

A.
System
Overview

Stud Size Chart (Inches/Millimeters)

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems











E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

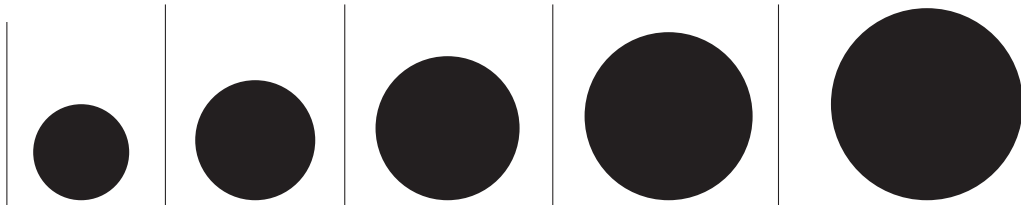
E5.
Lockout/
Tagout/
& Safety
Solutions





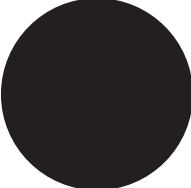
F.
Index

										
Standard Stud Size	#2	#4	#5	#6	#8	#10	1/4"	5/16"	3/8"	7/16"
Metric Stud Size (mm)	M2	M2.5	M3	M.35	M4	M5	M6	M8	M10	M11
Stud Size Decimal Equivalent	.086"	.112"	.127"	.138"	.164"	.190"	.250"	.312"	.375"	.438"
Metric Diameter (mm)	2.18	2.84	3.18	3.51	4.17	4.83	6.35	7.92	9.53	11.13
Terminal Hole Diameter	.090"	.118"	.130"	.147"	.173"	.204"	.270"	.343"	.392**	.456"
Terminal Hole Diameter Metric (mm)	2.29	3.0	3.23	3.71	4.39	5.18	6.86	8.71	9.78	11.58
Stud Size Designation in PANDUIT Part Number	2	4	5	6	8	10	14	56	38	76

*Terminal stud.

**Power Connector stud.



					
Standard Stud Size	1/2"	5/8"	3/4"	7/8"	1"
Metric Stud Size (mm)	M12	M16	M18	M20	M25
Stud Size Decimal Equivalent	.500"	.625"	.750"	.875"	1.00"
Metric Diameter (mm)	12.7	15.88	19.05	22.23	25.4
Terminal Hole Diameter	.531"	.656"	.810"	.906"	1.031"
Terminal Hole Diameter Metric (mm)	13.49	16.66	20.57	23.01	26.19
Stud Size Designation in PANDUIT Part Number	12	58	34	78	1

Note: Stud hole diagrams are for U.S. reference only.

Equivalent Tables

Decimal/Inches/Millimeters

1/64 — .0156 0,396	17/64 — .2656 6,746	33/64 — .5156 13,100	49/64 — .7656 19,446
1/32 — 0.312 0,792	9/32 — .2812 7,143	17/32 — .5312 13,492	25/32 — .7812 14,842
3/64 — .0468 1,189	19/64 — .2968 7,541	35/64 — .5468 13,891	51/64 — .7968 20,241
1/16 — .0625 1,588	5/16 — .3125 7,938	9/16 — .5625 14,288	13/16 — .8125 20,637
5/64 — .0781 1,984	21/64 — .3281 8,337	37/64 — .5781 14,684	53/64 — .8281 21,034
3/32 — .0937 2,380	11/32 — .3437 8,730	19/32 — .5937 15,080	27/32 — .8437 21,480
7/64 — .1093 2,779	23/64 — .3593 9,129	39/64 — .6093 15,479	55/64 — .8593 21,828
1/8 — .125 3,175	3/8 — .375 9,525	5/8 — .625 15,875	7/8 — .875 22,225
9/64 — .1406 3,571	25/64 — .3906 9,921	41/64 — .6406 16,271	57/64 — .8906 22,620
5/32 — .1562 3,968	13/32 — .4062 10,317	21/32 — .6562 16,667	29/32 — .9062 23,017
11/64 — .1718 4,366	27/64 — .4218 10,716	43/64 — .6718 17,066	59/64 — .9218 23,416
3/16 — .1875 4,763	7/16 — .4375 11,113	11/16 — .6875 17,463	15/16 — .9375 23,810
13/64 — .2031 5,159	29/64 — .4531 11,509	45/64 — .7031 17,859	61/64 — .9531 24,208
7/32 — .2187 5,555	15/32 — .4687 11,905	23/32 — .7187 18,255	31/32 — .9687 24,605
15/64 — .2343 5,954	31/64 — .4843 12,304	47/64 — .7343 18,654	63/64 — .9843 25,001
1/4 — .25 6,350	1/2 — .5 12,700	3/4 — .75 19,050	1 — 1. 25,400

