

## NONCODED CONNECTORS—KS-21274 THROUGH KS-21442

### DESCRIPTION

#### 1. GENERAL

**1.01** This practice describes noncoded connectors within the part or type number range of KS-21274 through KS-21442. These connectors are used for the maintenance and operation of equipment in central offices.

**1.02** Revision arrows are used to emphasize significant changes. This practice is reissued to add the following connectors.

- KS-21302, L9 through L12, L14, L5, L16, L20, L21, and L56
- KS-21304, L7 and L8
- KS-21305, L1, L3, L4, L6, L7, and L8
- KS-21306, L1 through L36
- KS-21307, L10, L11, L12, and L14 through L41.

#### 2. DESCRIPTION OF CONNECTORS

**2.01** *KS-21274, L1 and L2:* The KS-21274, L1 and L2, connector (Fig. 1) each has a solderless, wire-wrapped terminal in a molded insulator. The terminal will accept two 22-, 24-, or 26-gauge wire connections. The L1 insulator is yellow, and the L2 insulator is blue. The KS-21274, L1 and L2, connectors mate with KS-21275-type plugs.

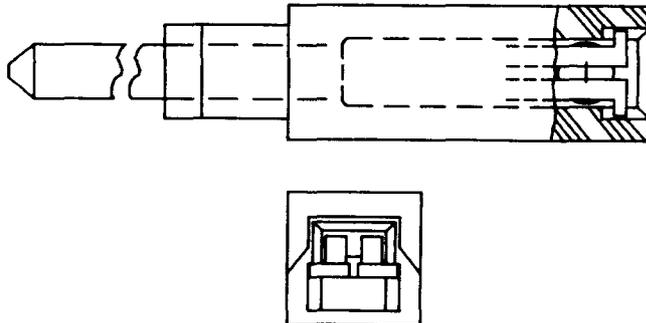


Fig. 1—KS-21274, L1 or L2, Connector

**2.02** *KS-21290 Type:* The KS-21290-type connectors consist of a molded plastic body and contacts with welded, 24-carat gold buttons. These connectors are soldered to printed wiring boards. For more information, see Table A.

TABLE A		
KS-21290-TYPE CONNECTORS		
KS-21290 LIST NO.	FIG NO.	NO. OF CONTACTS
1	2	2*
2	4	12
3	4	20
4	4	24
5	4	16
6	3	2*
7	2	2*
8	4	10

\* These are shorting plugs; contacts are electrically common.

