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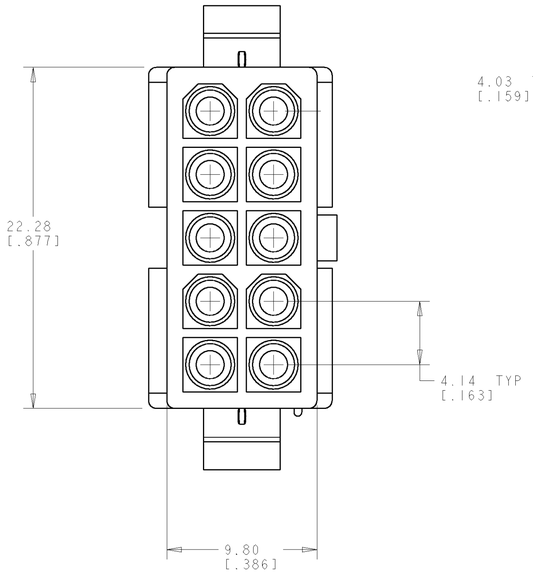
LOC	DIST
CM	00

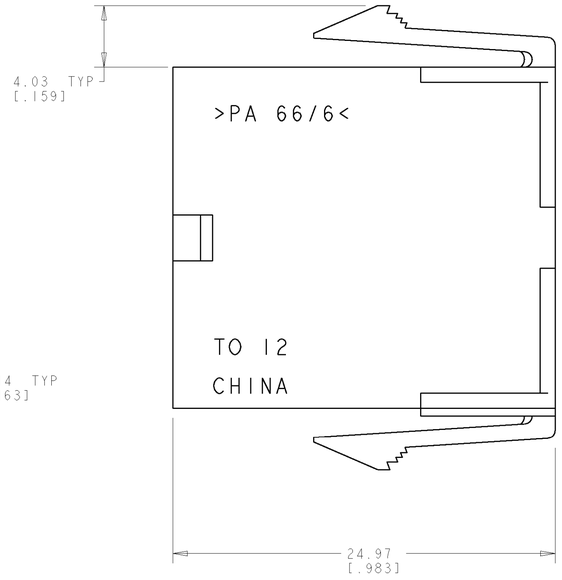
REVISIONS

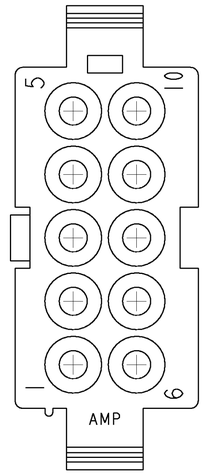
P	LTR	DESCRIPTION	DATE	DWN	APVD
	B	RELEASED PER 063B-0251-04	23JUNE04	KW	CJ

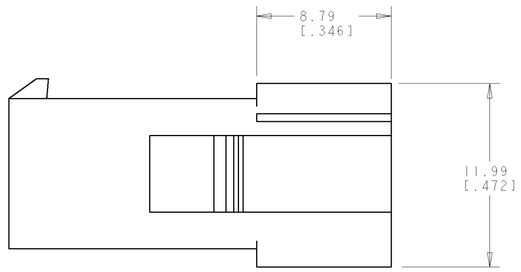
1. APPLICABLE CONTACT P/N: 170539, 170360, 170361, 170362.
2. DIMENSIONS IN BRACKETS ARE IN INCHES.
3. RECOMMENDED PANEL THICKNESS TO BE 0.8-2.0 [.031-.079].
4. HOUSING INSERTION INTO THE PANEL CUT OUT MUST BE IN THE SAME DIRECTION AS THE PUNCH.)