Common Conductor Size Chart (Stranded Wire)

Size	No. of Strands	Individual Strand Size			Conductor Size				
		Inches (mm)	Inches (mm)	Circle Mil Area (mm ²)	Inches (mm)	Inches (mm)	Circle Mil Area (mm ²)		
22 AWG	7	.0096 (0.24)	.029 (0.74)	640 (0.324)	1/0 AWG	19	.0745 (1.89)	.373 (9.47)	105,600 (0.823)
20 AWG	10	.0100 (0.25)	.038 (0.97)	1020 (0.519)	2/0 AWG	19	.0837 (2.13)	.418 (10.62)	133,100 (67.43)
18 AWG	16	.0100 (0.25)	.048 (1.22)	1620 (0.823)	3/0 AWG	19	.0940 (2.39)	.470 (11.94)	167,800 (85.01)
16 AWG	26	.0100 (0.25)	.060 (1.52)	2580 (1.310)	4/0 AWG	19	.1055 (2.68)	.528 (13.41)	211,600 (107.2)
14 AWG	7	.0242 (0.61)	.073 (1.85)	4110 (2.080)	250 kcmil	37	.0822 (2.09)	.575 (14.61)	250,000 (127)
12 AWG	7	.0305 (0.77)	.092 (2.34)	6530 (3.310)	300 kcmil	37	.0900 (2.29)	.630 (16.00)	300,000 (152)
10 AWG	7	.0385 (0.98)	.116 (2.95)	10,380 (5.261)	350 kcmil	37	.0973 (2.47)	.681 (17.29)	350,000 (177)
8 AWG	7	.0486 (1.23)	.146 (3.71)	16,510 (8.367)	400 kcmil	37	.1040 (2.64)	.728 (18.49)	400,000 (203)
6 AWG	7	.0612 (1.55)	.184 (4.67)	26,240 (13.30)	500 kcmil	37	.1162 (2.95)	.813 (20.65)	500,000 (253)
4 AWG	7	.0772 (1.96)	.232 (5.89)	41,740 (21.15)	600 kcmil	61	.0992 (2.52)	.893 (22.68)	600,000 (304)
2 AWG	7	.0974 (2.47)	.292 (7.42)	66,360 (33.62)	750 kcmil	61	.1109 (2.82)	.998 (25.35)	750,000 (380)
1 AWG	19	.0664 (1.69)	.332 (8.43)	83,690 (42.41)	800 kcmil	61	.1145 (2.91)	1.031 (26.19)	800,000 (405)
					1000 kcmil	61	.1280 (3.25)	1.152 (29.26)	1,000,000 (507)

