

114-5174

NUMBER:

Customer Release

SECURITY CLASSIFICATION:

114-5174

Application Specification

Insulation Displacement Termination of Metric Interconnect System

1. Scope :

This specification covers the requirements for Insulation Displacement Termination of Metric Interconnect System Assembly Machine (DECAM) and manually operated mini-press assembly.

2. Applicable Connectors:

Applicable connectors are shown in Appendix Table, applied in the final sheet of this specification.

2.1 Applicable Wire Specifications:

Applicable wires shall be conforming to the requirements in the range of #28~#22 AWG, having insulation diameter of 1.0~1.5mm.

3. Nomenclature of Product and Wire-Terminated Conditions:

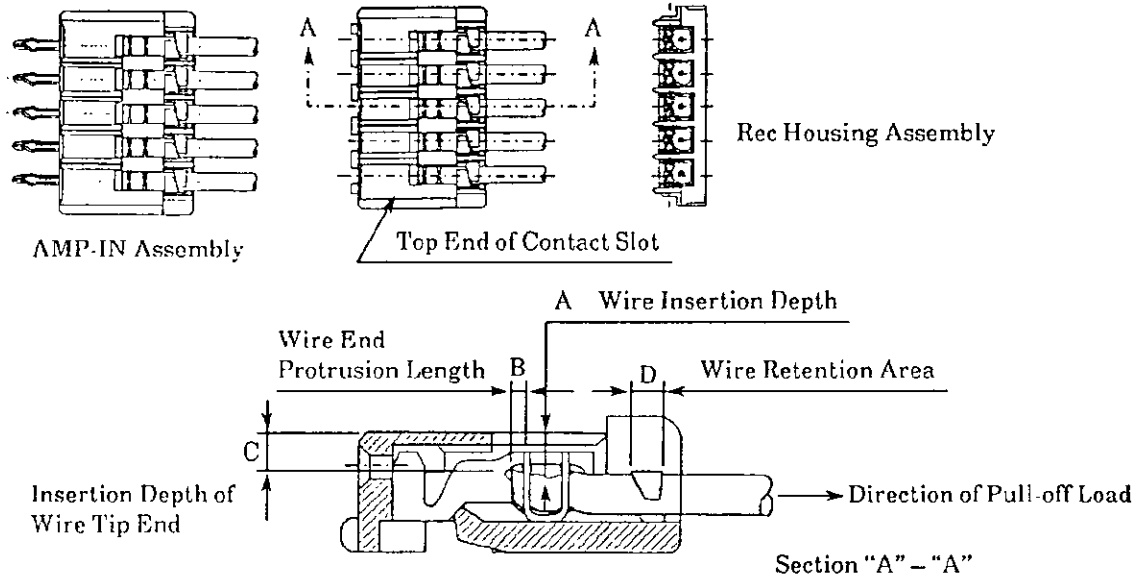


Fig. 1

				DR.	8/5 '92	SHEET 1 OF 6	 AMP (Japan), Ltd. Kawasaki, Japan		
				A. Ono					
				CHK.	S. Kubouchi				
				APP.	8/5 '92	LOC	LOC	NO	REV.
						J	A	114-5174	B
PIRNT	DR.'T					NAME			
	B	Revised FJ00-1788-94	AB	CK	1/22/94	Insulation Displacement Termination of			
	A	Revised FJ00-1156-94	A O	S K	9/14/91	Metric Interconnect System			
	0	Released RFA-2038	A O	S K	8/5 '92				
	LTR	REVISION RECORD	DR	CHK	DATE				

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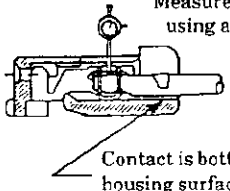
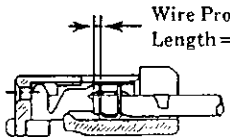
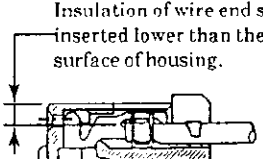
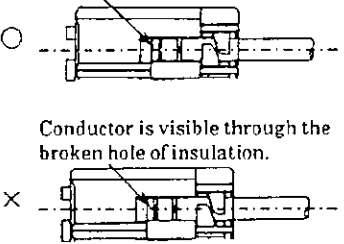
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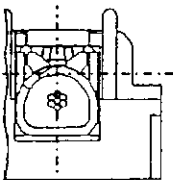
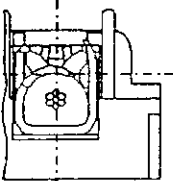
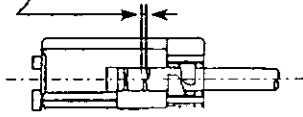
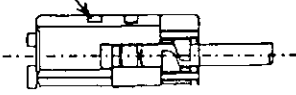
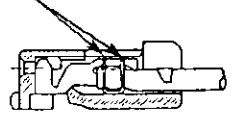
4.

Following figs are the same Rec Housing Ass'y as AMP-IN.