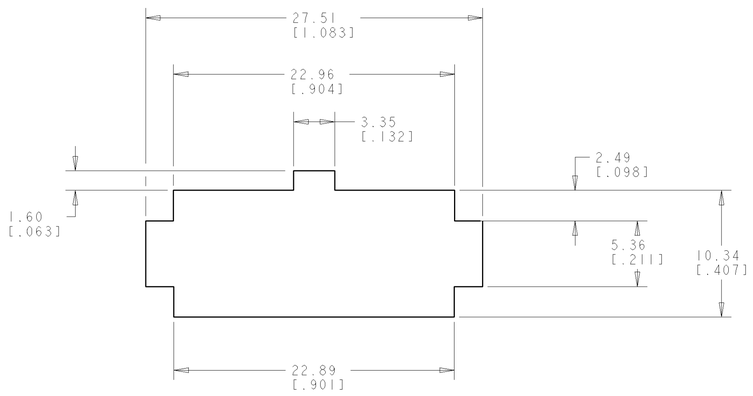
勝特力電材超市-龍山店 886-3-5773766
勝特力電材超市-光復店 886-3-5729570
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
http://www.100y.com.tw











REECOMMENDED PANEL CUT OUT 3
SCALE 4:1

METRIC

794942-1
PART NUMBER

THIS DRAWING IS A CONTROLLED DOCUMENT FOR TYCO ELECTRONICS CORPORATION IT IS SUBJECT TO CHANGE AND YOU CONTROLLING ENGINEERING ORGANIZATION SHOULD BE CONTACTED FOR THE LATEST REVISION.

DIMENSIONS: mm[INCHES]
TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±-
1 PLC ±-
2 PLC ±0.13 [.005]
3 PLC ±-
4 PLC ±-
ANGLES ±0° 30'
MATERIAL NYLON,UL94V-0 NATURAL
FINISH - -

DWN 23-JULY-2001 K. WHITAKER
CHK 23-JULY-2001 C. JONES
APVD 23-JULY-2001 C. JONES
PRODUCT SPEC -
APPLICATION SPEC -
WEIGHT -

Tyco Electronics
Harrisburg, PA 17105-3608

NAME
CAP, 10 CIRCUIT, SEALED APPLICATION, MINI UNIVERSAL MATE-N-LOK™

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A1	00779	C-794942	-

CUSTOMER DRAWING | SCALE 5:1 | SHEET 1 OF 1 | REV B

NOTE
All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of ±0.13 [±.005] and angles have a tolerance of ±2°. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This instruction sheet covers the use of the Mini-Universal MATE-N-LOK* sealed connector system. Instructions for seal assembly procedures are included. Application Specification 114-16017 provides the requirements for application, including wire size range and crimping requirements.

2. PART NUMBER SELECTION FOR SEALED APPLICATIONS

NUMBER OF CIRCUITS	WIRE SEALS(a)			INTERFACE SEALS	HOUSING(d)		HEADER(f)	
	Individual(e)	Cavity Plug(g)	Gang(b)		Plug Housing	Cap Housing(c)	Vertical(c)	Right Angle(c)
2	794758-X	794995-1	1586359-2	794772-2	794894-Y	794896-Y	Z-770872-Z	Z-770966-Z
4			1586359-4	794772-4	794805-Y	794939-Y	Z-770874-Z	Z-770968-Z
6			1586359-6	794772-6	794895-Y	794940-Y	Z-770875-Z	Z-770969-Z
8			1586359-8	794772-8	794821-Y	794941-Y	Z-794073-Z	Z-770970-Z
10			1-1586359-0	1-794772-0	794781-Y	791942-Y	Z-770858-Z	Z-770971-Z
16			1-1586359-6	1-794772-6	794824-Y	———	Z-794075-Z	Z-770974-Z

NOTE
(a) Only one type of wire seal shall be selected and used. The individual wire seal selection requires separate seals for each circuit in a housing. The gang seal selection requires a single seal of the corresponding position and configuration for the housing. Housings cannot utilize both individual wire seals and gang seals simultaneously.
(b) Two separate gang seals are required for the plug and cap housings. No gang seals are required on the headers. See Application Specification 114-16017 for wire sizes, insulation diameter ranges, and crimping information for terminals.
(c) Connectors require a plug and cap housing or a plug housing and header. Headers and cap housings cannot be used simultaneously in the same connector. Vertical and right angle headers cannot be used simultaneously in the same connectors.
(d) See Customer Drawing for applicable dash number (-Y) based on color.
(e) See Customer Drawing for applicable dash number (-X) based on wire size and insulation diameter.
(f) See Customer Drawing for applicable dash number (-Z) based on contact plating.
(g) Use of cavity plug seals is optional and may only be used in connectors utilizing individual wire seals. The purpose of the cavity plug seal is to block any unused position in the cap or plug housing.

