

Excellent Integrated System Limited

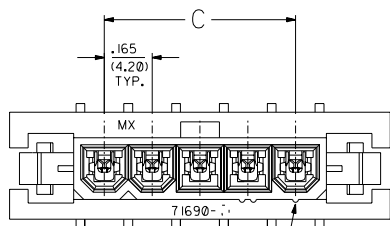
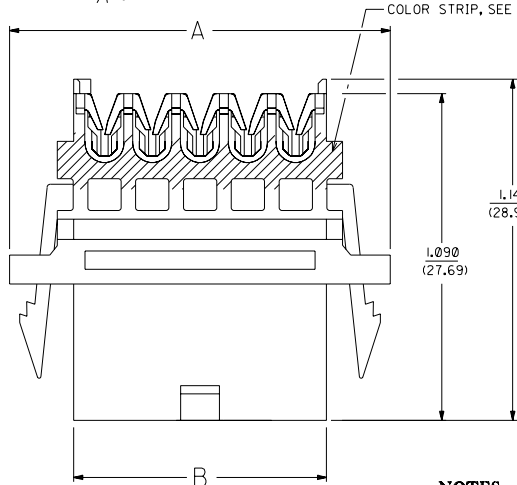
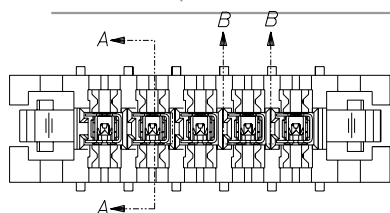
Stocking Distributor

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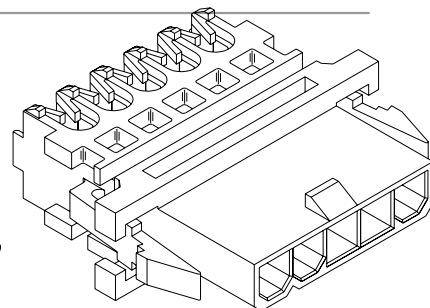
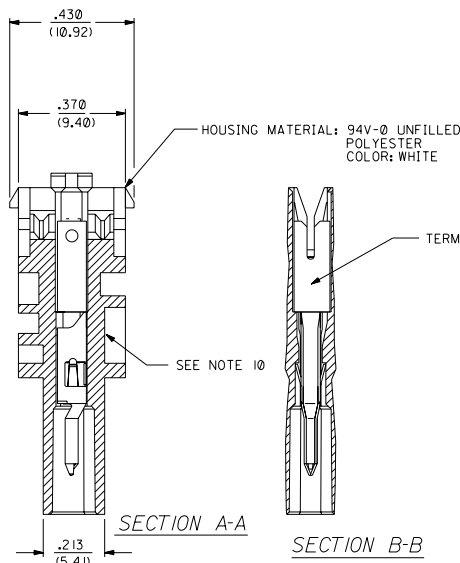
[Molex Connector Corporation](#)
[71690-2301](#)

For any questions, you can email us directly:

sales@integrated-circuit.com



CKT. NO. 1 INDICATOR RIB



NOTES:

1. ASSEMBLY NO. 71690-2301 SHOWN FOR ILLUSTRATION.
2. MATES WITH PART NUMBER 71694-0000.
3. SEE SHEET 2 FOR PART NUMBERS AND THEIR CONFIGURATIONS.
4. FINISHES (SEE CHART):
TIN OVERALL - .000100/(0.00254) MINIMUM TIN OVERALL, OVER NICKEL UNDERPLATING OVERALL.
15 GOLD - .000015/(0.0038) MINIMUM SELECT GOLD AND .000150/(0.0038) MINIMUM SELECT TIN OVER NICKEL UNDERPLATING OVERALL.
5. ITEM NUMBERS PRECEDED BY AN 'X' IN THE CHART ARE NOT AVAILABLE.
6. RECOMMENDED FOR USE WITH UL # 1007 STYLE WIRE.
7. OPTIONAL COVER NUMBERS: 71161-001 (FEED THRU) OR -002 (FEED TO VERSION).
8. SEE SHEET 7 FOR PANEL CUTOUT DETAIL.
9. PART CONFORMS TO SPECIFICATION NO. PS-71690-001.
10. RECYCLE LOGO: >PBT< FR TO BE LOCATED IN THIS AREA.
11. IDT SLOT IDENTIFIER COLOR STRIPE TO BE LOCATED ON THIS SURFACE. ID PER CHART BELOW.