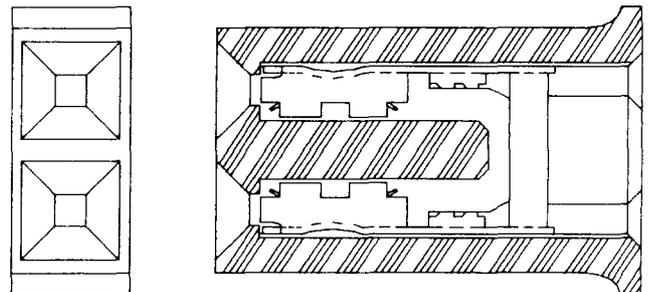


Fig. 2—KS-21290, L1 or L7, Connector

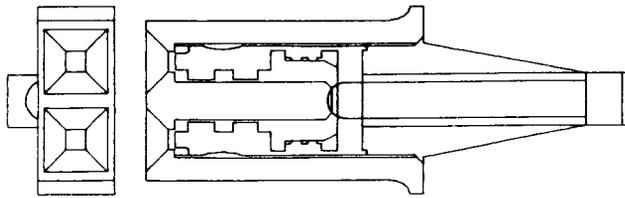


Fig. 3—KS-21290, L6, Connector

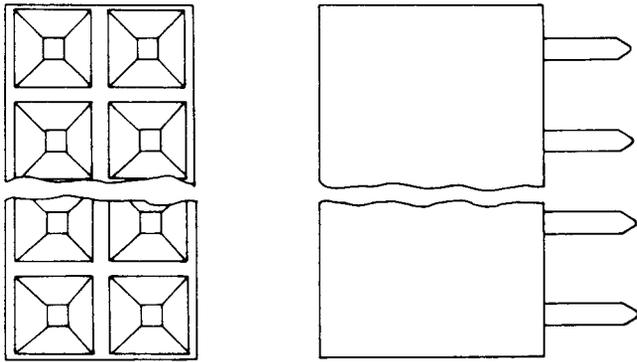


Fig. 4—KS-21290, L2, L3, L4, L5, or L8, Connector

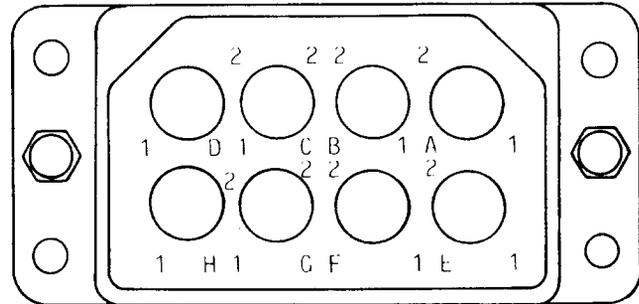
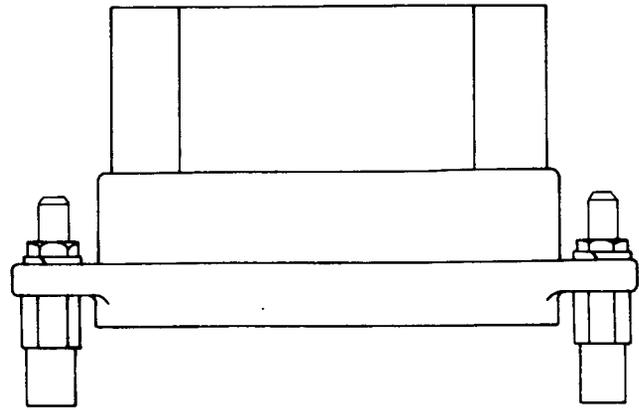


Fig. 5—KS-21297, L1, Connector

**2.03 KS-21297, L1:** The KS-21297, L1, polarized, female connector (Fig. 5) consists of a plastic body enclosed in an aluminum housing, female screw locks and space for eight gold-plated, KS-20295, L2, contacts. The contacts must be ordered separately. The connector mates with the KS-21298 plug.

**2.04 KS-21302 Type:** The KS-21302-type connectors are a series of receptacle and pin connectors (Fig. 6), designed to engage .025-inch by .025-inch square pins arranged in single or double rows. The contacts are supplied separately from the insulators. The contacts are terminated to conductors by crimping, and are then inserted into the insulators. The user is responsible for the tooling, termination methods, and quality of the crimp. These connectors are designed to mate with the KS-21307-type connectors of similar contact configurations. Normally, insulators with 40 through 72 positions should be equipped with List 50 or List 53 contacts; insulators with 10 through 50 positions should be equipped with List 51 or List 54 contacts; and insulators with 20 po-

sitions should be equipped with List 52 or List 54 contacts. For more information, see Tables B and C.

**2.05 KS-21303 Type:** The KS-21303, L1 through L18, connectors (Fig. 7) consist of a panel-mounted, molded, plastic insulator with removable gold-plated socket or pin contacts, and screw locks to prevent accidental separation of a mating plug. The L1 and L10 connectors have 34 socket contact positions, while the L9 has 34 pin contact positions. The L11 connector has 75 pin contact positions and the L12 has 75 socket contact positions. The KS-21303, L2, L3, L4, L5, L15, L16, L17, and L18 connectors have socket contacts. The KS-21303, L6, L7, L8, L13, and L14 connectors have pin contacts. The KS-21303, L4, connector is rated Mfr Disc. and is replaced by the KS-21303, L2. The KS-21303, L13, L14, L15, and L16 connectors are rated Mfr Disc. with no replacement.

**2.06 KS-21304 Type:** The KS-21304, L1 through L8, connectors consist of a molded, plastic insulator containing gold-plated connector pin con-

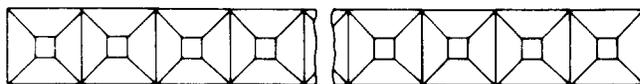


Fig. 6—KS-21302-Type Connector

TABLE B	
KS-21302-TYPE INSULATORS	
KS-21302 INSULATOR LIST NO.	NO. OF CONTACTS
1	8
2	10
3	14
4	14
5	24
6	26
7	34
8	50
9	8
10	24
11	20
12	34
14	36
15	26
16	34
20	10
21	16
22	14
23	2
24	3
25	4
26	6
27	20
28	1

tacts. The connectors are suitable for mounting on a circuit board or for cable-to-cable use. The connectors are polarized to prevent mismatching with its mating connector, KS-21305. Latching tabs are provided as a precaution against accidental separation of the mated connectors.

(a) **KS-21304, L1:** The KS-21304, L1 (Fig. 8), is a connector pin contact designed for use with KS-21304, L2, connectors.

TABLE C	
CONTACT CABLE SIZE	
KS-21302 CONTACT LIST NO.	CABLE SIZE GAUGE
50	22, 24, and 26
51	22, 24, and 26
52	22, 24, and 26
53	28 and 30
54	28 and 30
55	28 and 30
56	Two 26 or Two 28
57	28, 30, and 32
58	22, 24, and 26
59	18 and 20

