TABLE 314.16(B)(1) *Volume Allowance Required per Conductor*

Size of Conductor (AWG)	Free Space Within Box for Each Conductor	
	cm^3	$in.^3$
18	24.6	1.50
16	28.7	1.75
14	32.8	2.00
12	36.9	2.25
10	41.0	2.50
8	49.2	3.00
6	81.9	5.00

50 mm (2 in.) device box as described in Table 314.16(A) shall have double volume allowances provided for each gang required for mounting.

Δ **(5) Equipment Grounding Conductor Fill.** Where up to four equipment grounding conductors enter a box, a single volume allowance in accordance with Table 314.16(B)(1) shall be made based on the largest equipment grounding conductor entering the box. A ¼ volume allowance shall be made for each additional equipment grounding conductor that enters the box, based on the largest equipment grounding conductor entering the box.

N **(6) Terminal Block Fill.** Where a terminal block is present in a box, a single volume allowance in accordance with Table 314.16(B)(1) shall be made for each terminal block assembly based on the largest conductor(s) terminated to the assembly.

This section requires that the total box "volume" be equal to or greater than the total box "fill." The total box volume is determined by adding the individual volumes of the box components. The components include the box itself plus any attachments to it, such as a plaster ring, an extension ring, or a dome cover. The volume of each component is determined either from the volume marking on the component itself or from the standard volumes listed in Table 314.16(A). If a box is marked with a volume larger than listed in Table 314.16(A), the larger volume can be used instead of the table value. If a box contains one or more securely installed dividers, the volume would be apportioned among the resulting spaces. However, the space occupied by the divider must be considered in calculation of the box fill.

Adding all the volume allowances for all items contributing to box fill determines the total box fill. The volume allowance for each fill item is based on the volume listed in Table 314.16(B)(1) for the conductor size indicated. Commentary Table 314.1 summarizes the components contributing to box fill.

Up to four equipment grounding conductors entering a box will be considered as a single volume allowance. A ¼ volume allowance must be added for equipment grounding conductors and equipment bonding conductors where the number of conductors exceeds four.

COMMENTARY TABLE 314.1 Summary of Items Contributing to Box Fill

Items Contained Within Box	Volume Allowance	Based on [see Table 314.16(B)(1)]
Conductors that originate outside box	One for each conductor	Actual conductor size
Conductors that pass through box without splice or connection (less than 12 in. in total length)	One for each conductor	Actual conductor size
Conductors 12 in. or greater that are looped (or coiled) and unbroken (see 300.14 for exact measurement)	Two for a single (entire) unbroken conductor	Actual conductor size
Conductors that originate within box and do not leave box	None (these conductors not counted)	N.A.
Fixture wires [per 314.16(B)(1), Exception]	None (these conductors not counted)	N.A.
Internal cable clamps (one or more)	One only	Largest-sized conductor present
Support fittings (such as luminaire studs or hickeys)	One for each type of support fitting	Largest-sized conductor present
Devices (such as receptacles or switches) or utilization equipment (such as timers, dimmers, AFCI receptacles, GFCI receptacles, TVSS receptacles)	Two for each yoke or mounting strap	Largest-sized conductor connected to device or utilization equipment
Equipment grounding conductor (up to four)	One only	Largest equipment grounding conductor present; ¼ volume more per conductor over four
Isolated equipment grounding conductor (see equipment grounding conductor) [see 250.146(D)]	One only	Largest isolated and insulated equipment grounding conductor present

N.A. = not applicable.