Figure 1

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WIRE SIZE	INSULATION DIAMETER	WIRE SEAL STYLE	PIN(b)		SOCKET(b)	
			Strip	Loose Piece	Strip	Loose Piece
16 AWG	1.27-2.11 [.050-.083]	Gang	1586537-X	———	1586538-X	———
	———	Individual(a)	———	———	———	———
18-22 AWG	1.27-2.11 [.050-.083]	Gang	794440-X	———	794831-X	———
		Individual	X-770903-X	X-770987-X	X-770904-X	X-770988-X
22-26 AWG	1.27-1.75 [.050-.069]	Gang	X-770901-X	X-770985-X	X-770902-X	X-770986-X
	1.02-1.52 [.040-.060]	Individual				

NOTE

(a) Individual wire seals cannot be used in 16 AWG wire applications.

(b) See Customer Drawing for applicable dash number (X- and -X) based on contact plating.

Figure 2

3. SEAL ASSEMBLY PROCEDURE

3.1. Interface Seal Assembly

1. Assemble interface seal over contact silos of the plug housing as shown in Figure 3 until it rests against the mating face of the plug housing as shown in Figure 4.

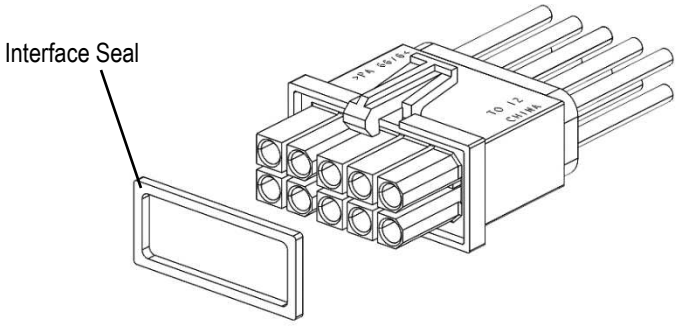

Figure 3

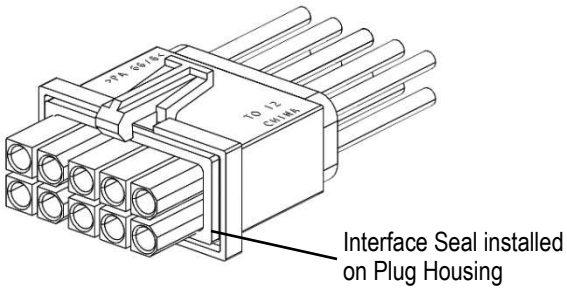

Figure 4

2. Ensure that the interface seal fits against the channel at the base of the silos of the plug housing. The interface seal must fit inside the channel at the base of the silos of the plug housing. The interface seal must remain flat against the back of the channel and shall not be twisted. There shall be no tears, rips, or other damage to the interface seal.

NOTE
To prevent damage to the interface seal, use fingers or the mating cap to slide the interface seal along the silos until it rests against the mating face of the plug housing.

3.2. Gang Seal Assembly

1. Crimp the contact onto the wire per specifications in 114-16017.

2. Insert the gang seal into the contact cavities at the back end (wire side) of the cap and plug housings as shown in Figure 5.

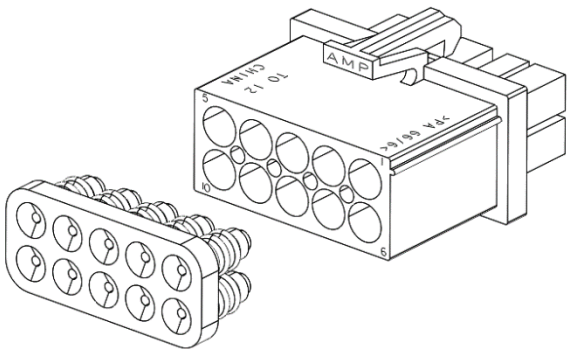

Figure 5

3. Align the terminated tab or receptacle contact with the appropriate cavity at the back end (wire side) of the plug or cap housing. This alignment is to help ensure that the gang seal will not be damaged during the insertion process. See Figure 6.