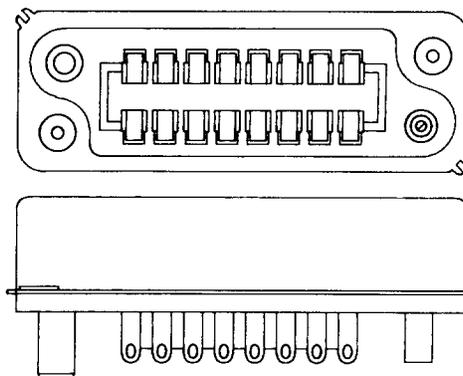
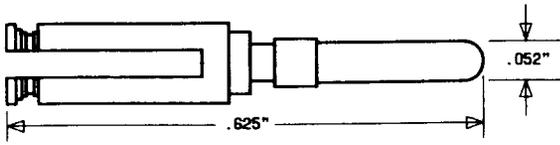


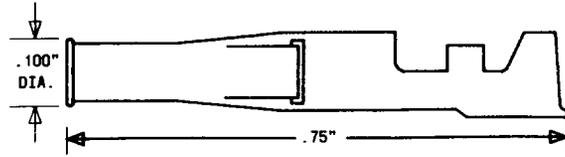
Fig. 7—KS-21303-Type Connector

(b) **KS-21304, L2:** The KS-21304, L2, connector (Fig. 9) is designed to accept KS-21304, L1, connector pin contacts. This connector is designed for mounting on printed wiring boards and mates with the KS-21305, L2, connector.

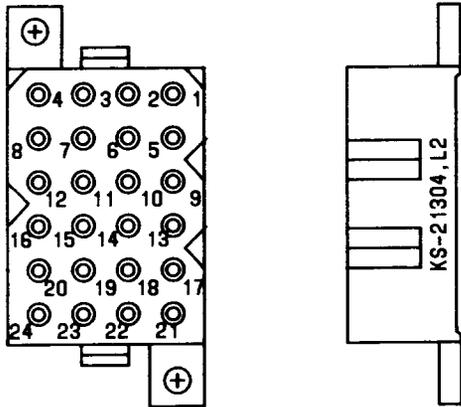
(c) **KS-21304, L3:** The KS-21304, L3, connector (Fig. 10) is designed to accept twenty-four 18-gauge crimp connector pin contacts, KS-21304, L4, and for cable-to-cable use, and mates with the KS-21305, L2, connector. The KS-21305, L3, hood may be used with this connector.



◆Fig. 8—KS-21304, L1, Connector Pin contact◆

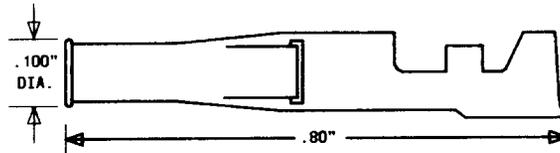


◆Fig. 11—KS-21304, L4, Connector Pin Contact◆



◆Fig. 9—KS-21304, L2, Connector Pin Contact◆

(e) **KS-21304, L5:** The KS-21304, L5, connector pin contact (Fig. 12) is designed to accommodate 20-, 18-, 16-, or 14-gauge connections. This connector is used in either KS-21304, L6, or KS-21305, L5, connectors.



◆Fig. 12—KS-21304, L5, Connector Pin Contact◆

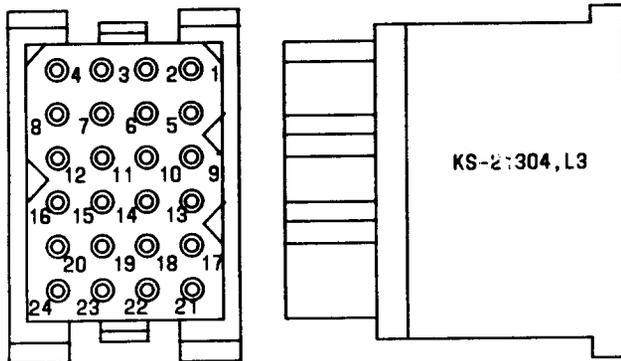


Fig. 10—KS-21304, L3, Connector

(d) **KS-21304, L4:** The KS-21304, L4, connector pin contact (Fig. 11) is designed to accommodate 18-gauge crimped connections. This contact is used in the KS-21304, L3, connector.

(f) **KS-21304, L6:** The KS-21304, L6, connector (Fig. 13) is designed to accept nine connector pin contacts (KS-21304, L5, or KS-21305, L4), and mates with the KS-21305, L5, connector.

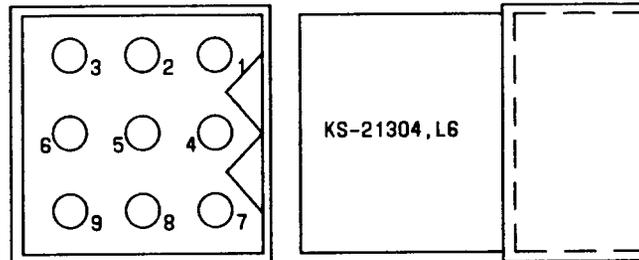
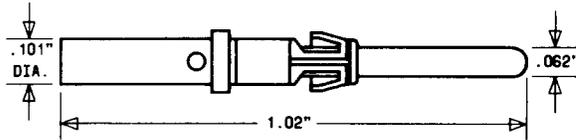


