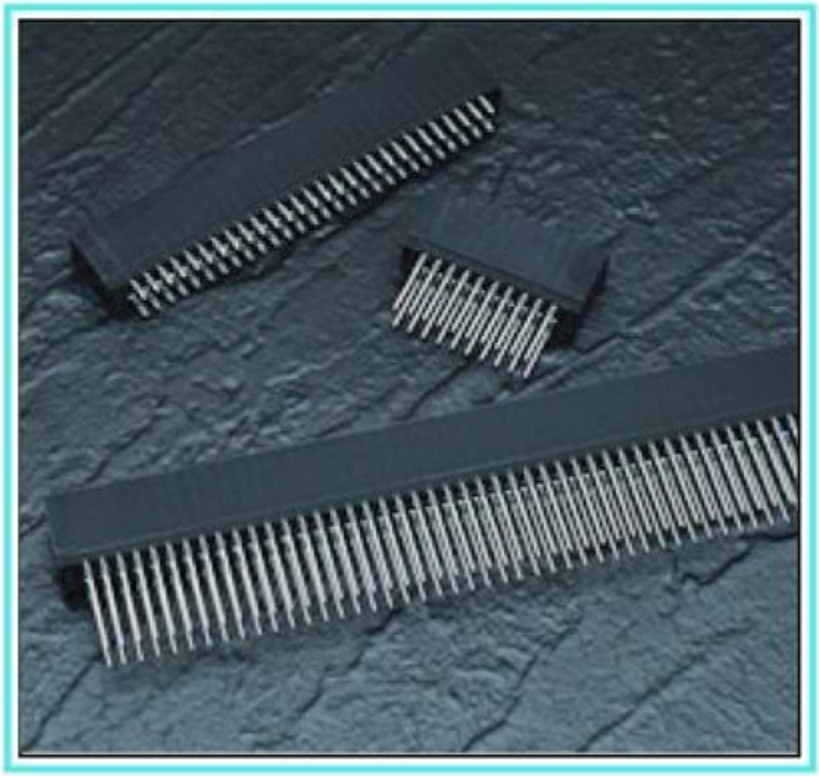
746 SERIES ULTRA-MATE CARD EDGE CONNECTOR

.125" (3.18mm) Contact Spacing, Compliant Pin



FEATURES

- CSA Approved and UL Recognized
- .125 (3.18) Contact Spacing x .250 (6.35) Row Spacing
- Accepts .062 (1.57) Nominal Thickness P.C. Board
- High Profile Insulator Body, .645 (16.38) with End Notch Option
- Ultra-Mate Compliant Section for Gas-Tight Reliable Connection in Plated Through Holes Eliminates Soldering Operations
- Contact Termination Options include P.C. Tail and .025 (0.64) Square Wire Wrap
- Single or Dual Row Configurations
- Accepts Between Contact and In-Contact Polarizing Keys
- Tools Available for Insulator and Contact Removal. Simple "Flat Rock" Tooling is Used for Connector Installation

SPECIFICATIONS

- Insulator Material: Thermoplastic Polyester, UL 94V-O, Colour: Black
- Contact Material: Copper, Nickel, Tin Alloy CA-725
- Contact Plating: 30 Microinches (0.76 Microns) Gold on the Mating Area, Tin on the Compliant Section and Contact Tails, Nickel Underplate. Other Plating Options Available upon Request.
- Current Rating: 3 Amperes Continuous
- Dielectric Withstanding Voltage: 1500 V AC rms at Sea Level Between Adjacent Contacts
- Insulation Resistance: 5000 Megohms Minimum
- Operating Temperature: -65 to +105 Degrees C
- Daughter Board Insertion Force: 16 oz (4.45 N) Maximum per Contact Pair when Tested with a .070 (1.78) Thick Gauge
- Daughter Board Withdrawal Force: 1 oz (0.28 N) Minimum per Contact Pair when Tested with a .054 (1.37) Thick Gauge
- Contact Insertion Into Hole: 20 lbs (89 N) Maximum
- Contact Retention In Hole: 10 lbs (44 N) Minimum
- Re-Insertability of Hole: 3 Times Minimum

746 SERIES ORDERING CODE

Example Part Number 746 - 070 - 525 - 6 01

- **Series**
- **Total Number of Contacts**
- **Contact Code**
- **Contact Rows & Card Slot Depth**
- **Insulator Options**