WIRE GAUGE	ID COLOR
18	FLRSCNT MAGENTA
20	BLUE
22	GREEN
24	BLACK

12. SEE SMES-71690-0000 FOR TERMINATION SPECIFICATIONS.
13. PACKAGE PER PK-71690-0000.

NOTE FOR LEAD FREE CONVERSION:

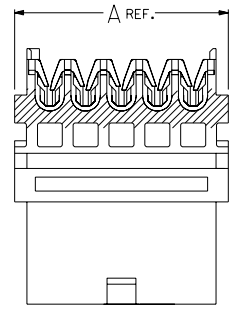
THE PRIMARY SHIPPING CARTON WILL BE LABELED 'COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2000/53/EC'. CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH LEAD.

L	LEAD FREE CONV ECN UCP2004-2042 ADAMS 04/04/20
K	CHANGE PROD SPEC ECR UDT2001-0195 KMS 9/22/2000
J	ALL WHITE MAT'L PER EC # U71026 ELO 97/2/26
I	18 AWG CLR CHANGE PER ECR U70413 ELO 10/23/96
H	REVISED PER ECR U61437 05/15/96 PAR
G	REVISED PER ECR U61185 03/21/96
F	ADD GOLD ASSY'S PER ECR U51189 08/30/95 SCS
E	REV CHARTS/DIM PER ECR U60094 07/26/95 SCS
D	ADD HOLE/NOTE 12 PER ECR U50939
C	ADD DIM/REV NOTE PER ECR U40914 8/10/94 SCS
B	ADD NOTE 11 PER ECR U40717 6/29/94 SCS
A	FINAL RELEASE PER ECR U40514 4/25/94 SCS

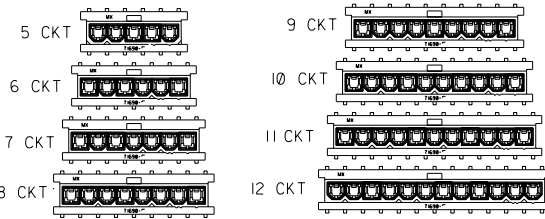
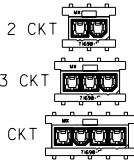
DIMENSIONS SHOWN (METRIC) INCH		UNLESS OTHERWISE SPECIFIED		TOLERANCES (INCH) ± 1/2°	
1 PLACE	± .010	2 PLACE	± .014	3 PLACE	± .025
4 PLACE	± .036	5 PLACE	± .048	6 PLACE	± .063
DRAFT: WHEN APPLICABLE MUST REMAIN WITHIN DIMENSIONS					
DRWG. BY	RWB	CHKD. BY	SAS	SCALE	4:1
APPD. BY		DATE	5/15/90X1	REV.	1
TITLE			MINI-FIT IDT SINGLE ROW PLUG SALES ASSEMBLY		
PART NO.			SDA-71690-0000		
FILE NAME			5/15/90X1		
THIS DRAWING CONVEYS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.			TC		

J	CT	S	A	T	ITEM	NUMBER	PANEL	MOUNTS	WIRE	AWG	WIRE DESCRIPTION	DIMENSION A		DIMENSION B		DIMENSION C		PLATING	SEE	NOTE	4	J
												INCH	(MM)	INCH	(MM)	INCH	(MM)					
2	71690-1001	NO	18	SOLID,FUSED STRANDED,STRANDED	0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)	TIN OVERALL	0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1003	NO	20		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1004	NO	22		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1005	NO	24		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1007	NO	18		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1009	NO	20		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1010	NO	22		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1011	NO	24		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)		0.490	(12.45)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1101	YES	18		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1103	YES	20		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1104	YES	22		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1105	YES	24		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1107	YES	18		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1109	YES	20		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1110	YES	22		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)					
2	71690-1111	YES	24		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)		0.821	(20.48)	0.378	(9.60)	0.1654	(4.20)					
3	71690-1401	NO	18		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1403	NO	20		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1404	NO	22		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1405	NO	24		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1407	NO	18		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1409	NO	20		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1410	NO	22		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1411	NO	24		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)		0.655	(16.65)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1501	YES	18		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1503	YES	20		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1504	YES	22		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1505	YES	24		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1507	YES	18		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1509	YES	20		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1510	YES	22		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)					
3	71690-1511	YES	24	SOLID,FUSED STRANDED,STRANDED	0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)		0.986	(25.05)	0.543	(13.80)	0.3307	(8.40)					

