Given that use of UL486F rated ferrules "Converts" rated wires to solid or B/C stranded, this comparison of AWG and mm2 wires, single and twin ferrules, calculates solid, B/C AWG equivalents for AWG & mm2 IEC metric wire to show which equivalent AWG number falls inside the permitted B, C, or solid wire range ratings an example rating AWG range like 2-6 AWG would include 2.01-5.99 AWG if at the same torque rating of connector

Table 1. uses exact AWG wire sizes and converts to the odd AWG sizes in a twin ferrule

Table 2. uses exact mm2 sizes and converst to approximate mm2 sizes in a twin ferrule

Conversions are done based on Cmils (circular millimteters). As an example, an 18AWG Twin Ferrule accepts (2) #18 AWG wires and the resulting Cmils of the combined wires is the equivalent of a single #15 AWG.

THE UL486F FERRULE USED MUST BE RATED FOR THE CLASS OF STRANDING IN USE & CRIMPED WITH THE DESIGNATED TOOL

Table 1.

	Wire size of a single wire			Approximate wire size when putting two wires into a twin ferrule				
AWG Aughts	**AWG**	**SINGLE Cmils**	**SINGLE mm2**	**TWIN (X2) Cmils**	**TWIN (X2) mm2**	**AWG TWIN (X2) Logical #**	**AWG TWIN (X2) Rounded**	**AWG Aughts**
	18	1624	0.82	3249	1.65	15.01	**15**	
	16	2583	1.31	5165	2.62	13.01	**13**	
	14	4107	2.08	8213	4.16	11.01	**11**	
	12	6530	3.31	13060	6.62	9.01	**9**	
	10	10383	5.26	20766	10.52	7.01	**7**	
	8	16510	8.37	33019	16.73	5.01	**5**	
	6	26251	13.30	52503	26.60	3.01	**3**	
	4	41741	21.15	83483	42.30	1.01	**1**	
	2	66371	33.63	132743	67.26	-0.989	-2	**2/0**
	1	83693	42.41	167385	84.82	-1.989	-3	**3/0**
1/0	0	105535	53.48	211069	106.95	-2.989	-4	**4/0**
2/0	-1	133077	67.43	266153	134.86	-	-	**266kcmil**

Note: 1/0 does not appear in twin AWG but mm2 twinned 25mm2 is close to 1/0 or zero AWG (0.23 AWG)

Table 2.

	Wire size of a single wire			Approximate wire size when putting two wires into a twin ferrule				
AWG Aughts	AWG	**SINGLE Cmils**	**SINGLE mm2**	**TWIN (X2) Cmils**	**TWIN (X2) mm2**	**AWG TWIN (X2) Logical #**	**AWG TWIN (X2) Rounded**	**AWG Aughts Range**
	18.40	1480	**0.75**	2960	1.50	15.41	**15.4**	
	17.16	1974	**1.00**	3947	2.00	14.17	**14.2**	
	15.41	2960	**1.50**	5921	3.00	12.42	**12.4**	
	13.21	4934	**2.50**	9868	5.00	10.22	**10.2**	
	11.18	7894	**4.00**	15788	8.00	8.19	**8.2**	
	9.43	11841	**6.00**	23682	12.00	6.44	**6.4**	
	7.23	19735	**10.00**	39471	20.00	4.24	**4.2**	
	5.20	31576	**16.00**	63153	32.00	2.21	**2.2**	
	3.28	49338	**25.00**	98677	50.00	0.29	**0.3**	**1AWG-1/0**
	1.83	69074	**35.00**	138147	70.00	-1.16	**-2.2**	**2/0-3/0**
~1-1/0	0.29	98677	**50**	197353	100.00	-2.70	**-3.7**	**3/0-4/0**

By definition, 36 AWG is 0.005 inches in diameter, and 0000 AWG is 0.46 inches in diameter. The ratio of these diameters is 1:92, and there are 40 gauge sizes from 36 to 0000, or 39 steps. Because each successive gauge number increases cross sectional area by a constant multiple, diametersvary geometrically. Any two successive gauges (e.g., *A* and *B*) have diameters whose ratio (dia. *B* ÷ dia. *A*) is (approximately 1.12293), while for gauges two steps apart (e.g., *A*, *B*, and *C*), the ratio of the *C* to *A* is about $1.12293^2 \approx 1.26098$. Similarly for gauges *n* steps apart the ratio of the first to last gauges is about 1.12293^n.

An = CM for given AWG

$$A_n = \left(5 \times 92^{\frac{36-n}{39}}\right)^2$$

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=(5*92^((36-B13)*1/39))^2
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CM to mm2

X 50670.75 x10^-8

Conversion formula used AWG to kcmil.

Equation `=36-((39/(2*LOG10(92))*(LOG10((E13/25)))))`

$$\text{AWG} = 36 - \frac{39}{2 \cdot \log_{10}(92)} \cdot \log_{10}\left(\frac{\text{CM}}{25}\right)$$

https://lugsdirect.com/AWG-CalculatorPage.htm?srsltid=AfmBOooDXW0InyAC4zm0Y9zojn1wYFAB59YporNTw3rbGnjhknOw9CbK

	Diameter		Cross Sectional Area		Circular Mils	
Input AWG number here:	**Wire Dia.**	**Wire Dia.**	**Wire Area**	**Wire Area**	**CM**	**kcmil or MCM**
	Inches	mm	inch2	mm2	Circular Mils	kcmil
15.011	0.0570	1.448	0.002551	1.6460	3248.5	3.2485