Series 746

Total Number of Contacts [1]	Contact Rows
005, 006,...060	Single Row
010, 012,...120	Dual Row

Contact Code [2]	Description & Contact Point		Tail Length "G"
520	P.C. Tail	Regular Point	.175 (4.45)
525	P.C. Tail	High Point	.175 (4.45)
527	P.C. Tail	High Point	.375 (9.53)
540	Wire Wrap	Regular Point	.560 (14.22)
541	Wire Wrap	Regular Point	.750 (19.05)
545	Wire Wrap	High Point	.560 (14.22)
553	Wire Wrap	Medium Point	.702 (17.83)

Contact Rows & Card Slot Depth	Description
1	Single Row, .515 (13.08) Slot Depth
2	Dual Row, .515 (13.08) Slot Depth
5	Single Row, .340 (8.64) Slot Depth
6	Dual Row, .340 (8.64) Slot Depth

Insulator Options	Description
01	.645 (16.38) Full Height Ends
06	.550 (13.97) Notched Ends

Ordering Code Notes

1) All connector sizes up to 60 contacts single row / 120 contacts dual row are available upon request.
2) Make-before-break switching contacts, assembled in specific contact positions, are available upon request.

IN–CONTACT POLARIZING KEY

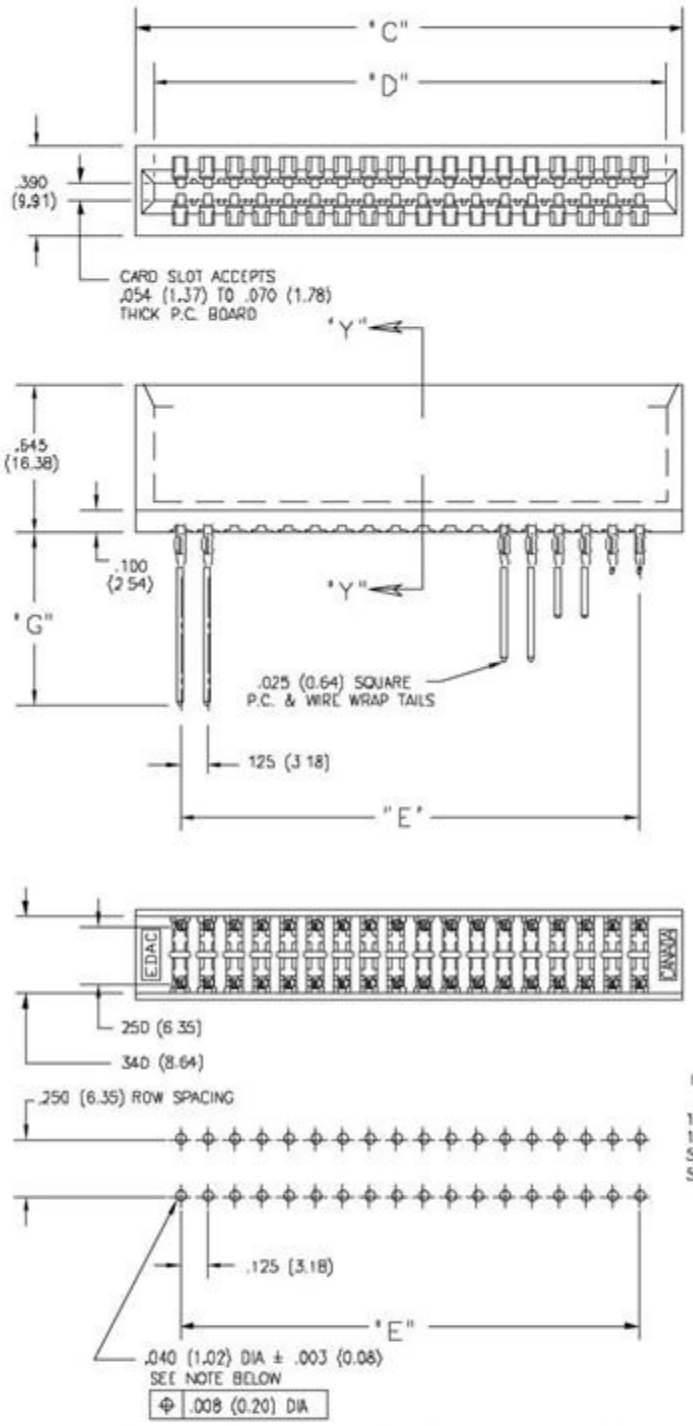
P/N 746-240-328

BETWEEN CONTACT POLARIZING KEY

P/N 306-240-318

ULTRA-MATE CARD EDGE CONNECTOR SERIES 746

Compliant Pin, Contact Spacing .125" (3.18mm)