WITHOUT PANEL MOUNTS



POLARIZATION SCHEME



DIMENSIONS SHOWN (METRIC) INCH		TITLE	
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE AS FOLLOWS		REVISE ONLY ON CAD SYSTEM	
3 PLACE	± .010	MINI-FIT IDT SINGLE ROW PLUG ASSEMBLY	
2 PLACE	± .014	DATE 01/28/93	
1 PLACE	± .036	MOLEX INCORPORATED	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		PART NO. 71690-2301	
DRG. BY RWB	CHKD. BY SAS	SEE CHART	
APP'D. BY	SCALE 1:1	FILE NAME 571690X2.DWG	
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L	SEE SHEET I
H	SEE SHEET I
F	SEE SHEET I
D	SEE SHEET I
C	SEE SHEET I
A	SEE SHEET I
4	SEE SHEET I
3	SEE SHEET I
2	SEE SHEET I
I	SEE SHEET I

MFG.	SH.	REV.	LTR.	REVISIONS

WIRE TERMINATION SPECIFICATION

- 1.0 APPLICABLE DRAWINGS:
THIS SPECIFICATION APPLIES TO A-71690 AND A-71694 SERIES OF INSULATION DISPLACEMENT CONNECTORS.
- 2.0 SCOPE:
THIS SPECIFICATION IS DESIGNED TO INSURE THE PROPER TERMINATION AND PERFORMANCE OF THE A-71690 AND A-71694 SERIES OF INSULATION DISPLACEMENT CONNECTORS.
- 3.0 GENERAL:
THE .1654/(4.20) CENTER INSULATION DISPLACEMENT CONNECTOR SYSTEM IS DESIGNED TO INTERCONNECT DISCRETE WIRE AS OUTLINED IN THIS SPECIFICATION.

4.0 CONDUCTOR REQUIREMENTS:
4.1 CONDUCTOR SIZE IDENTIFICATION:

CONDUCTOR SIZE	CONDUCTOR STYLE	HOUSING ID COLOR (SEE FIG. 4)	TERMINAL ID HOLE POSITION (SEE FIG.8; SHT.5)
18 AWG	STRANDED WITH TOPCOAT,FUSED, SOLID	RED	POSITION 1
20 AWG	STRANDED WITH TOPCOAT,FUSED, SOLID	BLUE	POSITION 2
22 AWG	STRANDED WITH TOPCOAT,FUSED, SOLID	GREEN	POSITION 3
24 AWG	STRANDED WITH TOPCOAT,FUSED, SOLID	BLACK	POSITION 4

RECOMMENDED UL STYLE: 1007, 1061

- 4.2 INSULATION REQUIREMENTS:
INSULATION DIAMETER: .090 MAX
INSULATION HARDNESS: 85 MAX ON THE SHORE A SCALE

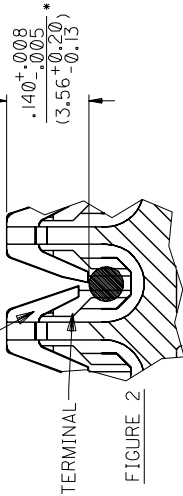
5.0 TERMINATION REQUIREMENTS:

5.1 CABLE INSERTION DEPTH:

THE CABLE SHOULD BE INSERTED TO DEPTH OF .140/(3.56)* FROM THE TOP OF THE HOUSING TO THE TOP OF THE WIRE (SEE FIGURE 2). WIRE MUST BE LOCATED BELOW THE BOTTOM OF EAGLES.

- * TERMINATION DEPTH FOR THE 24 AWG WIRES IN THE FOLLOWING ASSEMBLIES TO BE .138±.005/(3.51±0.13); 71690-6008 AND 71694-2402.

STRAIN RELIEF



REV.	B	A	B	B	B
SHT.	1	2	3	4	5

FILE NAME

T71690X1

REVISION ONLY ON CAD SYSTEM

REV.

B

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DRWG. NO. SMES-71690-0000

DRWG. NO. SMES-71690-0000

SHT.

1 OF 5



WIRE TERMINATION SPECIFICATION

5.2 WIRE CUT OFF

IN THE FEED-TO VERSION THE WIRE MUST BE DISPLACED IN BOTH INSULATION DISPLACEMENT SLOTS AND MUST PROTRUDE THROUGH THE SECONDARY SLOT BY $.152 \pm .060$ MIN. AS SHOWN IN FIGURE 3.