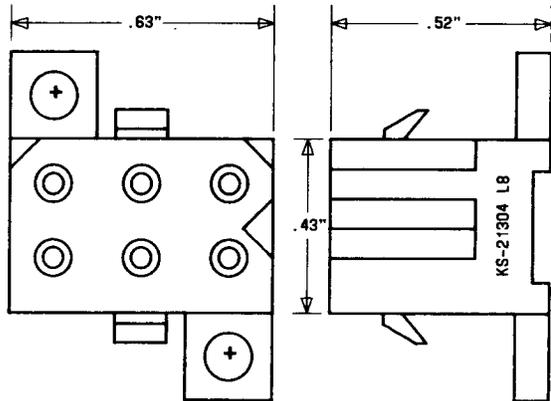
Fig. 13—KS-21304, L6, Connector

◆(g) **KS-21304, L7:** The KS-21304, L7, connector pin contact (Fig. 14) is designed for use in the KS-21304, L8, connector.



◆Fig. 14—KS-21304, L7, Connector Pin Contact◆

(h) **KS-21304, L8:** The KS-21304, L8, connector (Fig. 15) contains 6-pin contact positions and mates with the KS-21305, L7, connector plug.

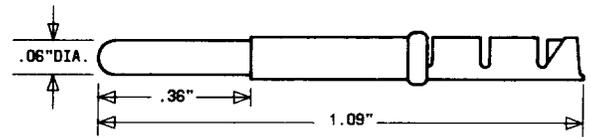


◆Fig. 15—KS-21304, L8, Connector◆

**2.07 KS-21305 Type:** The KS-21305, L1 through L8, connectors consist of a molded plastic insulator containing gold-plated pin contacts. The connectors are polarized to prevent mismatching with the mating KS-21304 connector.

(a) **KS-21305, L1:** The KS-21305, L1, connector pin contact (Fig. 16) is gold plated and is designed to accommodate 18-gauge wire in crimped connections. It is used in the KS-21305, L2, connector.◆

(b) **KS-21305, L2:** The KS-21305, L2, connector (Fig. 17) is designed to accept twenty-four KS-21305, L1, 18-gauge crimp pin contacts. This connector mates with the KS-21304, L2 and L3, connectors and will accommodate the KS-21305, L3, hood.



◆Fig. 16—KS-21305, L1, Connector Pin Contact◆

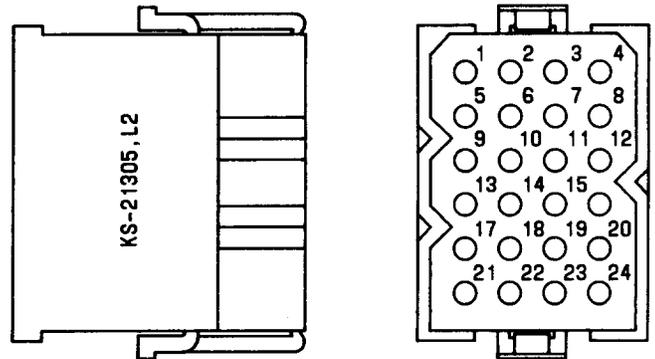
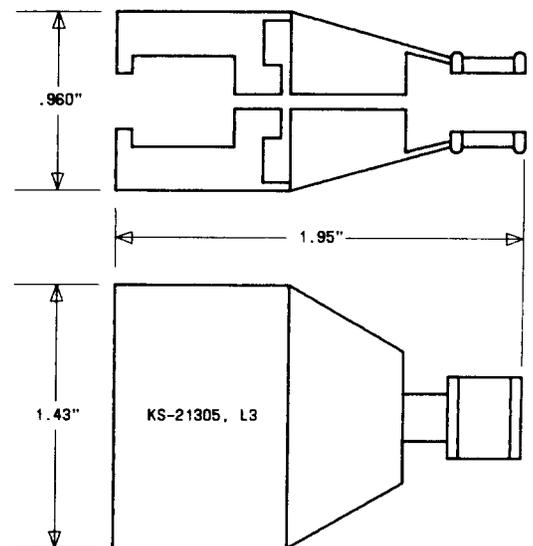


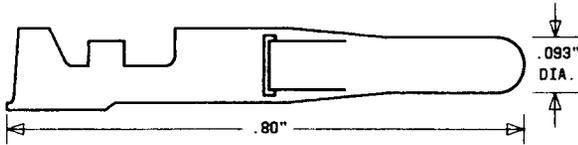
Fig. 17—KS-21305, L2, Connector

◆(c) **KS-21305, L3:** The KS-21305, L3, connector hood (Fig. 18) is made of molded plastic and designed to provide strain relief for connections made to the KS-21304, L3, and KS-21305, L2, connectors.