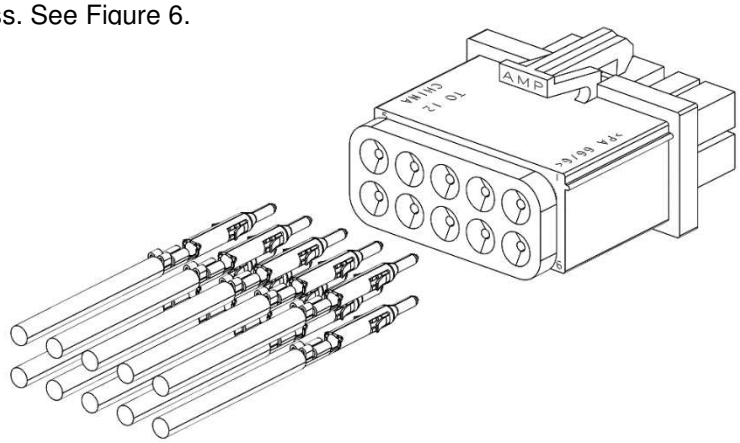

Figure 6

4. Grasp the wire directly behind the insulation barrel and push the contact straight into the housing cavity until contact locks in place. See Figure 7.

CAUTION
Care must be taken to avoid nicks, tears, or other damage to gang seal when inserting contact.

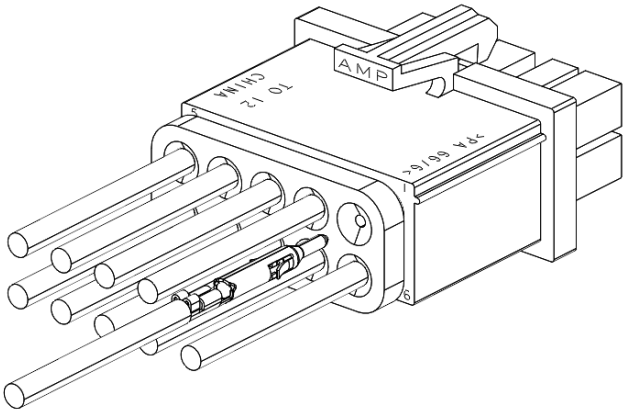

Figure 7

5. Pull back lightly on the wire to ensure the contact is locked in place. Pin and socket contacts may be inserted in either the plug or cap housing, or they may be intermixed in each housing to provide additional keying combinations. Both pin and socket contacts using the same gang seal.

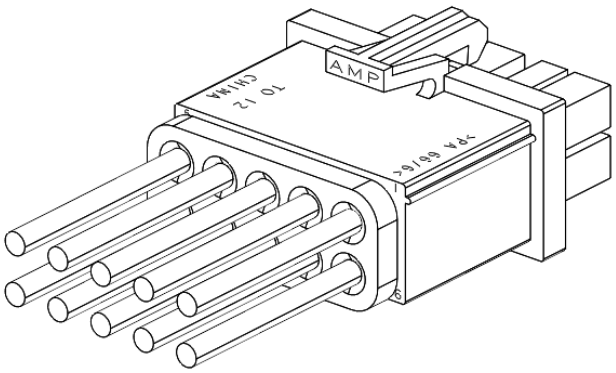

Figure 8

NOTE
All cavities must be filled in both the cap and plug housings with either contacts or keying plugs in order to provide a water-resistant seal.

3.3. Individual Wire Seal Assembly with Terminated Contacts

NOTE
The wire seal must be installed onto the wire before or after stripping the wire. It is recommended to install the wire seal after stripping the wire; however, if installing before stripping the wire, the wire seal must be protected from being damaged during the stripping operation.

NOTE
The wire seal can be installed manually or by using Insertion Tool 91002-1. Instruction for using the tool is provided in Instruction Sheet 408-7347.

1. Crimp the contact onto the wire per specifications in 114-16017.

2. Align the terminated tab or receptacle contact with the appropriate cavity at the back end (wire side) of the plug or cap housing. This alignment is to help ensure that the wire seal will not be damaged during the insertion process. See Figure 9.

