Tm	Upper temp limit of material

De-rating data and Curve for RAST 5, P/N 91779 terminated with 1.0mm^2 wire:

	Tb	Tu	Delta T	Tm-delta	Corrected
0			0	130	0
1	21.9	21.2	0.7	129.3	0.8
2	23.2	22.1	1.1	128.9	1.6
5	28.4	21.9	6.5	123.5	4.0
6	30.8	22.1	8.7	121.3	4.8
8	36.9	22.2	14.7	115.3	6.4
10	43.5	22.6	20.9	109.2	8.0
12	53.2	23.5	29.7	100.4	9.6
14	62.8	23.9	38.9	91.2	11.2
16	76.5	23.3	53.2	76.8	12.8
18	85.6	23.2	62.4	67.7	14.4
20	101.1	23.1	78.0	52.0	16.0
22	115.4	23.3	92.1	37.9	17.6
24	133.8	23.6	110.2	19.8	19.2

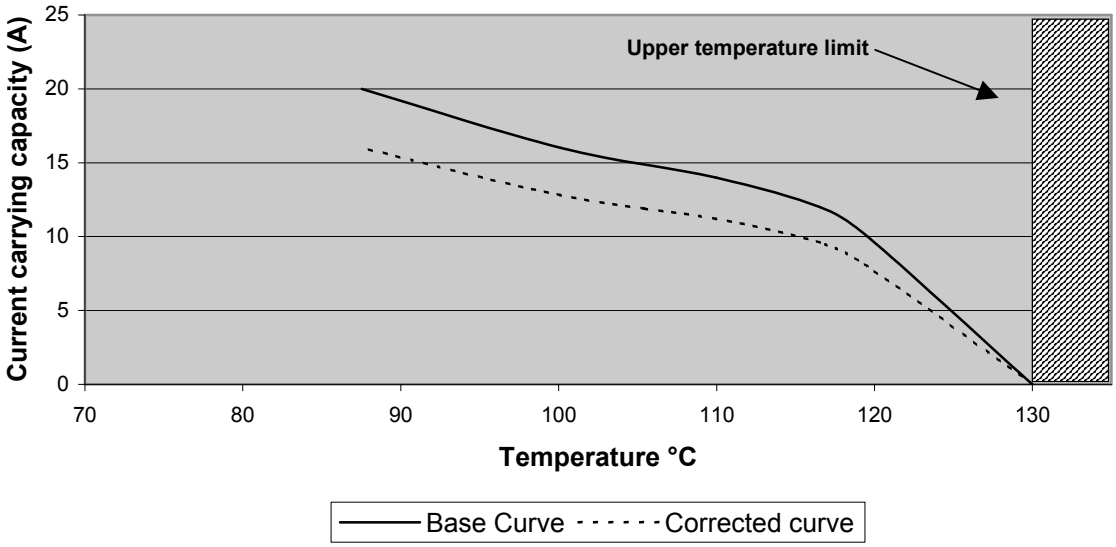


Tb	Measured Temperature
Tu	Room Temperature
Delta T	Tb-Tu
Tm	Upper temp limit of material

De-rating data and Curve for RAST 5, P/N 91779 terminated with 1.5mm^2 wire:

Current	Tb	Tu	Delta T	Tm- Delta T	(Current)20%
0				130	0
10	39.2	28.8	10.4	119.6	8
12	47.0	33.5	13.5	116.5	9.6
14	54.7	34.7	20.0	110.0	11.2
16	64.7	34.8	29.9	100.1	12.8
20	87.6	45.1	42.5	87.5	16

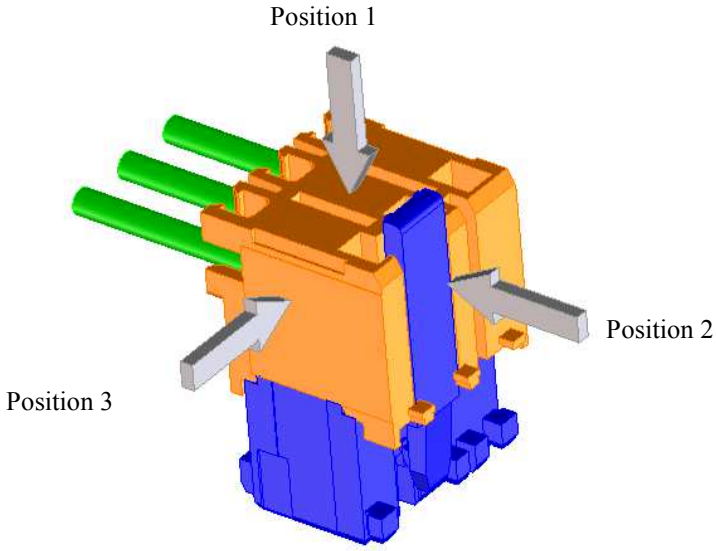
Derating Curve P/N 91779
1.5mm2 wire



Tb	Measured Temperature
Tu	Room Temperature
Delta T	Tb-Tu
Tm	Upper temp limit of material

Appendix E:
Position of Glow wire test Probe on connector for IEC60695-2-11 test

Female Connector



Male Header