

YASKAWA

Z1000 DRIVE

MULTIPLE RATINGS SUPPLEMENT

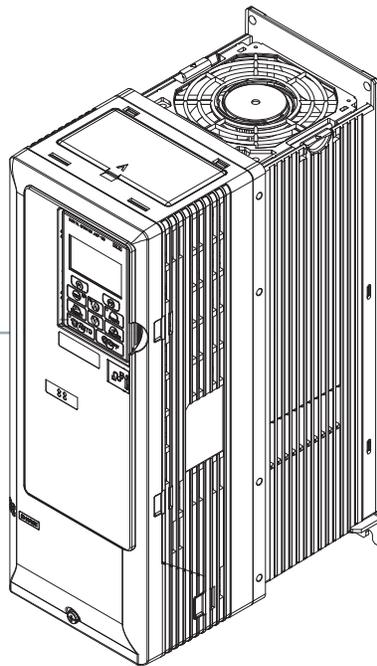
HVAC FAN & PUMP DRIVE

AFFECTED DOCUMENTS:

- Z1000 Safety Precautions (TOEPYAIZ1U01)
- Z1000 Programming Manual (SIEPC71061645)
- Z1000 User Manual (TOEPC71061645)
- Z1000 Quick Start Guide (TOEPC71061654)

PDF

[yaskawa.com/TOEPYAISUP29](https://www.yaskawa.com/TOEPYAISUP29)



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DOCUMENT NUMBER: TOEPYAISUP29

1 Supplemental Information - Applicable Documents

The contents of this supplement apply to the product instructions in [Table 1.1](#).

Table 1.1 Affected Documents

Drive Series	Document
Z1000	Safety Precautions (TOEPYAIZ1U01)
	User Manual (TOEPC71061645)
	Programming Manual (SIEPC71061645)
	Quick Start Guide (TOEPC71061654)

2 Multiple Ratings for Z1000 AC Drives

This document details the various ratings available for Z1000 drives and outlines the correct sizing of branch circuit protection along with input and output conductors for Z1000 installations.

Per the National Electric Code (NEC), input conductors must be rated at 125% of the drive maximum input current, and output conductors must be rated at 125% of the motor Full Load Amps (FLA). In the tables below, the drive output current rating was used instead of the motor FLA.

This reduced rating sizing approach is ideal in certain applications, such as emergency drive replacements that use a larger drive, drive systems with multiple motors, or where the drive is significantly oversized for the connected motor.

In these applications, power distribution components are often unnecessarily oversized to maintain NEC compliance. To mitigate this issue, UL permits multiple ratings for a single drive, providing a more efficient approach to conductor and branch circuit protection component sizing.

◆ Multiple Ratings

Calculate the total FLA for all motors connected to the drive by summing their individual FLA values. The value set for *E2-01* becomes the reference value for motor protection and the torque limit. Enter the motor rated current as written on the motor nameplate. Auto-Tuning automatically sets *E2-01* to the value input for "Motor Rated Current".

Once you have the total FLA, refer to [Table 2.1](#) to [Table 2.22](#) depending on the desired drive rating, and use the calculated current value to determine the appropriate allowable input current rating for the drive. This ensures proper conductor sizing while optimizing system efficiency. The following tables and examples are provided for guidance only. You must comply with NEC and local codes when you select conductors and branch circuit protection for your application.

Fuse and MCCB recommendations are provided in the tables below. You cannot reduce semiconductor fuses. Class CC, J, or T fuses (sized at 175% of drive output FLA rating) and MCCBs (sized at 200% of drive output FLA rating) can use the reduced ratings, and you must follow NEC and local codes.