Para. No.	Check Item	Requirement	Standard Criteria for Acceptance
4.1	Depth of Wire Insertion	Wire insertion depth shall be controlled within $1.25^{+0.1}_{-0.2}$ mm, when measured from the top edge of housing to the tool mark on the inserted wire, regardless of the wire size and insulation diameter.	
4.2	Wire-end Protrusion Length	Wire-end protrusion length shall be controlled within the dimension "B" of 0.4mm minimum, when measured from the contact slot surface to the inside wall of housing. Excessive protrusion of the wire end shall be rejected.	
4.3	Wire-end Insertion Depth	So long as the insulation of wire end is inserted lower than the upper surface of housing, wire end insertion depth is acceptable.	
4.4	Exposure of Wire Conductor	Any inserted wire being damaged with broken insulation, resulting visible conductor, shall be rejected.	

(To be continued)

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SECURITY CLASSIFICATION: Customer Release NUMBER: 114-5174	Para. No.	Check Item	Requirement	Standard Criteria for Acceptance
	4.5	Wire Retention over the Cavity	Inserted wires shall be retained in hold under insulation barrel of the contact as shown in Fig. in the right.	<p><u>Acceptable</u></p>  <p><u>Rejectable</u></p> 
	4.6	Position Uniformity of Upper Edges of Contact Slot	After termination, the upper edges of inserted contact slot shall be of in-line uniformity. Any deviation not exceeding the thickness of contact (0.2mm) shall be allowable.	<p>Deviation not exceeding contact thickness (0.2mm) is allowable.</p> 
4.7	Damage of Contact and Housing	After termination, housing and contact slot shall appear intact without evidence of tool mark of insertion tooling. However, tool mark and scraping on contact insulation barrel shall be allowable.	<p><u>(Housing)</u></p> <p>Tool mark is allowable. However, cracking and blister are not allowable.</p>  <p><u>(Contact)</u></p> <p>Scraping is allowable on condition that plated surface is not peeled off.</p> 	

(To be continued)

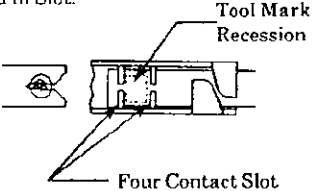
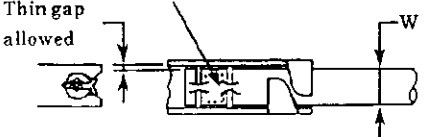
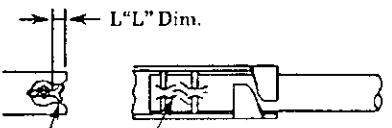
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Para. No.	Check Item	Requirement	Standard Criteria for Acceptance
4.8	Deviation of Wire Axis Alignment	<p>Inserted wire shall be aligned evenly with the centerline of contact axis.</p> <p>After termination, the four corners of the contact shall appear in symmetrical uniformity.</p> <p>Normal Condition of Wire Conductors Bottomed in Slot.</p>  <p>Tool Mark Recession</p> <p>Four Contact Slot</p> <p>Ⓐ Tool mark located at the center of wire</p> <p>Ⓑ Insulation heap-up shall be equal and symmetrical in place A and B.</p>	<p>Tool mark recession can be visible in size of a half wire width minimum.</p>  <p>Thin gap allowed</p> <p>W</p> <p>Off-centered conductors and one-sided insulation placement on contact slot are rejectable.</p>  <p>L "L" Dim.</p> <p>No tool mark is evident or exists but insufficient.</p> <p>Insulation heap-up more than half an "L" dimension causes rejectable.</p>
Others		Any contact once terminated, shall be not reused.	

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5. Wire Retention Force: (The specification values are all based on the actual measured readings.)

Wire Size	Wire Retention Force in Wire Axial Direction
AWG #28	19.6 N (2.0 kgf) Min.
AWG #26	19.6 N (2.0 kgf) Min.
AWG #24	19.6 N (2.0 kgf) Min.
AWG #22	19.6 N (2.0 kgf) Min.

6. Applicable Wire Range

Wire Size (Nominal)	No. of conductors / Diameter of a Conductor	Calculated Cross-sectional Area (mm ²)	Insulation Diameter (mm)	Applicable Wire
AWG #28	7 / 0.12	0.09	1.00-1.50	UL1061
AWG #26	7 / 0.16	0.14		UL1007
AWG #24	7 / 0.203	0.22		UL2651
AWG #22	7 / 0.26	0.37	1.30	UL2651

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Appendix Table:

Applicable Connector (s):

Descriptions	Product Part Number	Applicable Wire Specifications
Receptacle Housing Assembly	X-177534-X	UL-1007 UL-1061 AWG #28~#24
AMP-IN Assembly	X-179414-X	UL-1007 UL-1061 AWG #28, #26
	X-179436-X	UL-1007 UL-1061 AWG #24
AMP-IN Assembly Polarized	X-179548-X	UL-1007 UL-1061 AWG #28, #26
	X-179549-X	UL-1007 UL-1061 AWG #24
Receptacle Housing Assembly	X-179872-X	UL-2651 AWG #22

Appendix sheet:

Prepared: 7-3-92

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