

### NEC Table 310.85 {Detail 7 - One Circuit, 3-1/c Triplexed Directly Buried}

Ambient Earth Temperature = 20 Deg C, Earth Thermal resistivity (RHO) = 90, Load Factor = 100%, Copper Conductors.

1 Circuit, 3-1/c Triplexed Copper Conductor Cables (Fig. B-310-60, Detail 7)													
COPPER							COPPER						
Size (AWG or kcmil)	2001-5000 Volts Ampacity						5001-35,000 Volts Ampacity						
	90C (194F) Type MV-90	105C (221F) Type MV-105	90C (194F) Type MV-90	105C (221F) Type MV-105	90C (194F) Type MV-90	105C (221F) Type MV-105	90C (194F) Type MV-90	105C (221F) Type MV-105	90C (194F) Type MV-90	105C (221F) Type MV-105	90C (194F) Type MV-90	105C (221F) Type MV-105	
	NEC		AmpCalc		%Deviation		NEC		AmpCalc		%Deviation		
	8	90	95	91.9	99.0	2.1%	4.2%	-	-	-	-	-	-
6	120	130	118.2	127.3	-1.5%	-2.1%	115	120	114.8	123.7	-0.2%	3.1%	
4	150	165	152.9	164.7	1.9%	-0.2%	150	160	148.6	160.1	-0.9%	0.1%	
2	195	205	196.8	212.1	0.9%	3.5%	190	205	188.4	203.1	-0.8%	-0.9%	
1	225	240	223.5	240.8	-0.7%	0.3%	215	230	214.7	231.5	-0.1%	0.7%	
1/0	255	270	254.4	274.1	-0.2%	1.5%	245	260	244.3	263.5	-0.3%	1.3%	
2/0	290	310	289.4	311.8	-0.2%	0.6%	275	295	277.9	299.7	1.1%	1.6%	
3/0	330	360	329.0	354.5	-0.3%	-1.5%	315	340	315.2	340.0	0.1%	0.0%	
4/0	375	405	373.0	401.9	-0.5%	-0.8%	360	385	358.1	386.4	-0.5%	0.4%	
250	410	445	408.1	439.9	-0.5%	-1.1%	390	410	392.5	423.6	0.6%	3.3%	
350	490	*580	490.4	528.8	0.1%	-8.8%	470	505	470.8	508.3	0.2%	0.7%	
500	590	635	592.3	639.2	0.4%	0.7%	565	605	567.0	612.8	0.4%	1.3%	
750	725	780	723.5	782.2	-0.2%	0.3%	685	740	689.7	747.0	0.7%	0.9%	
1000	825	885	824.0	892.6	-0.1%	0.9%	770	830	781.3	847.9	1.5%	2.2%	
Average Deviation =					0.1%	-0.2%	Average Deviation =					0.1%	1.1%

\* Value not consistent with others - Code misprint? Should be 530?

**AmpCalc References:**

AmpCalc Library = IEERUB\_2  
 AmpCalc Volume = IEERUB1  
 1 kV non-shielded

AmpCalc Library = IEERUB\_2  
 AmpCalc Volume = IEERUB8 for #6, 4 , IEERUB15 for all others  
 8 or 15 kV shielded with both ends grounded

### NEC Table 310.85 {Detail 8 - Two Circuits, each with 3-1/c Triplexed Directly Buried}

Ambient Earth Temperature = 20 Deg C, Earth Thermal resistivity (RHO) = 90, Load Factor = 100%, Copper Conductors

2 Circuits, two sets of 3-1/c Triplexed Copper Conductor Cables (Fig. B-310-60, Detail 8)												
COPPER						COPPER						
Size (AWG or kcmil)	2001-5000 Volts						5001-35,000 Volts					
	Ampacity						Ampacity					
	90C (194F) Type MV-90	105C (221F) Type MV-105	90C (194F) Type MV-90	105C (221F) Type MV-105	90C (194F) Type MV-90	105C (221F) Type MV-105	90C (194F) Type MV-90	105C (221F) Type MV-105	90C (194F) Type MV-90	105C (221F) Type MV-105	90C (194F) Type MV-90	105C (221F) Type MV-105
	NEC		AmpCalc		%Deviation		NEC		AmpCalc		%Deviation	
8	85	90	85.4	92.0	0.5%	2.2%	-	-	-	-	-	-
6	110	115	109.4	117.9	-0.5%	2.5%	105	115	106.7	115.0	1.6%	0.0%
4	140	150	141.0	151.9	0.7%	1.3%	140	150	137.6	148.3	-1.7%	-1.1%
2	180	195	181.0	195.0	0.6%	0.0%	175	190	174.1	187.8	-0.5%	-1.2%
1	205	220	205.2	221.1	0.1%	0.5%	200	215	197.9	213.5	-1.1%	-0.7%
1/0	235	250	233.1	251.1	-0.8%	0.4%	225	240	224.8	242.4	-0.1%	1.0%
2/0	265	285	264.5	285.0	-0.2%	0.0%	255	275	255.0	275.1	0.0%	0.0%
3/0	300	320	300.1	323.3	0.0%	1.0%	290	315	288.7	311.5	-0.4%	-1.1%
4/0	340	365	339.5	365.9	-0.1%	0.2%	325	350	327.2	353.0	0.7%	0.9%
250	370	395	371.0	399.9	0.3%	1.2%	355	380	357.9	386.2	0.8%	1.6%
350	445	480	444.2	478.9	-0.2%	-0.2%	425	455	427.4	461.6	0.6%	1.5%
500	535	575	534.3	576.6	-0.1%	0.3%	510	545	512.4	554.0	0.5%	1.7%
750	650	700	649.9	702.7	0.0%	0.4%	615	660	619.8	671.5	0.8%	1.7%
1000	740	795	737.4	798.8	-0.4%	0.5%	690	745	698.9	758.8	1.3%	1.9%
Average Deviation =		0.0%		0.7%		Average Deviation =		0.2%		0.5%		

**AmpCalc References:**

AmpCalc Library = IEERUB\_2  
 AmpCalc Volume = IEERUB1  
 1 kV non-shielded

AmpCalc Library = IEERUB\_2  
 AmpCalc Volume = IEERUB8 for #6, 4 , IEERUB15 for all others  
 8 or 15 kV shielded with both ends grounded

NEC ampacities obtained from "NFPA 70, National Electric Code, 2002 Edition", © 2002, National Fire Protection Association, Inc.  
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