

Technical Data - Cable

VFD Cable Selection Guide

■ VFD Motor Properties Selection Chart for VFD Cables per NEC

Small motor properties AWG size selection chart for VFD cables: VFD XLPE TR, VFD Combo XLPE, VFD Symmetrical XLPE, and VFD XLPE Auto

Drive HP	230 V 3Ø AWG	460 V 3Ø AWG	575 V 3Ø AWG	Drive HP	230 V 3Ø AWG	460 V 3Ø AWG	575 V 3Ø AWG
1/4 - 3	14	16	18	60	2/0	3	4
5	14	14	16	75	3/0	2	3
7 1/2	12	14	14	100	300 MCM	1/0	2
10	10	14	14	125	500 MCM	2/0	1/0
15	8	12	14	150	-	3/0	2/0
20	6	10	12	200	-	300 MCM	4/0
25	4	8	10	250	-	400 MCM	300 MCM
30	3	8	10	300	-	-	400 MCM
40	2	6	8	350	-	-	500 MCM
50	1/0	4	6	400 - 500	-	-	-

Note: The above table references the suggested wire AWG to use based on Horse Power (HP) and the Full Load Current (FLC) times 125% per NEC Art. 430-22 (G) (1) and (2) for small motors. For special motor types NEC Art. 430-22 (A) - (G) may give additional restrictions for conductor sizes. Amperes (FLC) were determined from NEC Art. 430-250.

Drive HP	230 V 1pr AWG	460 V 1pr AWG	575 V 1pr AWG	Drive HP	230 V 2pr AWG	460 V 2pr AWG	575 V 2pr AWG
1/4 - 3	14	16*	16*	1/4 - 3	14	14	16*
5	14	14	14	5	12	14	14
7 1/2	10	14	14	7 1/2	10	14	14
10	8	14	14	10	8	12	14
15	6	10	12	15	4	10	10
20	-	8	10	20	-	8	10
25	-	8	8	25	-	6	8
30	-	6	8	30	-	6	6
40	-	-	6	40	-	-	6
50	-	-	-	50	-	-	-

* If the circuit is protected according NEC 43022 (G) (1) (1) or (G) (1) (2). Otherwise AWG 14.

General Conversion Table

■ Length		
from	to	formula
inch(in)	millimeter(mm)	in x 25.4 = mm
millimeter(mm)	inch(in)	mm x 0.03937 = in
foot(ft)	meter(m)	ft x 0.3048 = m
meter(m)	foot(ft)	m x 3.281 = ft
mile(mi)	kilometer(km)	mi x 1.609 = km
kilometer(km)	mile(mi)	km x 0.621 = mi

■ Temperature		
from	to	formula
Fahrenheit(F)	Celsius(C)	(F-32) x 0.56 = C
Celsius(C)	Fahrenheit(F)	C x 1.8 + 32 = F

■ Weights		
from	to	formula
pound(lb)	kilogram(kg)	lb x 0.454 = kg
kilogram(kg)	pound (lb)	kg : 2.205 = lb
kg/km	lbs/mft	kg/km x 0.6719
lbs/mft	kg/km	lbs/mft x 1.488