

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

SECTION G50.623.3
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CABLE SPLICING — GENERAL

LEAD SLEEVES —

PLASTIC INSULATED CABLES

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1. GENERAL

1.01 This section covers the sizes of lead sleeves used on polyethylene insulated cable where it is impracticable to use splice cases or ready access terminals.

1.02 The preparation of the sheath, as well as splicing and wrapping the splice differ from paper insulated cable and are covered in Section G50.699.1.

2. AUXILIARY SLEEVES

2.01 The following table shows the diameters of the auxiliary sleeves to be used on these cables.

2.02 The minimum length auxiliary sleeve for wrapped joints is 5 inches. Where the splice is to be supported between racks in a cable vault or manhole, the sleeve may be made longer if necessary to properly support the cable and keep the tape wrappings off the rack hooks.

AUXILIARY SLEEVE SIZES (INSIDE DIAMETER)

SIZE OF CABLE IN PAIRS	19-GA CA 1727	19-GA CA 1741 CA 1814	22-GA CA 1813
6	—	3/4	—
11	—	1	3/4
16	1*	1	3/4*
26	1 1/4	1*	1
31	1 1/2	1 1/4	—
51	1 1/2*	1 1/2	1*
76	2	1 1/2*	1 1/4*
101	2 1/4	1 3/4	1 1/4*
152	2 1/2	2*	1 1/2*
202	—	2 1/4*	1 3/4
303	—	—	2

*Use next larger size on PAP Sheath

3. STRAIGHT SPLICES

3.01 The following table shows the lead sleeve sizes required for straight splices in 19-gauge and 22-gauge cables.

LEAD SLEEVE SIZES - STRAIGHT SPLICES

SIZE OF CABLE IN PAIRS	GAUGE AND TYPE					
	19-GA CA-1814 CA-1741		19-GA CA-1727		22-GA CA-1813	
	D	L	D	L	D	L
6	1/4	15	—	—	1/4	15
11	1/2	15	—	—	1/4	15
16	1 3/4	15	1 3/4	15	1/4	15
26	2	17	2	17	1/2	15
31	2 1/4	17	2 1/4	17	—	—
51	2 1/2	20	2 3/4	20	2	17
76	2 1/2	20	2 3/4	20	2	17
101	3	20	3 1/2	20	2 1/2	20
152	3 1/2	20	4	20	2 1/2	20
202	4	20	—	—	2 3/4	20
303	—	—	—	—	3 1/2	20

D = Diameter (inches)

L = Length (inches)

4. BRIDGE SPLICES

4.01 The following table shows the sleeve sizes for the more generally used bridge splice combinations.

4.02 The sizes of sleeves for bridge splices are controlled by the diameter of the auxiliary sleeve on the main cable, the diameter of the branch cable (or auxiliary sleeve), and the wedge size.

4.03 These tables are based on having alpeph sheath on both main and branch cables. Therefore, it is not necessary to make the allowances indicated in Part 4 of Section G50.622.1.

4.04 The tables assume that the main and bridge cables are both polyethylene insulated and of the same gauge. If the bridge cable has lead sheath or if a smaller auxiliary sleeve is required on the bridge cable used, the diameter of the main lead sleeve should be reduced accordingly. For example, the following table shows a 4-in. diameter sleeve for a branch splice in 303 pair CA-1813 main cable (2-in. diameter auxiliary sleeve) with 26 pair CA-1813 stub cable (1-in. diameter auxiliary sleeve). If the bridge were a 26 pair 22-gauge lead sheath cable (.6-in. diameter) which is approximately 1/2-in. smaller than the 1-in. diameter auxiliary sleeve, the diameter of the main sleeve can be reduced 1/2-in. Use a 3-1/2-in. diameter sleeve.

LEAD SLEEVE SIZES - BRIDGE SPLICES
22 GAUGE MAIN CABLE - CA-1813

SIZE OF MAIN CABLE IN PAIRS	SIZE OF BRIDGE CABLE IN PAIRS											
	6, 11 or 16		26		51		76		101		152	
	D	L	D	L	D	L	D	L	D	L	D	L
26	2 3/4	20	2 3/4	20	—	—	—	—	—	—	—	—
51	2 3/4	20	2 3/4	20	2 3/4	20	—	—	—	—	—	—
76	3	20	3	20	3	20	3 1/2	20	—	—	—	—
101	3	20	3	20	3	20	3 1/2	20	3 1/2	20	—	—
152	3 1/2	20	3 1/2	20	3 1/2	20	3 1/2	20	4	20	—	—
202	3 1/2	20	3 1/2	20	3 1/2	20	4	20	4	20	4	20
303	4	20	4	20	4	20	4 1/2	20	4 1/2	20	4 1/2	20

D = Diameter (inches)

L = Length (inches)

LEAD SLEEVE SIZES - BRIDGE SPLICES
19 GA 083MF MAIN CABLE CA 1814, CA 1741

SIZE OF MAIN CABLE IN PAIRS	SIZE OF BRIDGE CABLE IN PAIRS											
	6, 11 or 16		26		31		51		76		101	
	D	L	D	L	D	L	D	L	D	L	D	L
26	2 3/4	20	2 3/4	20	—	—	—	—	—	—	—	—
31	3	20	3	20	3 1/2	20	—	—	—	—	—	—
51	3	20	3	20	3 1/2	20	3 1/2	20	—	—	—	—
76	3 1/2	20	3 1/2	20	3 1/2	20	3 1/2	20	—	—	—	—
101	3 1/2	20	3 1/2	20	4	20	4	20	—	—	—	—
152	4	20	4	20	4 1/2	20	4 1/2	20	4 1/2	20	—	—
202	4 1/2	20	4 1/2	20	4 1/2	20	4 1/2	20	5	20	5	20

D = Diameter (inches)

L = Length (inches)

LEAD SLEEVE SIZES - BRIDGE SPLICES
19 GA 066MF MAIN CABLE CA 1727

SIZE OF MAIN CABLE IN PAIRS	SIZE OF BRIDGE CABLE IN PAIRS											
	11 or 16		26		31		51		76		101	
	D	L	D	L	D	L	D	L	D	L	D	L
26	3 1/2	20	3 1/2	20	—	—	—	—	—	—	—	—
31	3 1/2	20	3 1/2	20	4	20	—	—	—	—	—	—
51	4	20	4	20	4	20	4 1/2	20	—	—	—	—
76	4	20	4	20	4 1/2	20	4 1/2	20	5	20	—	—
101	4 1/2	20	4 1/2	20	5	20	5	20	5	20	5 1/2	20
152	4 1/2	20	4 1/2	20	5	20	5	20	5 1/2	20	5 1/2	20

D = Diameter (inches)

L = Length (inches)