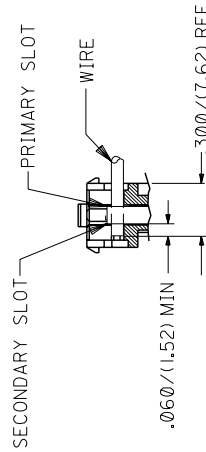


FIGURE 3

5.3 HORIZONTAL PULL OUT FORCE

THE CONNECTOR MUST MAINTAIN THE FOLLOWING MIN. PULL OUT VALUES WHEN A FORCE IS APPLIED AT A RATE OF 1 INCH PER MINUTE TO THE CABLE IN A DIRECTION PERPENDICULAR TO THE INSULATION DISPLACEMENT SECTION, AS SHOWN IN FIGURE 4. (NOTE CABLE MUST BE SLIT TO FORM INDIVIDUAL CONDUCTORS AFTER TERMINATION BUT PRIOR TO TESTING).

AWG	PULL FORCE
18 AWG	14.0 LBS. MIN.
20 AWG	TBD
22 AWG	TBD
24 AWG	8.0 LBS. MIN.

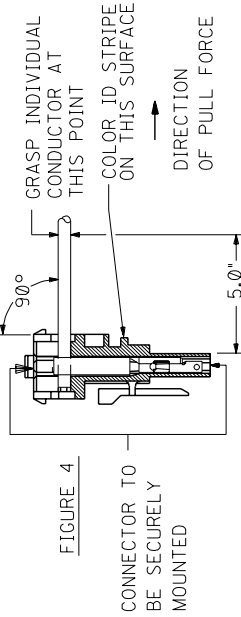


FIGURE 4

5.4 VERTICAL PULL OUT FORCE

THE CONNECTOR MUST MAINTAIN THE FOLLOWING MIN. PULL OUT VALUES WHEN A FORCE IS APPLIED AT A RATE OF 1 INCH PER MINUTE TO THE CABLE IN A DIRECTION PARALLEL TO THE INSULATION DISPLACEMENT SECTION, AS SHOWN IN FIGURE 5. (NOTE CABLE MUST BE SLIT TO FORM INDIVIDUAL CONDUCTORS AFTER TERMINATION BUT PRIOR TO TESTING).

AWG	PULL FORCE
18 AWG	5.0 LBS. MIN.
20 AWG	TBD
22 AWG	TBD
24 AWG	2.4 LBS. MIN.

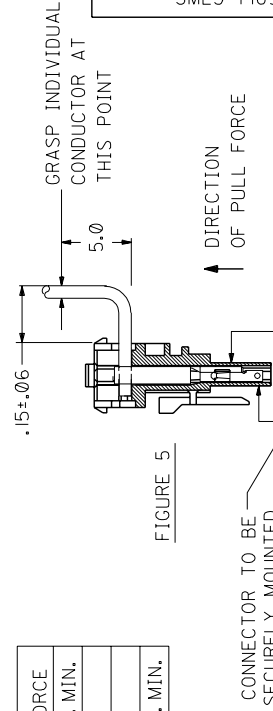


FIGURE 5

REV.
SHT.

FILE NAME
T71690X2

REV.	REV. ONLY ON CAD SYSTEM	REV.	A
SHT.		SHT.	2

DRWG. NO. SMES-71690-0000

DRWG. NO. SMES-71690-0000

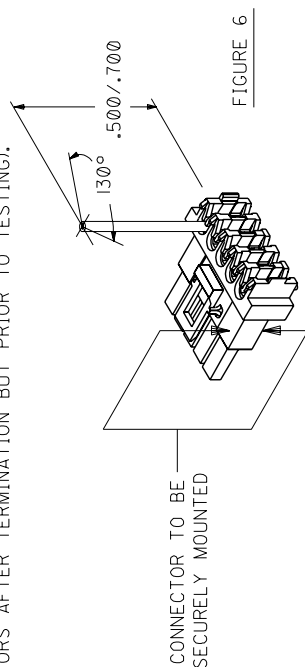
CONNECTOR TO BE
SECURELY MOUNTED

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WIRE TERMINATION SPECIFICATION

5.5 TORSIONAL RESISTANCE:

CONNECTOR MUST WITHSTAND A MAXIMUM TWIST ON A TERMINATED CABLE OF 130° WITHOUT DISTURBING THE INSULATION DISPLACEMENT INTERFACE IN THE PRIMARY OR SECONDARY SLOTS (SEE FIGURE 3). (NOTE CABLE MUST BE SLIT TO FORM INDIVIDUAL CONDUCTORS AFTER TERMINATION BUT PRIOR TO TESTING).