■ Three-Phase 240 V

Table 2.1 100% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	10.6	10.6	17.5	17.5	FWH-40B	20	20	14	14	14	14
0017	16.7	16.7	25.0	25.0	FWH-50B	30	30	10	10	10	10
0024	24.2	24.2	40.0	40.0	FWH-80B	40	40	8	8	8	8
0031	30.8	30.8	50.0	50.0	FWH-100B	60	60	8	8	8	8
0046	46.2	46.2	80.0	80.0	FWH-150B	90	90	6	6	6	6
0059	59.4	59.4	100.0	100.0	FWH-175B	110	110	4	4	4	4

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0075	74.8	74.8	125.0	125.0	FWH-225A	150	150	3	3	3	3
0088	88.0	88.0	150.0	150.0	FWH-225A	175	175	2	2	2	2
0114	114.0	114.0	175.0	175.0	FWH-250A	225	225	1/0	1/0	1/0	1/0
0143	143.0	143.0	250.0	250.0	FWH-275A	250	250	3 × 2P	3/0 or 3 × 2P ^{*1}	3 × 2P	3/0 or 3 × 2P ^{*1}
0169	169.0	169.0	275.0	275.0	FWH-350A	300	300	2 × 2P	4/0 or 2 × 2P ^{*1}	2 × 2P	4/0 or 2 × 2P ^{*1}
0211	211.0	211.0	350.0	350.0	FWH-400A	400	400	1/0 × 2P	1/0 × 2P	1/0 × 2P	1/0 × 2P
0273	273.0	273.0	450.0	450.0	FWH-450A	500	500	2/0 × 2P	2/0 × 2P	2/0 × 2P	2/0 × 2P
0343	343.0	343.0	600.0	600.0	FWH-600A	600	600	4/0 × 2P	4/0 × 2P	4/0 × 2P	4/0 × 2P
0396	396.0	396.0	Consult Factory	Consult Factory	FWH-600A	700	700	250 × 2P	250 × 2P	250 × 2P	250 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.2 95% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	10.1	10.1	-	17.5	-	-	20	-	14	-	14
0017	15.9	16.4	-	25.0	-	-	30	-	10	-	10
0024	23.0	23.8	-	40.0	-	-	40	-	8	-	10
0031	29.3	30.0	-	50.0	-	-	60	-	8	-	8
0046	43.9	44.1	-	70.0	-	-	80	-	6	-	6
0059	56.4	58.3	-	100.0	-	-	110	-	4	-	4
0075	71.1	71.4	-	110.0	-	-	125	-	3	-	3
0088	83.6	84.4	-	125.0	-	-	150	-	2	-	2
0114	108.3	114.0	-	175.0	-	-	225	-	1/0	-	1/0
0143	135.9	139.7	-	225.0	-	-	250	-	3/0 or 3 × 2P ^{*1}	-	3/0 or 3 × 2P ^{*1}
0169	160.6	169.1	-	250.0	-	-	300	-	4/0 or 2 × 2P ^{*1}	-	4/0 or 2 × 2P ^{*1}
0211	200.5	205.6	-	350.0	-	-	400	-	1/0 × 2P	-	1/0 × 2P
0273	259.4	262.0	-	450.0	-	-	500	-	2/0 × 2P	-	2/0 × 2P
0343	325.9	332.8	-	500.0	-	-	600	-	4/0 × 2P	-	4/0 × 2P
0396	376.2	381.4	-	Consult Factory	-	-	700	-	250 × 2P	-	250 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