◆Fig. 18—KS-21305, L3, Connector Hood◆

(d) **KS-21305, L4:** The KS-21305, L4, connector pin contact (Fig. 19) is gold plated and designed to accommodate 20-, 18-, 16-, or 14-gauge wire in crimped connections. It is used in the KS-21304, L6, and KS-21305, L5, connectors. ♦



♦Fig. 19—KS-21305, L4, Connector Pin Contact♦

(e) **KS-21305, L5:** The KS-21305, L5, connector (Fig. 20) has nine contact positions and is designed to accommodate either the KS-21304, L5, or KS-21305, L4, connector pin contacts. This connector mates with the KS-21304, L6, connector.

♦(f) **KS-21305, L6:** The KS-21305, L6, connector socket contact is gold plated and designed to accommodate 20-, 18-, or 16-gauge wire in crimped connections. It is used in the KS-21305, L7, connectors.

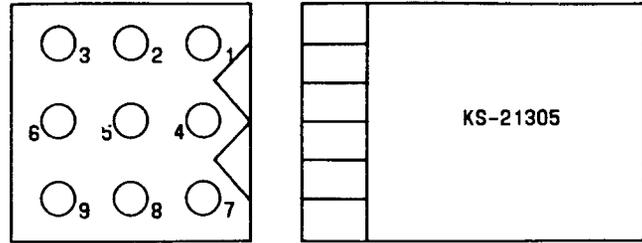
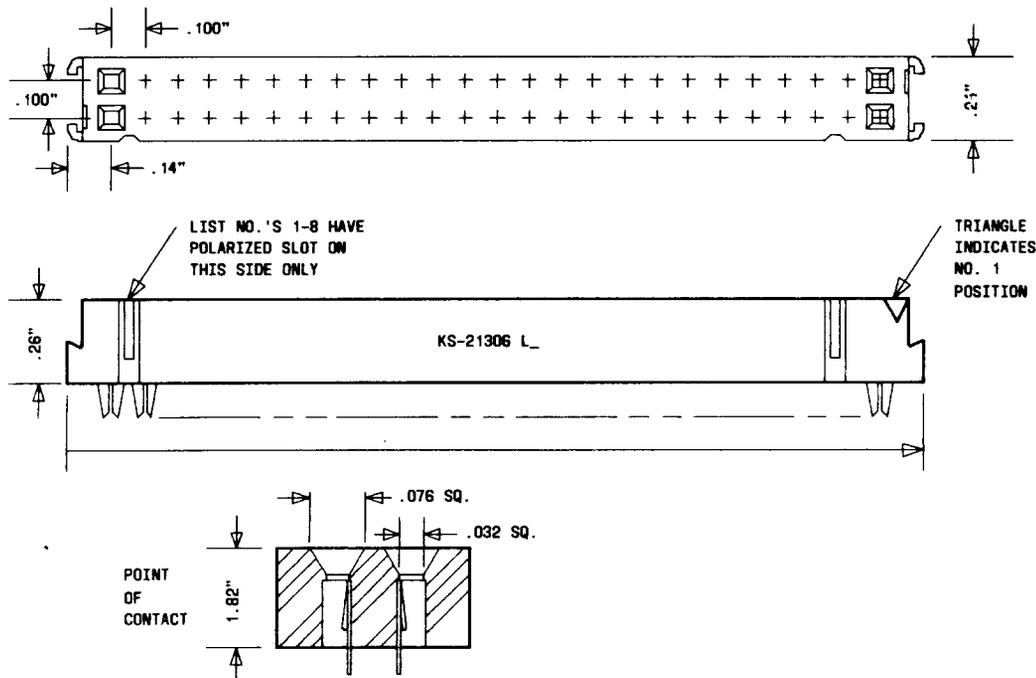


Fig. 20—KS-21305, L5, Connector

(g) **KS-21305, L7:** The KS-21305, L7, connector has six contact positions and is designed to accommodate the KS-21305, L6, connector socket contact. The connector mates with the KS-21304, L8, connector.

(h) **KS-21305, L8:** The KS-21305, L8, connector hood is made of molded plastic and designed to provide strain relief for connections made to the KS-21304, L8, and KS-21305, L7, connectors.

**2.08 KS-21306, L1 Through L36:** The KS-21306, L1 through L36, connectors (Fig. 21)



LIST NO.	NUMBER OF CONTACTS	DIMENSION "A"
1		
2		
3	10	.68
4		
5		
6	14	.88
7		
8		
9		
10		
11	16	.98
12		
13		
14		
15	20	1.18
16		
17		
18	26	1.48
19		
20		
21		
22	34	1.88
23		
24		
25		
26	40	2.18
27		
28		
29		
30	50	2.68
31		
32		
33		
34	60	3.18
35		
36		

♦Fig. 21—KS-21306-Type Connector♦

consist of molded thermoplastic insulators with .025 inch square gold-plated contacts on 0.100 inch centers. The connector mates with the KS-21307-type connector.

angle shielded, right-angle unshielded, and straight unshielded configurations. The connectors are designed to mate with the KS-21302 and KS-21306 connectors having the same contact arrangement.