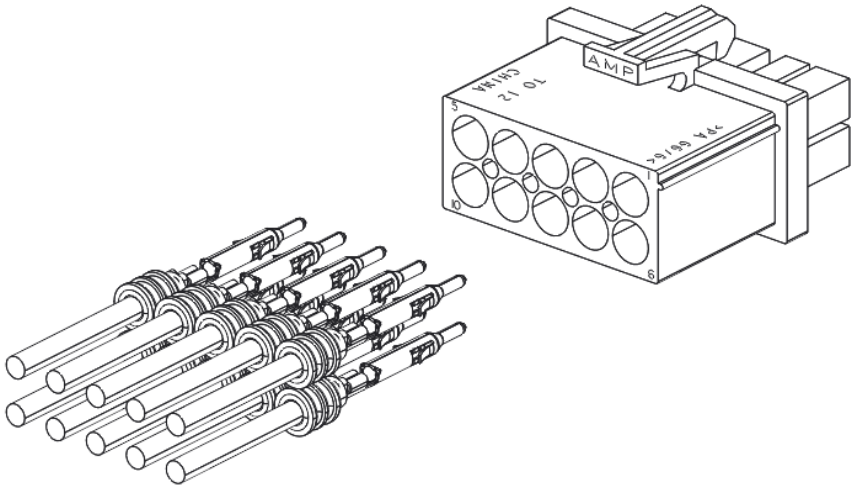

Figure 9

3. Grasp the wire directly behind the insulation barrel and push the contact straight into the housing cavity until at least two of the three flanges of the wire seal are fully inserted into the contact cavity. See Figure 10.

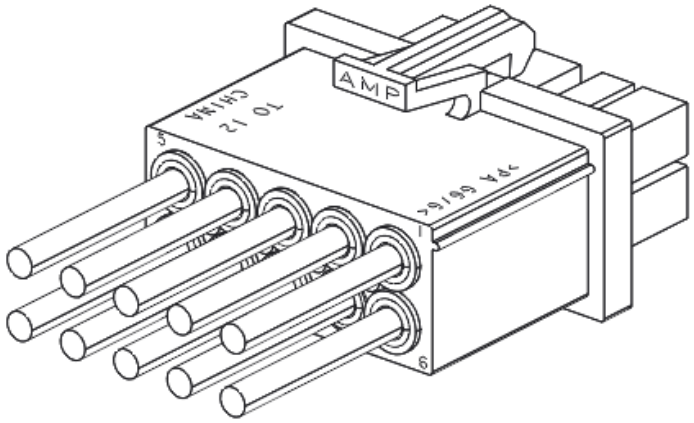

Figure 10

4. Pull back lightly on the wire to ensure the contact is locked in place. Pin and socket contacts may be inserted in either the plug or cap housing, or they may be intermixed in each housing to provide additional keying combinations.

3.4. Individual Wire Seal Assembly with Keying Plug

NOTE
The wire seal must be installed into the contact cavity at the wire end of the housing after the keying plug is installed.

NOTE
The wire seal can be installed over the keying plug and into the contact cavity manually or by using Insertion Tool 91002-1. Instruction for using the tool is provided in Instruction Sheet 408-7347.

NOTE
If a keying plug is installed into a housing, the corresponding contact cavity of the mating connector must contain a cavity plug seal.

1. Align the wire seal with the appropriate cavity at the back end (wire side) of the plug or cap housing with the flanged end (end opposite the throat) first. See Figure 11.

2. Push the wire seal over the keying plug and into the contact cavity.

3. For optimum performance, ensure that the wire seal has at least two of the three flanges fully inserted into the contact cavity.

3.5. Cavity Plug Seal Assembly

NOTE
If a keying plug is installed into a housing, the corresponding contact cavity of the mating connector must contain a cavity plug seal.

1. Align the cavity plug seal with the appropriate cavity at the back end (wire side) of the plug or cap housing with the flanged end (end opposite the throat) first. See Figure 11.

2. Push the cavity plug seal into the contact cavity.

3. For optimum performance, ensure that the wire seal has at least two of the three flanges fully inserted into the contact cavity.