2 Multiple Ratings for Z1000 AC Drives

Table 2.3 90% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	9.5	9.6	-	15.0	-	-	15	-	14	-	14
0017	15.0	15.6	-	25.0	-	-	30	-	10	-	12
0024	21.8	22.7	-	35.0	-	-	40	-	10	-	10
0031	27.7	28.5	-	45.0	-	-	50	-	8	-	8
0046	41.6	41.6	-	70.0	-	-	80	-	6	-	6
0059	53.5	55.3	-	90.0	-	-	110	-	4	-	4
0075	67.3	67.7	-	110.0	-	-	125	-	4	-	4
0088	79.2	80.1	-	125.0	-	-	150	-	2	-	3
0114	102.6	108.1	-	175.0	-	-	200	-	1/0	-	1
0143	128.7	132.6	-	225.0	-	-	250	-	2/0	-	2/0
0169	152.1	160.4	-	250.0	-	-	300	-	4/0 or 2 × 2P ^{*1}	-	3/0 or 3 × 2P ^{*1}
0211	189.9	195.1	-	300.0	-	-	350	-	1/0 × 2P	-	1/0 × 2P
0273	245.7	248.5	-	400.0	-	-	450	-	2/0 × 2P	-	1/0 × 2P
0343	308.7	315.7	-	500.0	-	-	600	-	4/0 × 2P	-	4/0 × 2P
0396	356.4	361.7	-	Consult Factory	-	-	700	-	4/0 × 2P	-	4/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.4 85% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	9.0	9.1	-	15	-	-	15	-	14	-	14
0017	14.2	14.8	-	25	-	-	25	-	12	-	12
0024	20.6	21.5	-	35	-	-	40	-	10	-	10
0031	26.2	27.0	-	45	-	-	50	-	8	-	8
0046	39.3	39.4	-	60	-	-	75	-	8	-	8
0059	50.5	52.4	-	90	-	-	100	-	4	-	6
0075	63.6	64.1	-	110	-	-	125	-	4	-	4
0088	74.8	75.8	-	125	-	-	150	-	3	-	3
0114	96.9	102.3	-	175	-	-	200	-	1/0	-	1
0143	121.6	125.4	-	200	-	-	250	-	2/0	-	2/0
0169	143.7	151.7	-	250	-	-	300	-	3/0 or 3 × 2P ^{*1}	-	3/0 or 3 × 2P ^{*1}
0211	179.4	184.5	-	300	-	-	350	-	1/0 × 2P	-	4/0 or 2 × 2P ^{*1}
0273	232.1	235.0	-	400	-	-	450	-	1/0 × 2P	-	1/0 × 2P
0343	291.6	298.5	-	500	-	-	500	-	3/0 × 2P	-	3/0 × 2P
0396	336.6	342.0	-	Consult Factory	-	-	600	-	4/0 × 2P	-	4/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.5 80% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	8.5	8.6	-	15	-	-	15	-	14	-	14
0017	13.4	14.0	-	20	-	-	25	-	12	-	12
0024	19.4	20.3	-	35	-	-	40	-	10	-	10
0031	24.6	25.5	-	40	-	-	50	-	8	-	8
0046	37.0	37.2	-	60	-	-	60	-	8	-	8
0059	47.5	49.4	-	80	-	-	90	-	6	-	6
0075	59.8	60.5	-	100	-	-	110	-	4	-	4
0088	70.4	71.5	-	125	-	-	125	-	3	-	3
0114	91.2	96.5	-	150	-	-	175	-	1	-	1
0143	114.4	118.2	-	200	-	-	225	-	2/0	-	1/0
0169	135.2	143.0	-	250	-	-	250	-	3/0 or 3 × 2P *	-	3/0 or 3 × 2P *
0211	168.8	173.9	-	300	-	-	300	-	4/0 or 2 × 2P *	-	4/0 or 2 × 2P *
0273	218.4	221.5	-	350	-	-	400	-	1/0 × 2P	-	1/0 × 2P
0343	274.4	281.3	-	450	-	-	500	-	3/0 × 2P	-	3/0 × 2P
0396	316.8	322.2	-	Consult Factory	-	-	600	-	4/0 × 2P	-	4/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.6 75% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	8.0	8.1	-	12	-	-	15	-	14	-	14
0017	12.5	13.1	-	20	-	-	25	-	12	-	12
0024	18.2	19.1	-	30	-	-	35	-	10	-	10
0031	23.1	24.0	-	40	-	-	45	-	8	-	8
0046	34.7	35.0	-	60	-	-	60	-	8	-	8
0059	44.6	46.5	-	80	-	-	90	-	6	-	6
0075	56.1	56.8	-	90	-	-	110	-	4	-	4
0088	66.0	67.2	-	110	-	-	125	-	4	-	4
0114	85.5	90.6	-	150	-	-	175	-	1	-	2
0143	107.3	111.1	-	175	-	-	200	-	1/0	-	1/0
0169	126.8	134.3	-	225	-	-	250	-	2/0	-	2/0
0211	158.3	163.3	-	250	-	-	300	-	4/0 or 2 × 2P *	-	4/0 or 2 × 2P *
0273	204.8	208.0	-	350	-	-	400	-	1/0 × 2P	-	1/0 × 2P