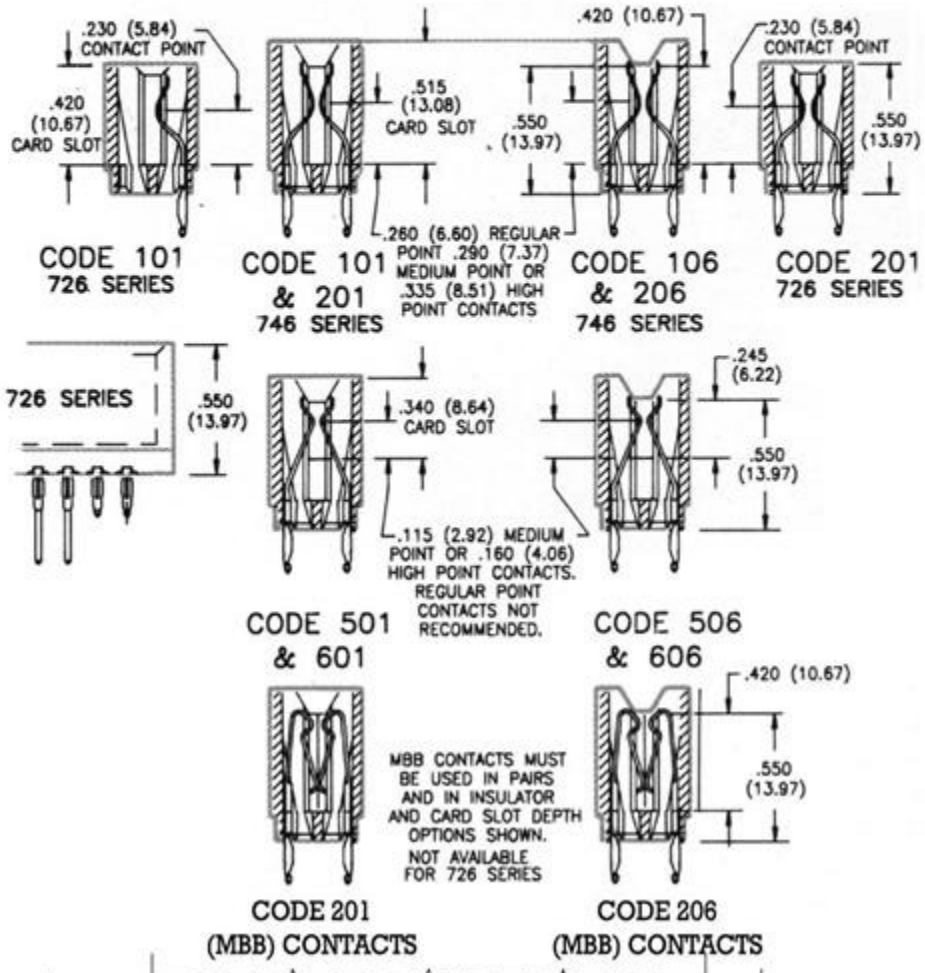


RECOMMENDED MOTHER BOARD HOLE PATTERN

TO OBTAIN OPTIMUM COMPLIANT SECTION PERFORMANCE, DRILL HOLES .0453 ± .001 (1.15 ± 0.03) DIAMETER COPPER PLATE, .001 (25.4 MICRONS) MINIMUM THICKNESS, FOLLOWED BY TIN PLATE TO PROVIDE FINISHED HOLES .040 ± .003 (1.02 ± 0.08) DIAMETER

SECTIONS "Y"–"Y"
CONTACT ROWS & INSULATOR OPTIONS

Single Row Versions May Require Backup Springs Depending on the Application. Consult with EDAC for Details.