**2.09 KS-21307 Type:** The KS-21307-type connectors consist of molded plastic insulators with 0.025 inch square gold-plated contacts on 0.100 inch or 0.125 inch centers in single or double row arrangements. The connectors are available in right-

**(a) KS-21307, L1 and L2:** The KS-21307, L1 and L2, connectors (Fig. 22) consist of a single row of contacts in the right-angle shielded configuration.

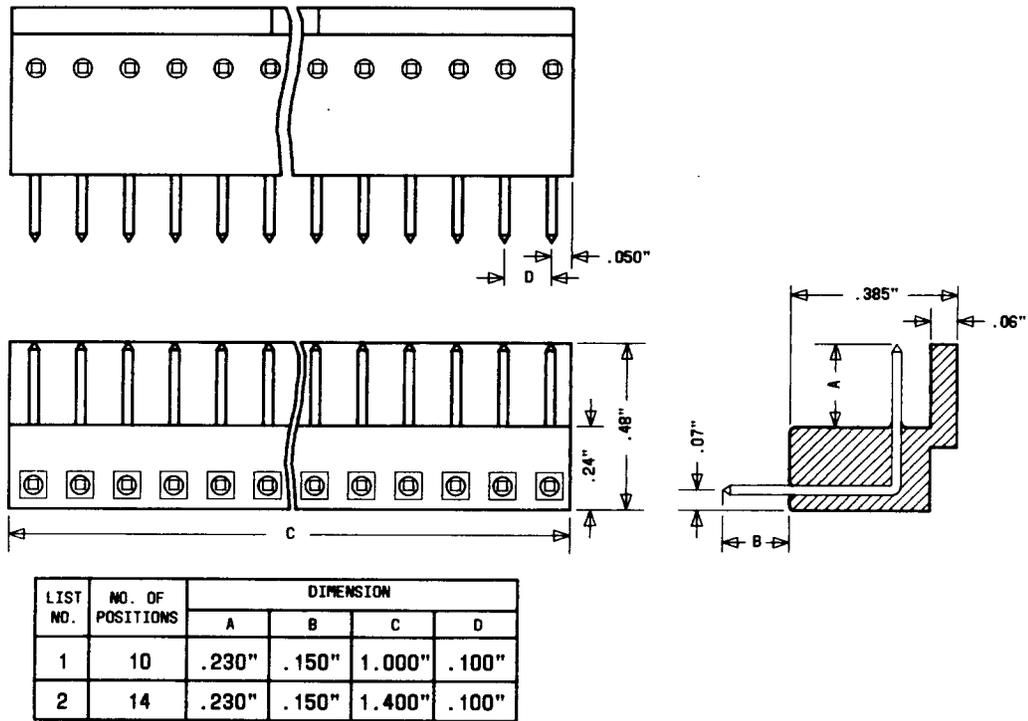
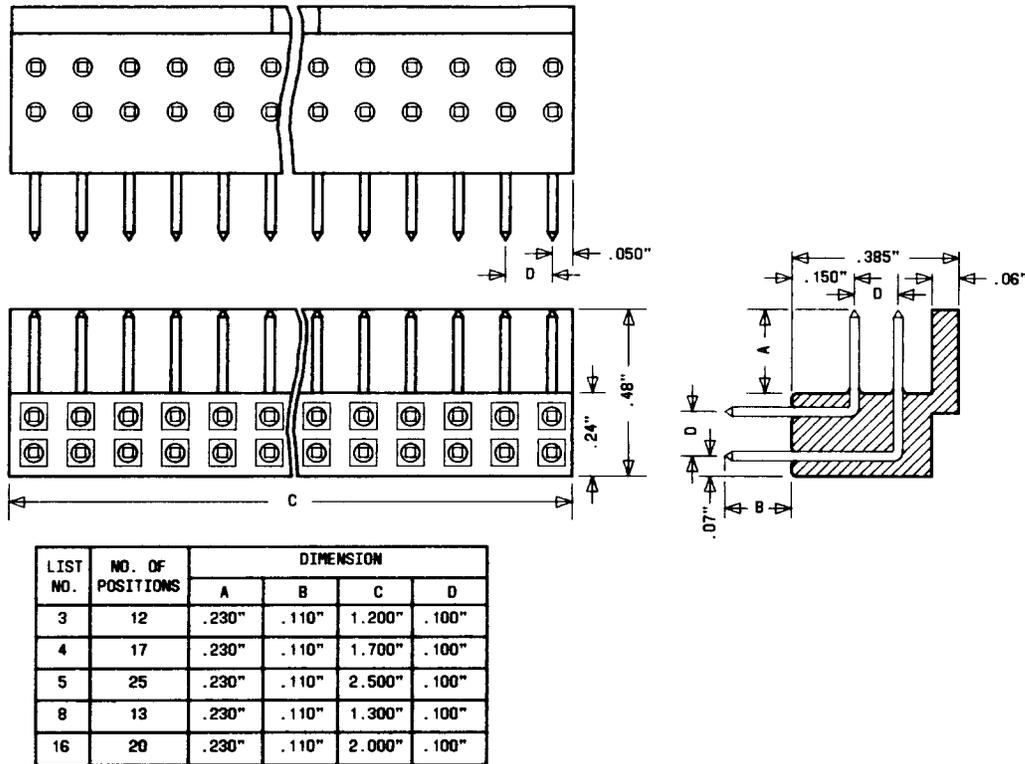