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Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0343	257.3	264.1	-	450	-	-	500	-	2/0 × 2P	-	2/0 × 2P
0396	297.0	302.5	-	Consult Factory	-	-	600	-	3/0 × 2P	-	3/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.7 70% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	7.4	7.6	-	12	-	-	15	-	14	-	14
0017	11.7	12.3	-	20	-	-	20	-	12	-	12
0024	16.9	17.9	-	30	-	-	35	-	10	-	10
0031	21.6	22.5	-	35	-	-	40	-	10	-	10
0046	32.3	32.7	-	50	-	-	60	-	8	-	8
0059	41.6	43.5	-	70	-	-	80	-	6	-	6
0075	52.4	53.2	-	90	-	-	100	-	4	-	4
0088	61.6	62.8	-	100	-	-	125	-	4	-	4
0114	79.8	84.8	-	125	-	-	150	-	2	-	3
0143	100.1	103.9	-	175	-	-	200	-	1/0	-	1
0169	118.3	125.6	-	200	-	-	250	-	2/0	-	2/0
0211	147.7	152.7	-	250	-	-	300	-	3/0 or 3 × 2P *1	-	3/0 or 3 × 2P *1
0273	191.1	194.4	-	300	-	-	350	-	1/0 × 2P	-	1/0 × 2P
0343	240.1	246.8	-	400	-	-	450	-	2/0 × 2P	-	1/0 × 2P
0396	277.2	282.7	-	Consult Factory	-	-	500	-	3/0 × 2P	-	3/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.8 65% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing *1			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	6.9	7.1	-	12	-	-	10	-	14	-	14
0017	10.9	11.5	-	20	-	-	20	-	14	-	14
0024	15.7	16.7	-	25	-	-	30	-	10	-	10
0031	20.0	20.9	-	35	-	-	40	-	10	-	10
0046	30.0	30.1	-	50	-	-	60	-	8	-	8
0059	38.6	40.5	-	70	-	-	80	-	6	-	8
0075	48.6	49.5	-	80	-	-	90	-	6	-	6
0088	57.2	58.5	-	100	-	-	110	-	4	-	4

Drive Model			Protection					Cable Sizing ^{*/}			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0114	74.1	78.9	-	125	-	-	150	-	2	-	3
0143	93.0	96.7	-	150	-	-	175	-	1	-	1
0169	109.9	116.9	-	200	-	-	225	-	2/0	-	1/0
0211	137.2	142.1	-	225	-	-	250	-	3/0 or 3 × 2P ^{*/}	-	3/0 or 3 × 2P ^{*/}
0273	177.5	180.9	-	300	-	-	350	-	1/0 × 2P	-	4/0 or 2 × 2P ^{*/}
0343	223.0	229.6	-	400	-	-	450	-	1/0 × 2P	-	1/0 × 2P
0396	257.4	262.9	-	Consult Factory	-	-	500	-	2/0 × 2P	-	2/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.9 60% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing ^{*/}			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	6.4	6.6	-	10	-	-	10	-	14	-	14
0017	10.0	10.7	-	17.5	-	-	20	-	14	-	14
0024	14.5	15.5	-	25	-	-	30	-	10	-	12
0031	18.5	19.4	-	30	-	-	35	-	10	-	10
0046	27.7	27.9	-	45	-	-	50	-	8	-	8
0059	35.6	37.5	-	60	-	-	75	-	8	-	8
0075	44.9	45.9	-	80	-	-	90	-	6	-	6
0088	52.8	54.2	-	90	-	-	100	-	4	-	4
0114	68.4	73.0	-	125	-	-	125	-	3	-	3
0143	85.8	89.5	-	150	-	-	175	-	1	-	2
0169	101.4	108.1	-	175	-	-	200	-	1/0	-	1
0211	126.6	131.4	-	225	-	-	250	-	2/0	-	2/0
0273	163.8	167.3	-	250	-	-	300	-	4/0 or 2 × 2P ^{*/}	-	4/0 or 2 × 2P ^{*/}
0343	205.8	212.3	-	350	-	-	400	-	1/0 × 2P	-	1/0 × 2P
0396	237.6	243.1	-	Consult Factory	-	-	450	-	1/0 × 2P	-	1/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.10 55% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	5.8	6.1	-	10	-	-	10	-	14	-	14
0017	9.2	9.9	-	15	-	-	15	-	14	-	14
0024	13.3	14.3	-	20	-	-	25	-	12	-	12