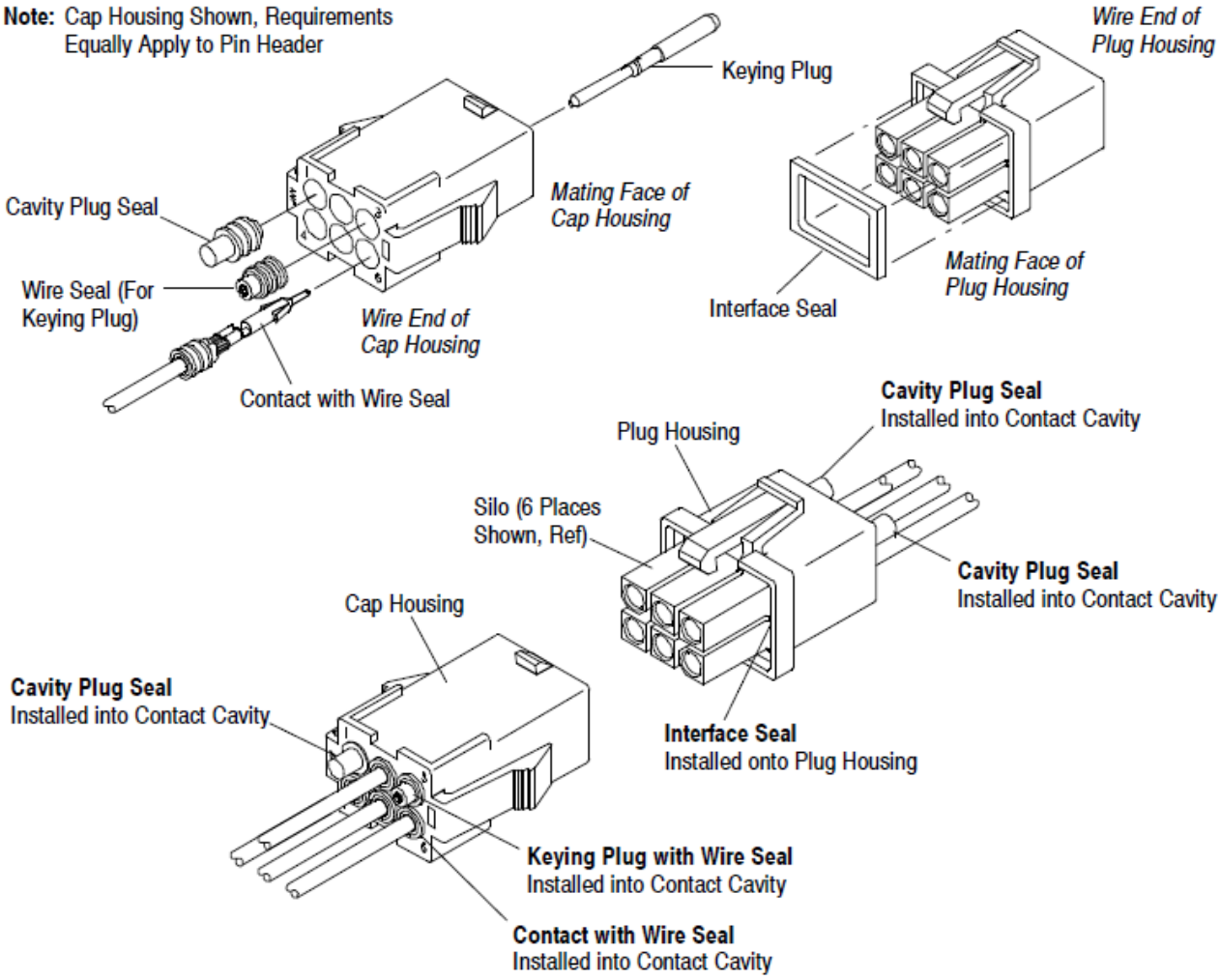
Note: Cap Housing Shown, Requirements Equally Apply to Pin Header
Keying Plug
Wire End of Plug Housing
Cavity Plug Seal
Mating Face of Cap Housing
Wire Seal (For Keying Plug)
Wire End of Cap Housing
Mating Face of Plug Housing
Interface Seal
Contact with Wire Seal
Cavity Plug Seal
Installed into Contact Cavity
Plug Housing
Silo (6 Places Shown, Ref)
Cavity Plug Seal
Installed into Contact Cavity
Cap Housing
Cavity Plug Seal
Installed into Contact Cavity
Interface Seal
Installed onto Plug Housing
Keying Plug with Wire Seal
Installed into Contact Cavity
Contact with Wire Seal
Installed into Contact Cavity

Figure 11