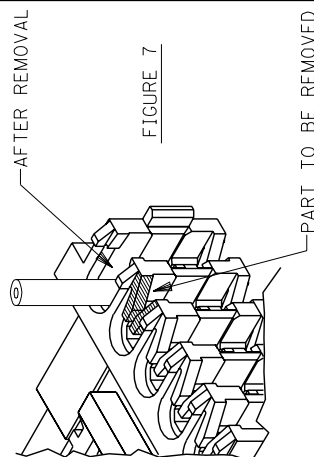
5.6 VISUAL INSPECTION:

TOOL MARKS FROM TERMINATION EQUIPMENT.
AFTER TERMINATION, INSULATION DISPLACEMENT SECTION OF THE TERMINAL TO BE FREE OF TOOL MARKS FROM TERMINATION EQUIPMENT.

6.0 TERMINATION EVALUATION PROCEDURE:

STEP 1 - STRAIN RELIEF REMOVAL

REMOVE SHADED PORTION OF THE STRAIN
RELIEF USING A RAZOR BLADE



STEP 2 -REMOVAL OF TERMINAL

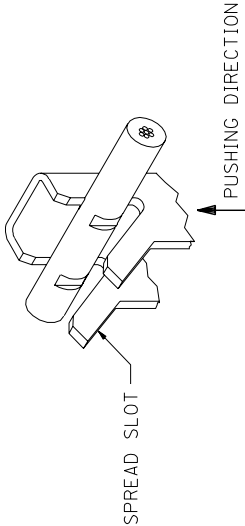
INSERT THE REMOVAL TOOL(#HT60630A) INTO THE FRONT OF THE CONNECTOR (AROUND THE TERMINAL) TO DEPRESS LOCK TANGS. PUSH THE TERMINAL/WIRE OUT THE BACK OF THE CONNECTOR.

[illegible]

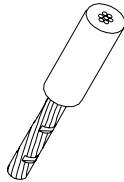
MOLEX INCORPORATED
LISLE, ILL. 60532 U.S.A.

WIRE TERMINATION SPECIFICATION

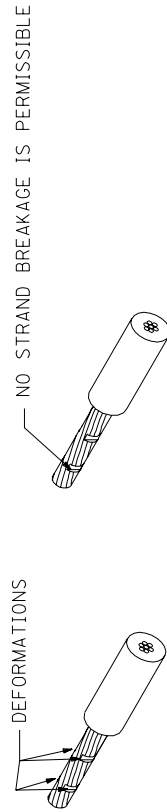
STEP 3 -CONDUCTOR REMOVAL
USING A SMALL PAIR OF PLIERS SPREAD THE I.D.T. SLOT
AND REMOVE CONDUCTOR BY PUSHING IN DIRECTION SHOWN



STEP 4 -REMOVING INSULATION
INSULATION TO BE REMOVED WITHOUT DISTURBING I.D.T. AREA



STEP 5 -CONDUCTOR INSPECTION
FOUR DEFORMATION POINTS MUST BE CLEARLY VISIBLE WHEN
USING 10X MAGNIFICATION



DRWG. NO. SMES-71690-0000

REV.
SHT.

FILE NAME
T71690X4

REVISIONS
1 0 0

REVISE ONLY ON CAD SYSTEM

REV. B

SHT. 4

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DRWG. NO. SMES-71690-0000

WIRE TERMINATION SPECIFICATION

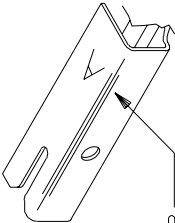
LTR.	REVISIONS
A	RELEASED PER ECR U51189 09/15/95 sas
B	UPDATED PER ECR U70308 ELO 09/20/96

STEP 1 -REMOVAL OF TERMINAL

INSERT THE REMOVAL TOOL(*HT60630A) INTO THE FRONT OF
OF THE CONNECTOR (AROUND THE TERMINAL) TO DEPRESS LOCK TANGS.
PUSH THE TERMINAL/WIRE OUT THE BACK OF THE CONNECTOR.

STEP 2 -WIRE GAGE PER CHART

ID LETTER	WIRE GAGE
D	18 AWG
C	20 AWG
B	22 AWG
A	24 AWG



ID LETTER

FIGURE 8

DRWG. NO. SMES-71690-0000

DRWG. NO. SMES-71690-0000

REV.
SHT.
FILE NAME T71690X5

REV.	REV. ONLY ON CAD SYSTEM	REV.	SHT.
B			5

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