2 Multiple Ratings for Z1000 AC Drives

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0031	16.9	17.9	-	30	-	-	35	-	10	-	10
0046	25.4	25.7	-	40	-	-	50	-	8	-	8
0059	32.7	34.5	-	60	-	-	60	-	8	-	8
0075	41.1	42.2	-	70	-	-	80	-	6	-	6
0088	48.4	49.8	-	80	-	-	90	-	6	-	6
0114	62.7	67.2	-	110	-	-	125	-	4	-	4
0143	78.7	82.2	-	125	-	-	150	-	2	-	3
0169	93.0	99.4	-	150	-	-	175	-	1	-	1
0211	116.1	120.8	-	200	-	-	225	-	2/0	-	2/0
0273	150.2	153.7	-	250	-	-	300	-	3/0 or 3 × 2P *1	-	3/0 or 3 × 2P *1
0343	188.7	195.1	-	300	-	-	350	-	1/0 × 2P	-	1/0 × 2P
0396	217.8	223.3	-	Consult Factory	-	-	400	-	1/0 × 2P	-	1/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.11 50% Ratings for Z1000 AC Drives (Three-Phase 240 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	5.3	5.6	-	9	-	-	10	-	14	-	14
0017	8.4	9.0	-	15	-	-	15	-	14	-	14
0024	12.1	13.0	-	20	-	-	25	-	12	-	12
0031	15.4	16.3	-	25	-	-	30	-	10	-	10
0046	23.1	23.5	-	40	-	-	45	-	10	-	8
0059	29.7	31.5	-	50	-	-	60	-	8	-	8
0075	37.4	38.5	-	60	-	-	75	-	8	-	8
0088	44.0	45.5	-	70	-	-	90	-	6	-	6
0114	57.0	61.3	-	100	-	-	110	-	4	-	4
0143	71.5	75.0	-	125	-	-	125	-	3	-	3
0169	84.5	90.6	-	150	-	-	175	-	1	-	2
0211	105.5	110.1	-	175	-	-	200	-	1/0	-	1/0
0273	136.5	140.1	-	225	-	-	250	-	3/0 or 3 × 2P *1	-	3/0 or 3 × 2P *1
0343	171.5	177.7	-	300	-	-	350	-	4/0 or 2 × 2P *1	-	4/0 or 2 × 2P *1
0396	198.0	203.5	-	Consult Factory	-	-	400	-	1/0 × 2P	-	1/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