RECOMMENDED DAUGHTER BOARD

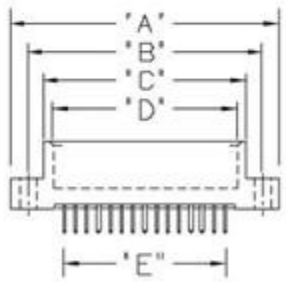
NUMBER OF CONTACTS		"C"		"D"		"E"	
Single	Dual	Inch	(mm)	Inch	(mm)	Inch	(mm)
5	10	.910	(23.11)	.750	(19.05)	.500	(12.70)
6	12	1.035	(26.29)	.875	(22.23)	.625	(15.88)
15	30	2.160	(54.86)	2.000	(50.80)	1.750	(44.45)
18	36	2.535	(64.39)	2.375	(60.33)	2.125	(53.98)
22	44	3.035	(77.09)	2.875	(73.03)	2.625	(66.68)
25	50	3.410	(86.61)	3.250	(82.55)	3.000	(76.20)
28	56	3.785	(96.14)	3.625	(92.08)	3.375	(85.73)
30	60	4.035	(102.49)	3.875	(98.43)	3.625	(92.08)
35	70	4.660	(118.36)	4.500	(114.30)	4.250	(107.95)
36	72	4.785	(121.54)	4.625	(117.48)	4.375	(111.13)
40	80	5.285	(134.24)	5.125	(130.18)	4.875	(123.83)
43	86	5.660	(143.76)	5.500	(139.70)	5.250	(133.35)
50	100	6.535	(165.99)	6.375	(161.93)	6.125	(155.58)
60	120	7.785	(197.74)	7.625	(193.68)	7.375	(187.33)