A.
System
Overview

Common Conductor Sizes and Strandings Reference Chart

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

E5.
Lockout/
Tagout
& Safety
Solutions

F.
Index

Conductor		Individual Strands			Overall Conductor Size			Conductor		Individual Strands			Overall Conductor Size		
AWG	Metric mm ²	No.	Diameter		Diameter		Circ. MILS	AWG	Metric mm ²	No.	Diameter		Diameter		Circ. MILS
			mm	In.	mm	In.					mm	In.	mm	In.	
	.05	25	.05	.002	.25	.010	97			19	0.25	.010	1.30	.051	1841
	.06	41	.05	.002	.36	.014	159			1	1.13	.044	1.13	.044	1979
26		10	.13	.005	.53	.021	250	16		32	.20	.008	1.30	.051	1984
		1	.41	.016	.41	.016	256			7	.43	.017	1.30	.051	2006
		7	.16	.006	.48	.019	278			19	.29	.011	1.47	.058	2426
		19	.10	.004	.51	.020	304			65	.16	.006	1.50	.059	2580
24		41	.08	.003	.58	.023	384			*26	.25	.010	1.50	.059	2600
		10	.16	.006	.58	.023	397			1	1.30	.051	1.30	.051	2601
		1	.51	.020	.51	.020	400			105	.13	.005	1.50	.059	2625
		7	.20	.008	.61	.024	448			*7	.51	.020	1.52	.060	2828
		19	.13	.005	.61	.024	475			30	.25	.010	1.70	.067	2906
		65	.07	.003	.65	.026	484			21	.30	.012	1.60	.063	2930
		128	.05	.002	.65	.026	496			189	.10	.004	1.90	.075	2930
		32	.10	.004	.65	.026	496			7	.52	.020	1.60	.063	2934
		14	.16	.006	.65	.026	556			1	1.38	.054	1.38	.054	2952
		1	.64	.025	.64	.025	625			45	.16	.006	1.85	.073	3786
		16	.16	.006	.76	.030	635			19	.38	.014	1.85	.073	3831
		26	.13	.005	.76	.030	650			1	1.63	.064	1.63	.064	4096
22		7	.25	.010	.76	.030	700			*41	.25	.010	1.85	.073	4100
		19	.16	.006	.79	.031	754			*7	.64	.025	1.85	.073	4481
		48	.10	.004	.80	.031	744			50	.25	.010	2.20	.087	4844
		194	.05	.002	.80	.031	752			7	.67	.026	2.10	.083	4871
		100	.07	.003	.80	.031	760			35	.30	.012	2.20	.087	4883
		7	.27	.011	.80	.031	791			315	.10	.004	2.20	.087	4883
		12	.21	.008	.80	.031	820			1	1.78	.070	1.78	.070	4911
		21	.16	.006	.80	.031	833			19	.45	.018	2.36	.093	6088
		7	.30	.012	.90	.035	977	12		*65	.25	.010	2.41	.095	6500
		16	.20	.008	.90	.035	992			165	.16	.006	2.41	.095	6549
		1	.80	.031	.80	.031	992			1	2.06	.081	2.06	.081	6561
		*10	.25	.010	.89	.035	1000			*7	.81	.032	2.44	.096	7168
20		1	.81	.032	.81	.032	1024			56	.30	.012	3.10	.122	7812
		41	.13	.005	.91	.036	1025			1	2.26	.089	2.26	.089	7917
		26	.16	.006	.91	.036	1032			511	.10	.004	3.00	.118	7921
		*7	.32	.013	.97	.038	1111			19	.52	.020	2.70	.106	7963
		19	.20	.008	.94	.037	1216	10		37	.40	.016	2.92	.115	9354
		7	.37	.015	1.10	.043	1485			49	.36	.014	2.95	.116	9880
		24	.20	.008	1.20	.047	1488			*7	.98	.039	2.95	.116	10376
		1	1.00	.039	1.00	.039	1550			1	2.59	.102	2.59	.102	10404
18		*16	.25	.010	1.19	0.047	1600			*105	.25	.010	2.95	.116	10500
		1	1.02	.040	1.02	.040	1600			84	.30	.012	3.50	.138	11718
		65	.13	.005	1.19	.047	1625			756	.10	.004	3.70	.146	11718
		41	.16	.006	1.19	.047	1627			1	2.76	.109	2.76	.109	11807
E4. Permanent Identification		*7	.40	.016	1.22	.048	1770			7	1.05	.041	3.20	.126	11962
		19	.25	.010	1.24	.049	1900			19	.64	.025	3.30	.130	12063

*Strandings required for UL and CSA certification testing.

This chart details the different conductors commonly used in the industry. For each size, either AWG or metric, various stranding options are listed. Typically the higher stranding is used in applications requiring greater conductor flexibility.

