

Chapter E 374

AUXILIARY GUTTERS

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E 374.01 Purpose. Auxiliary gutters, used to supplement wiring spaces at meter centers, distribution centers, switchboards and similar points of wiring systems, may enclose conductors or bus-bars, but shall not be used to enclose switches, overcurrent devices or other appliances or apparatus.

History: Cr. Register, April, 1964, No. 100, eff. 5-1-64.

E 374.02 Extension beyond equipment. An auxiliary gutter shall not extend a greater distance than 30 feet beyond the equipment which it supplements except in elevator work. Any extension beyond this distance shall comply with the provisions for wireways in chapter E 362 or with the provisions for busways in chapter E 364.

History: Cr. Register, April, 1964, No. 100, eff. 5-1-64.

E 374.03 Supports. Gutters shall be supported throughout their entire length at intervals not exceeding 5 feet.

History: Cr. Register, April, 1964, No. 100, eff. 5-1-64.

E 374.04 Covers. Covers shall be securely fastened to the gutter.

History: Cr. Register, April, 1964, No. 100, eff. 5-1-64.

E 374.05 Number of conductors. Auxiliary gutters shall not contain more than 30 conductors at any cross-section, unless the additional conductors are for signal or control circuits. The sum of the cross-sectional areas of all contained conductors at any cross-section of an auxiliary gutter shall not exceed 20% of the interior cross-sectional area of the gutter.

History: Cr. Register, April, 1964, No. 100, eff. 5-1-64.

E 374.06 Carrying capacity of conductors. The current-carrying capacities of insulated copper and aluminum conductors are given in tables E 310.12 and E 310.14 respectively. The correction factors specified in note 8 of these tables shall not apply to conductors in auxiliary gutters. The current carried continuously in bare copper bars in auxiliary gutters shall not exceed 1000 amperes per square inch of cross section of the conductor. For aluminum bars the current carried continuously shall not exceed 700 amperes per square inch of cross-section of the conductor.

History: Cr. Register, April, 1964, No. 100, eff. 5-1-64.

E 374.07 Clearance of bare live parts. Bare conductors shall be securely and rigidly supported so that the minimum clearance between bare current-carrying metal parts of opposite polarities mounted on the same surface shall be not less than 2 inches, nor less than 1 inch for parts that are held free in the air. A clearance not less

than 1 inch shall be secured between bare current-carrying metal parts and any metal surface. Adequate provision shall be made for expansion and contraction of copper bars.

History: Cr. Register, April, 1964, No. 100, eff. 5-1-64.

E 374.08 Splices and taps. Splices and taps shall conform to the following:

(1) Splices or taps, made and insulated by approved methods, may be located within gutters when they are accessible by means of removable covers or doors. The conductors, including splices and taps, shall not fill the gutter to more than 75% of its area.

(2) Taps from bare conductors shall leave the gutter opposite their terminal connections and conductors shall not be brought in contact with uninsulated current-carrying parts of opposite polarity.

(3) All taps shall be suitably identified at the gutter as to the circuit or equipment which they supply.

(4) Tap connections from conductors in auxiliary gutters shall be provided with overcurrent protection in conformity with the provisions of section E 240.15.

History: Cr. Register, April, 1964, No. 100, eff. 5-1-64.

E 374.09 Construction and installation. Auxiliary gutters shall be constructed in accordance with the following:

(1) Gutters shall be so constructed and installed that adequate electrical and mechanical continuity of the complete system will be secured.

(2) Gutters shall be of substantial construction and shall provide a complete enclosure for the contained conductors. All surfaces, both interior and exterior, shall be suitably protected from corrosion. Corner joints shall be made tight and where the assembly is held together by rivets or bolts, these shall be spaced not more than 12 inches apart.

(3) Suitable bushings, shields or fittings having smooth rounded edges shall be provided where conductors pass between gutters, through partitions, around bends, between gutters and cabinets or junction boxes and at other locations where necessary to prevent abrasion of the insulation of the conductors.

(4) Gutters shall be constructed of sheet metal of thicknesses not less than in the following table:

TABLE E 374.09 (4)	
MAXIMUM WIDTH OF THE WIDEST SURFACE OF GUTTERS	
THICKNESS IN MS (USS REVISED) GAUGE	
Up to and including 6 inches	No. 16
Over 6 inches and not over 18 inches	No. 14
Over 18 inches and not over 30 inches	No. 12
Over 30 inches	No. 10

(5) Where insulated conductors are deflected within the auxiliary gutter, either at the ends or where conduits, fittings or other raceways enter or leave the gutter, or where the direction of the gutter is deflected greater than 30 degrees, dimensions corresponding to section E 373.06 shall apply.

(6) Auxiliary gutters intended for outdoor use shall be of approved raintight construction.

History: Cr. Register, April, 1964, No. 100, eff. 5-1-64.