Dimensions of Other Connector Sizes are Listed

.125" (3.18mm) CONTACT SPACING CONNECTOR DIMENSIONS

346, 396, 746 Series Card Edge Connectors

DIMENSION		"A"		"B"		"C"		"D"		"E"	
SERIES		346, 396		346, 396		ALL SERIES		ALL SERIES		ALL SERIES	
Number of Contacts Single	Dual	Inch	(mm)	Inch	(mm)	Inch	(mm)	Inch	(mm)	Inch	(mm)
5	10	1.435	(36.45)	1.170	(29.72)	.910	(23.11)	.750	(19.05)	.500	(12.70)
6	12	1.560	(39.62)	1.295	(32.89)	1.035	(26.29)	.875	(22.23)	.625	(15.88)
7	14	1.685	(42.80)	1.420	(36.07)	1.160	(29.46)	1.000	(25.40)	.750	(19.05)
8	16	1.810	(45.97)	1.545	(39.24)	1.285	(32.64)	1.125	(28.58)	.875	(22.23)
9	18	1.935	(49.15)	1.670	(42.42)	1.410	(35.81)	1.250	(31.75)	1.000	(25.40)
10	20	2.060	(52.32)	1.795	(45.59)	1.535	(38.99)	1.375	(34.93)	1.125	(28.58)
11	22	2.185	(55.50)	1.920	(48.77)	1.660	(42.16)	1.500	(38.10)	1.250	(31.75)
12	24	2.310	(58.67)	2.045	(51.94)	1.785	(45.34)	1.625	(41.28)	1.375	(34.93)
13	26	2.435	(61.85)	2.170	(55.12)	1.910	(48.51)	1.750	(44.45)	1.500	(38.10)
14	28	2.560	(65.02)	2.295	(58.29)	2.035	(51.69)	1.875	(47.63)	1.625	(41.28)
15	30	2.685	(68.20)	2.420	(61.47)	2.160	(54.86)	2.000	(50.80)	1.750	(44.45)
16	32	2.810	(71.37)	2.545	(64.64)	2.285	(58.04)	2.125	(53.98)	1.875	(47.63)
17	34	2.935	(74.55)	2.670	(67.82)	2.410	(61.21)	2.250	(57.15)	2.000	(50.80)
18	36	3.060	(77.72)	2.795	(70.99)	2.535	(64.39)	2.375	(60.33)	2.125	(53.98)
19	38	3.185	(80.90)	2.920	(74.17)	2.660	(67.56)	2.500	(63.50)	2.250	(57.15)
20	40	3.310	(84.07)	3.045	(77.34)	2.785	(70.74)	2.625	(66.68)	2.375	(60.33)
21	42	3.435	(87.25)	3.170	(80.52)	2.910	(73.91)	2.750	(69.85)	2.500	(63.50)
22	44	3.560	(90.42)	3.295	(83.69)	3.035	(77.09)	2.875	(73.03)	2.625	(66.68)
23	46	3.685	(93.60)	3.420	(86.87)	3.160	(80.26)	3.000	(76.20)	2.750	(69.85)
24	48	3.810	(96.77)	3.545	(90.04)	3.285	(83.44)	3.125	(79.38)	2.875	(73.03)
25	50	3.935	(99.95)	3.670	(93.22)	3.410	(86.61)	3.250	(82.55)	3.000	(76.20)
26	52	4.060	(103.12)	3.795	(96.39)	3.535	(89.79)	3.375	(85.73)	3.125	(79.38)
27	54	4.185	(106.30)	3.920	(99.57)	3.660	(92.96)	3.500	(88.90)	3.250	(82.55)
28	56	4.310	(109.47)	4.045	(102.74)	3.785	(96.14)	3.625	(92.08)	3.375	(85.73)
29	58	4.435	(112.65)	4.170	(105.92)	3.910	(99.31)	3.750	(95.25)	3.500	(88.90)
30	60	4.560	(115.82)	4.295	(109.09)	4.035	(102.49)	3.875	(98.43)	3.625	(92.08)
31	62	4.685	(119.00)	4.420	(112.27)	4.160	(105.66)	4.000	(101.60)	3.750	(95.25)
32	64	4.810	(122.17)	4.545	(115.44)	4.285	(108.84)	4.125	(104.78)	3.875	(98.43)
33	66	4.935	(125.35)	4.670	(118.62)	4.410	(112.01)	4.250	(107.95)	4.000	(101.60)
34	68	5.060	(128.52)	4.795	(121.79)	4.535	(115.19)	4.375	(111.13)	4.125	(104.78)
35	70	5.185	(131.70)	4.920	(124.97)	4.660	(118.36)	4.500	(114.30)	4.250	(107.95)
36	72	5.310	(134.87)	5.045	(128.14)	4.785	(121.54)	4.625	(117.48)	4.375	(111.13)
37	74	5.435	(138.05)	5.170	(131.32)	4.910	(124.71)	4.750	(120.65)	4.500	(114.30)
38	76	5.560	(141.22)	5.295	(134.49)	5.035	(127.89)	4.875	(123.83)	4.625	(117.48)
39	78	5.685	(144.40)	5.420	(137.67)	5.160	(131.06)	5.000	(127.00)	4.750	(120.65)
40	80	5.810	(147.57)	5.545	(140.84)	5.285	(134.24)	5.125	(130.18)	4.875	(123.83)
41	82	5.935	(150.75)	5.670	(144.02)	5.410	(137.41)	5.250	(133.35)	5.000	(127.00)
42	84	6.060	(153.92)	5.795	(147.19)	5.535	(140.59)	5.375	(136.53)	5.125	(130.18)
43	86	6.185	(157.10)	5.920	(150.37)	5.660	(143.76)	5.500	(139.70)	5.250	(133.35)
44	88	6.310	(160.27)	6.045	(153.54)	5.785	(146.94)	5.625	(142.88)	5.375	(136.53)
45	90	6.435	(163.45)	6.170	(156.72)	5.910	(150.11)	5.750	(146.05)	5.500	(139.70)
46	92	6.560	(166.62)	6.295	(159.89)	6.035	(153.29)	5.875	(149.23)	5.625	(142.88)
47	94	6.685	(169.80)	6.420	(163.07)	6.160	(156.46)	6.000	(152.40)	5.750	(146.05)
48	96	6.810	(172.97)	6.545	(166.24)	6.285	(159.64)	6.125	(155.58)	5.875	(149.23)
49	98	6.935	(176.15)	6.670	(169.42)	6.410	(162.81)	6.250	(158.75)	6.000	(152.40)
50	100	7.060	(179.32)	6.795	(172.59)	6.535	(165.99)	6.375	(161.93)	6.125	(155.58)
51	102					6.660	(169.16)	6.500	(165.10)	6.250	(158.75)
52	104					6.785	(172.34)	6.625	(168.28)	6.375	(161.93)
53	106					6.910	(175.51)	6.750	(171.45)	6.500	(165.10)
54	108					7.035	(178.69)	6.875	(174.63)	6.625	(168.28)
55	110					7.160	(181.86)	7.000	(177.80)	6.750	(171.45)
56	112					7.285	(185.04)	7.125	(180.98)	6.875	(174.63)
57	114					7.410	(188.21)	7.250	(184.15)	7.000	(177.80)
58	116					7.535	(191.39)	7.375	(187.33)	7.125	(180.98)
59	118					7.660	(194.56)	7.500	(190.50)	7.250	(184.15)
60	120					7.785	(197.74)	7.625	(193.68)	7.375	(187.33)