AWG to Metric Wire Crosses	
AWG	Metric (mm ²)
26 – 22	0.1 – 0.5
22 – 18	0.5 – 1.0
16 – 14	1.5 – 2.5
12 – 10	4.0 – 6.0

Common Conductor Sizes and Strandings Reference Chart (continued)

Conductor		Individual Strands			Overall Conductor Size			Conductor		Individual Strands			Overall Conductor Size		
		No.	Diameter		Diameter		Area			No.	Diameter		Diameter		Area
AWG	Metric mm ²		mm	In.	mm	In.	Circ. MILS	AWG	Metric mm ²		mm	In.	mm	In.	Circ. MILS
	6	7	0.107	0.042	3.21	0.126	11840		95	19	2.57	0.101	12.8	0.505	187500
		1	2.77	0.109	2.77	0.109	11840			37	1.83	0.072	12.5	0.504	187500
9		7	1.1	0.0432	3.3	0.13	13000	4/0		19	2.89	0.1055	13.4	0.528	211600
		1	2.91	0.1144	2.91	0.114	13090		120	37	2.06	0.081	14.4	0.567	237.8 kcmil
8		1	3.26	0.1285	3.25	0.128	16510	250 kcmil		37	2.07	0.0822	14.6	0.575	250 kcmil
		7	1.23	0.0486	3.7	0.146	16510	300 kcmil	150	37	2.29	0.09	16	0.63	300 kcmil
	10	7	1.37	0.054	4.12	0.162	19740	350 kcmil		37	2.47	0.0973	17.3	0.681	350 kcmil
		1	3.58	0.141	3.58	0.141	19740		185	37	2.54	0.1	17.8	0.7	365.1 kcmil
7		7	1.38	0.0545	4.15	0.164	20520	400 kcmil		37	2.64	0.104	18.5	0.728	400 kcmil
		1	3.67	0.1443	3.67	0.144	20520		240	37	2.9	0.114	20.3	0.798	473.6 kcmil
6		7	1.55	0.0612	4.66	0.184	26240			61	2.26	0.089	20.3	0.801	473.6 kcmil
		1	4.11	0.162	4.11	0.162	26240	500 kcmil		37	2.95	0.1162	20.7	0.813	500 kcmil
	16	7	1.73	0.008	5.13	0.204	31580			61	2.3	0.0905	20.7	0.814	500 kcmil
5		7	1.75	0.0688	5.24	0.206	33090		300 kcmil	61	2.51	0.099	22.6	0.891	592.1 kcmil
4		7	1.96	0.0772	5.88	0.232	41740	600 kcmil		61	2.52	0.0992	22.7	0.893	600 kcmil
	25	7	2.16	0.085	6.48	0.255	49340	700 kcmil		61	2.72	0.1071	24.5	0.964	700 kcmil
		19	1.32	0.052	6.6	0.26	49340	750 kcmil		61	2.82	0.1109	25.4	0.998	750 kcmil
3		7	2.2	0.0867	6.61	0.26	52620			91	2.31	0.0908	25.4	0.998	750 kcmil
2		7	2.47	0.0974	7.42	0.292	66300		400	61	2.9	0.114	26.1	1.026	798.4 kcmil
	35	7	2.54	0.1	7.62	0.300	69070	800 kcmil		61	2.91	0.1145	26.2	1.031	800 kcmil
		19	1.55	0.001	7.75	0.305	69070			91	2.38	0.0938	26.2	1.032	800 kcmil
1		19	1.5	0.0064	8.43	0.332	83690	1000 kcmil	500	61	3.25	0.128	28.3	1.152	986.8 kcmil
	50	19	1.85	0.073	9.27	0.365	98680			91	2.66	0.1048	29.3	1.153	1000 kcmil
1/0		19	1.59	0.0745	9.46	0.373	10500		625	91	2.97	0.117	32.7	1.287	1233.7 kcmil
2/0		19	2.13	0.0837	10.6	0.419	133100								
3/0	70	19	2.18	0.086	10.9	0.43	138100								
		19	2.59	0.094	11.9	0.47	167800								
		36	1.71	0.0673	12	0.471	167800								

This chart details the different conductors commonly used in the industry. For each size, either AWG or metric, various stranding options are listed. Typically the higher stranding is used in applications requiring greater conductor flexibility.

AWG to Metric Wire Crosses	
AWG	Metric (mm ²)
26 – 22	0.1 – 0.5
22 – 18	0.5 – 1.0
16 – 14	1.5 – 2.5
12 – 10	4.0 – 6.0