Fig. 22—KS-21307, L1 or L2, Connector

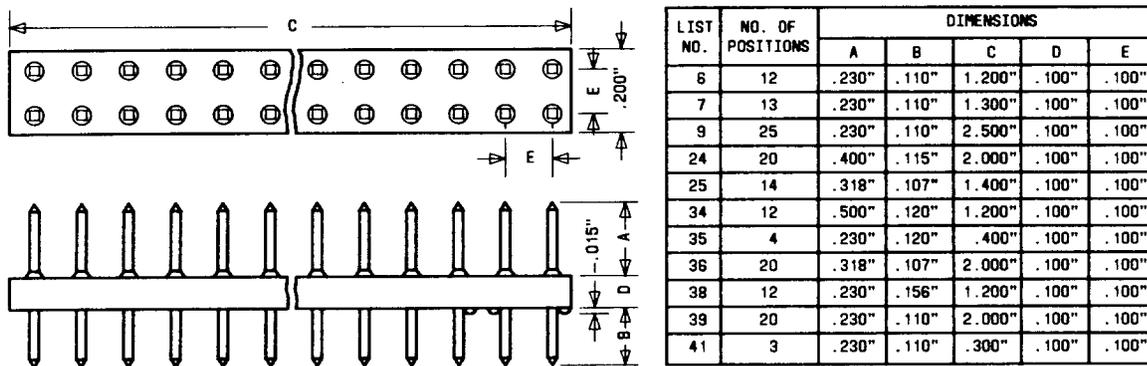
(b) **KS-21307, L3, L4, L5, L8, and L16:**

These connectors (Fig. 23) consist of a double row of contacts in the right-angle shielded configuration.

(c) **KS-21307, L6, L7, L9, L24, L25, L34, L35, L36, L38, L39, and L41:** These connectors (Fig. 24) consist of a double row of contacts in the straight unshielded configuration.

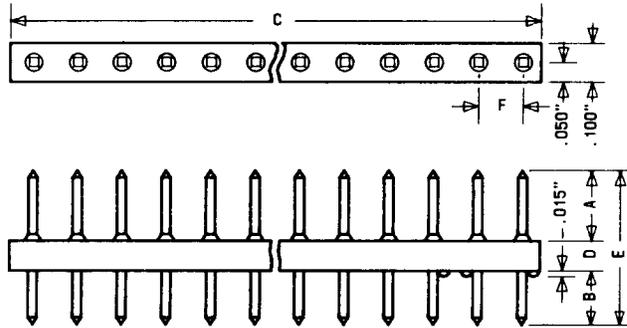


◆Fig. 23—KS-21307, L3, L4, L5, L8, or L16, Connector◆



◆Fig. 24—KS-21307, L6, L7, L9, L24, L25, L34, L35, L36, L38, L39, or L41, Connector◆

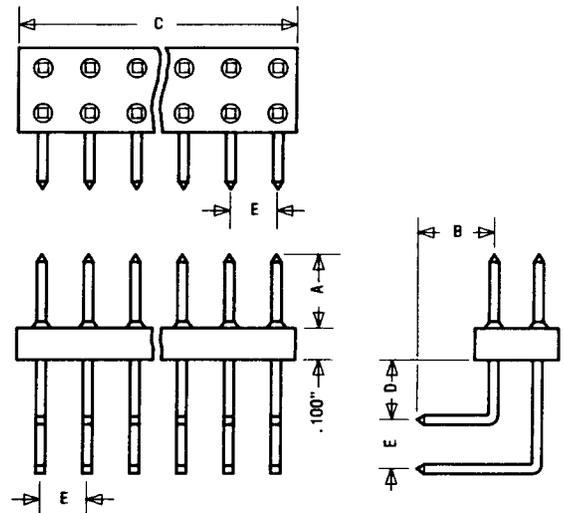
(d) **KS-21307, L12, L14, L15, L17, L18, L19, L26, L27, L28, L31, L32, and L37:** These connectors (Fig. 25) consist of a single row of contacts in a straight unshielded configuration.



