

Single-Phase Transformer Wire/Raceway Sizing Chart

480V					240V				
1. Load	2a. Breaker	4a. Wire	5a. Raceway	6. EGC	2b. Protection	3. Load	4b. Wire	5a. Raceway	7. SBJ/SSBJ
3 kVA	15A	14 AWG	1/2	14 AWG	15A	12A/2880VA	14 AWG	1/2	8 AWG
5 kVA	15A	14 AWG	1/2	14 AWG	25A	20A/4800VA	10 AWG	1/2	8 AWG
7.5 kVA	20A	12 AWG	1/2	12 AWG	40A	31A/7500VA	8 AWG	3/4	8 AWG
10 kVA	30A	10 AWG	1/2	10 AWG	50A	40A/9600VA	8 AWG	3/4	8 AWG
15 kVA	40A	8 AWG	3/4	10 AWG	80A	62A/15000 VA	4 AWG	1 1/4	8 AWG
25 kVA	70A	6 AWG	1	8 AWG	125A	100A/24000 VA	1 AWG	1 1/2	6 AWG
37.5 kVA	100A	3 AWG	1 1/4	8 AWG	200A	156A/37500 VA	3/0 AWG	2	4 AWG
50 kVA	150A	1/0 AWG	2	6 AWG	250A	200A/48000 VA	250 kcmil	2 1/2	2 AWG
75 kVA	200A	3/0 AWG	2	6 AWG	400A	312A/75000 VA	600 kcmil	3 1/2	1/0 AWG

Three-Phase Transformer Wire/Raceway Sizing Chart

480V					208V				
1. Load	2a. Breaker	4a. Wire	5a. Raceway	6. EGC	2b. Protection	3. Load	4b. Wire	5a. Raceway	7. SBJ/SSBJ
6 kVA/7.2A	15A	14 AWG	1/2	14 AWG	20A	16A/5760 VA	12 AWG	1/2	8 AWG
9 kVA/10.8A	15A	14 AWG	1/2	14 AWG	30A	24A/8640 VA	10 AWG	3/4	8 AWG
15 kVA/18A	30A	10 AWG	3/4	10 AWG	50A	40A/14400 VA	6 AWG	1	8 AWG
15 kVA/18A	30A	10 AWG	3/4	10 AWG	60A	42A/15000 VA	6 AWG	1	8 AWG
30 kVA/36A	50A	6 AWG	1	10 AWG	100A	80A/28800 VA	1 AWG	2	6 AWG
45 kVA/54A	70A	4 AWG	1 1/4	8 AWG	150A	120A/43200 VA	1/0 AWG	2	6 AWG
45 kVA/54A	70A	4 AWG	1 1/4	8 AWG	175A	125A/45000 VA	2/0 AWG	2	4 AWG
75 kVA/90A	125A	2 AWG	2	6 AWG	225A	180A/64800 VA	4/0 AWG	3	2 AWG
75 kVA/90A	125A	2 AWG	2	6 AWG	250A	200A/72000 VA	250 kcmil	3	2 AWG
75 kVA/90A	125A	2 AWG	2	6 AWG	300A	208A/74880 VA	350 kcmil	3	2 AWG
112.5 kVA/135A	175A	2/0 AWG	2 1/2	6 AWG	400A	312A/112,500 VA	2 sets of 3/0 AWG	2 1/2	2 AWG
112.5 kVA/135A	175A	2/0 AWG	2 1/2	6 AWG	400A	312A/112,500 VA	600 kcmil	4	1/0 AWG

Notes

1	Transformer is sized to 100% of secondary kVA continuous load.
2a	Primary protection to not greater than 125% of primary current rating [215.3(A)] in accordance with Table 450.3(B)(1)] and 240.4.
2b	Secondary panelboard protection sized to not be less than 125% of the secondary current rating [215.3(A) and 408.36].
3	Maximum continuous load [not more than 49% of the total load is nonlinear].
4a	Primary copper conductors not less than 125% of the primary current rating [110.14(C)(1)(a)(2) and 215.2(A)(1)(a)] per Table 310.15(B)(16).
4b	Secondary copper conductors sized to not less than the secondary protection device rating [240.21(C)] 75°C terminals [110.14(C)(1)(a)(2)] per Table 310.15(B)(16).
5a	Raceway sized to accommodate four full-size conductors at no more than 35% fill, so that the conductors can be easily pulled.
5b	Raceway sized to accommodate five full-size conductors at no more than 35% fill, so that the conductors can be easily pulled.
6	Equipment grounding conductor sized in accordance with 250.122.
7	System bonding jumper and supply side-bonding jumper sized to Table 250.102(C) [250.30(A)].

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