ULTRA-MATE CARD EDGE CONNECTOR TOOLS

Compliant Pin Connector Installation, Contact and Insulatior Removal

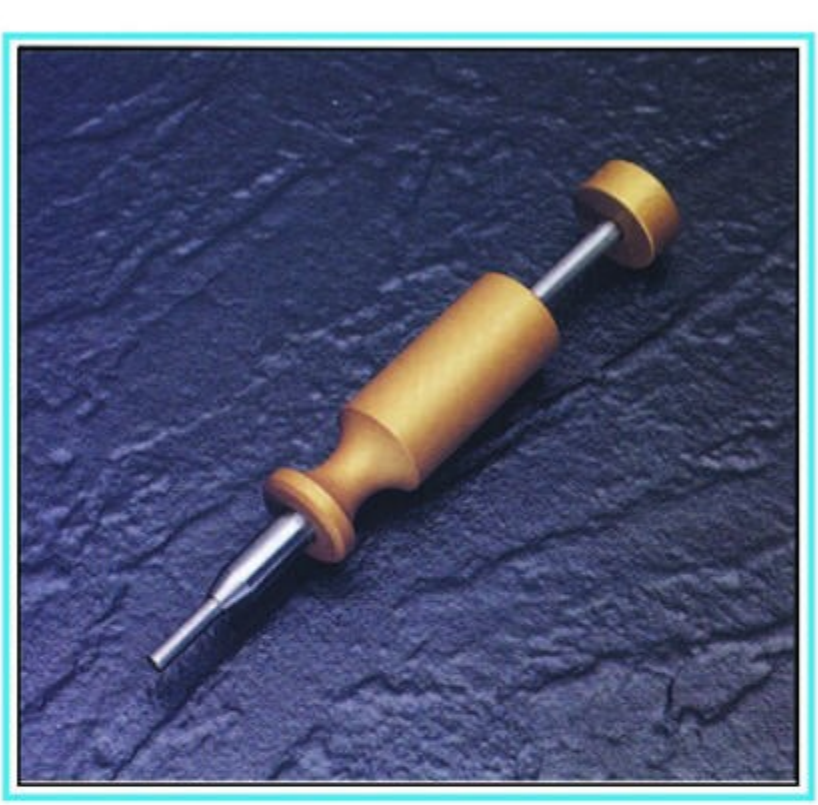
CONNECTOR INSTALLATION

Connectors received by the customer are ready for installation into the circuit board. The flat rock insertion technique requires a press and adequate support for the circuit board. Once the number of contacts to be pressed into the board together has been determined, the press tonnage should be calculated at approximately 30 pounds (134 N) per contact. The support plate should be designed with clearance where the contact tails protrude through the underside of the board.

INSULATOR REMOVAL TOOL

- Part Number 745-280-200 for Use with 737 and 745 Series Connectors
- Part Number 746-280-200 for Use with 746 Series Connectors
- Tool Latches under Side Steps of Insulator and Lifts Insulator while Leaving Contacts Firmly Positioned in the Circuit Board

CONTACT REMOVAL TOOL



- Part Number 745-280-300 for Contact Codes 520 and 525
- Part Number 345-280-200 for All Other Contact Codes
- Used for 737, 745 and 746 Series
- Removes a Contact from the Circuit Board after the Insulator has been Removed

CONTACT REMOVAL OR REPLACEMENT PROCEDURE

Using the insulator removal tool, lift the insulator up to remove it from the contacts. The contacts will be left standing firmly on the circuit board. Remove any contacts necessary. If replacement contacts are needed, assemble contacts into the appropriate positions in the insulator and push them in lightly so that they will stay in position during re-assembly. Align the insulator with the contacts in the board and push it down until the new contacts are positioned over their holes. Using the flat rock installation technique, push the insulator and new contacts down into their final position.