LIST NO.	NO. OF POSITIONS	DIMENSIONS					
		A	B	C	D	E	F
12	10	.230"	.120"	1.000"	.100"	.450"	.100"
14	3	.190"	.110"	.300"	.160"	.460"	.100"
15	20	.190"	.110"	2.000"	.160"	.460"	.100"
17	2	.230"	.120"	.200"	.100"	.450"	.100"
18	7	.230"	.120"	.700"	.100"	.450"	.100"
19	20	.400"	.115"	2.000"	.100"	.615"	.100"
26	36	.230"	.120"	3.600"	.100"	.450"	.100"
27	1	.230"	.120"	.200"	.100"	.450"	.100"
28	3	.230"	.120"	.200"	.100"	.450"	.100"
31	3	.230"	.120"	.375"	.100"	.450"	.125"
32	10	.230"	.120"	1.250"	.100"	.450"	.125"
37	14	.230"	.120"	1.400"	.100"	.450"	.100"

◆Fig. 25—KS-21307, L12, L14, L15, L17, L18, L19, L26, L27, L28, L31, L32, or L37, Connector◆

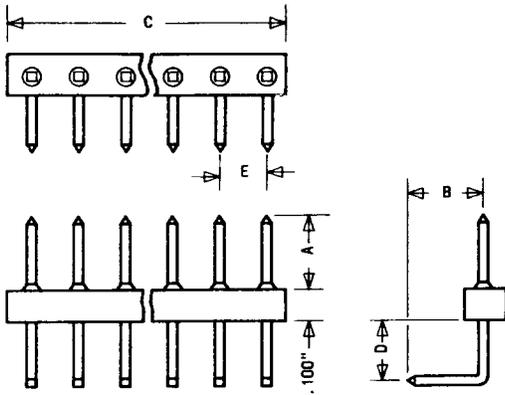
(e) **KS-21307, L13 and L29:** These connectors (Fig. 26) consist of a double row of contacts in the right-angle unshielded configuration.



LIST NO.	NO. OF POSITIONS	DIMENSION				
		A	B	C	D	E
13	4	.230"	.120"	.400"	.060"	.100"
29	26	.318"	.110"	2.600"	.060"	.100"

◆Fig. 26—KS-21307, L13 or L29, Connector◆

(f) **KS-21307, L10, L11, L20, L21, L22, L23, L30, L33 and L40:** These connectors (Fig. 27) consist of a single row of contacts in the right-angle unshielded configuration.◆



LIST NO.	NO. OF POSITIONS	DIMENSION				
		A	B	C	D	E
10	4	.230"	.120"	.400"	.060"	.100"
11	4	.230"	.220"	.400"	.160"	.100"
20	10	.230"	.120"	1.000"	.060"	.100"
21	20	.230"	.120"	2.000"	.060"	.100"
22	6	.230"	.120"	.600"	.060"	.100"
23	14	.230"	.120"	1.400"	.060"	.100"
30	15	.230"	.120"	1.875"	.060"	.125"
33	15	.230"	.255"	1.875"	.060"	.125"
40	8	.318"	.120"	.800"	.060"	.100"

Fig. 27—KS-21307, L10, L11, L20, L21, L22, L23, L30, L33, or L40, Connector

**2.10 KS-21442, L3 Through L14:** The KS-21442, L3 through L14, connectors are multicontact, miniature ribbon receptacles. These connectors are equipped with an end cable entry cover intended for the termination of jacketed cable or midcable splicing cover (half-tap). The connector assemblies are to be used as part of the assemblies of telephone products manufactured by AT&T (see Table D). The KS-21442, L1 and L2, connectors are rated Mfr Disc.

TABLE D		
KS-21442-TYPE CONNECTORS		
KS-21442 LIST NO.	FIG. NO.	NO. OF CONTACTS
3	28	50
4	28	50
5	29	64
6	29	50
7	29	64
8	28	50
9	28	50
10	29	64
11	29	36
12	29	24
13	29	14
14	28	50

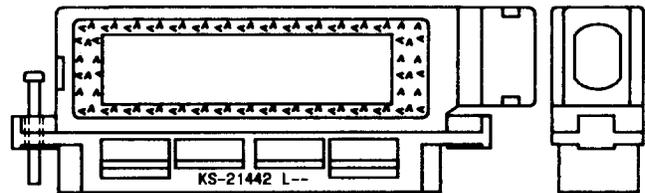


Fig. 28—KS-21442, L3, L4, L8, L9, or L14, Connector

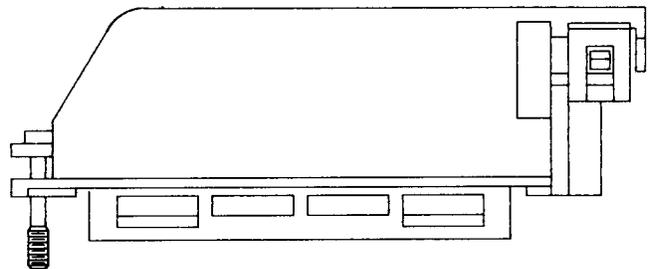


Fig. 29—KS-21442, L5, L6, L7, L10, L11, L12, or L13, Connector