■ Three-Phase 480 V

Table 2.12 100% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	4.8	4.8	8.0	8.0	FWH-40B	15	15	14	14	14	14
0008	7.6	7.6	12.0	12.0	FWH-40B	15	15	14	14	14	14
0011	11.0	11.0	17.5	17.5	FWH-45B	20	20	14	14	14	14
0014	14.0	14.0	20.0	20.0	FWH-45B	25	25	12	12	12	12
0021	21.0	21.0	35.0	35.0	FWH-60B	40	40	10	10	10	10
0027	27.0	27.0	45.0	45.0	FWH-80B	50	50	8	8	8	8
0034	34.0	34.0	50.0	50.0	FWH-125B	60	60	8	8	8	8
0040	40.0	40.0	70.0	70.0	FWH-150B	75	75	8	8	8	8
0052	52.0	52.0	90.0	90.0	FWH-200B	100	100	6	6	6	6
0065	65.0	65.0	110.0	110.0	FWH-225A	125	125	4	4	4	4
0077	77.0	77.0	125.0	125.0	FWH-225A	150	150	3	3	3	3
0096	96.0	96.0	150.0	150.0	FWH-225A	175	175	1	1	1	1
0124	124.0	124.0	200.0	200.0	FWH-250A	225	225	2/0	2/0	2/0	2/0
0156	156.0	156.0	250.0	250.0	FWH-300A	300	300	3 × 2P	3/0 or 3 × 2P ^{*1}	3 × 2P	3/0 or 3 × 2P ^{*1}
0180	180.0	180.0	300.0	300.0	FWH-350A	350	350	2 × 2P	4/0 or 2 × 2P ^{*1}	2 × 2P	4/0 or 2 × 2P ^{*1}
0240	240.0	240.0	400.0	400.0	FWH-400A	450	450	1/0 × 2P	1/0 × 2P	1/0 × 2P	1/0 × 2P
0302	302.0	302.0	500.0	500.0	FWH-600A	600	600	3/0 × 2P	3/0 × 2P	3/0 × 2P	3/0 × 2P
0361	361.0	361.0	600.0	600.0	FWH-700A	600	600	4/0 × 2P	4/0 × 2P	4/0 × 2P	4/0 × 2P
0414	414.0	414.0	700.0	700.0	FWH-700A	800	800	300 × 2P	300 × 2P	300 × 2P	300 × 2P
0480	480.0	480.0	Consult Factory	Consult Factory	FWH-700A	900	900	1/0 × 4P	1/0 × 4P	1/0 × 4P	1/0 × 4P
0590	590.0	590.0	Consult Factory	Consult Factory	FWH-1000A	1100	1100	3/0 × 4P	3/0 × 4P	3/0 × 4P	3/0 × 4P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.13 95% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	4.6	4.6	-	7.0	-	-	10	-	14	-	14
0008	7.2	7.4	-	12.0	-	-	10	-	14	-	14
0011	10.5	10.8	-	17.5	-	-	20	-	14	-	14
0014	13.3	13.6	-	20.0	-	-	25	-	12	-	12
0021	20.0	20.0	-	30.0	-	-	35	-	10	-	10
0027	25.7	26.4	-	45.0	-	-	50	-	8	-	8
0034	32.3	32.5	-	50.0	-	-	60	-	8	-	8
0040	38.0	38.2	-	60.0	-	-	75	-	8	-	8

2 Multiple Ratings for Z1000 AC Drives

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0052	49.4	51.5	-	90.0	-	-	100	-	6	-	6
0065	61.8	63.2	-	110.0	-	-	125	-	4	-	4
0077	73.2	76.4	-	125.0	-	-	150	-	3	-	3
0096	91.2	93.0	-	150.0	-	-	175	-	1	-	1
0124	117.8	118.5	-	200.0	-	-	225	-	2/0	-	2/0
0156	148.2	150.5	-	250.0	-	-	300	-	3/0 or 3 × 2P *1	-	3/0 or 3 × 2P *1
0180	171.0	172.4	-	300.0	-	-	300	-	4/0 or 2 × 2P *1	-	4/0 or 2 × 2P *1
0240	228.0	233.8	-	400.0	-	-	450	-	1/0 × 2P	-	1/0 × 2P
0302	286.9	287.4	-	500.0	-	-	500	-	3/0 × 2P	-	3/0 × 2P
0361	343.9	343.1	-	600.0	-	-	600	-	4/0 × 2P	-	4/0 × 2P
0414	393.3	401.8	-	700.0	-	-	800	-	250 × 2P	-	250 × 2P
0480	456.0	462.7	-	Consult Factory	-	-	900	-	1/0 × 4P	-	1/0 × 4P
0590	560.5	569.1	-	Consult Factory	-	-	1100	-	3/0 × 4P	-	3/0 × 4P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.14 90% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	4.3	4.3	-	7.0	-	-	10	-	14	-	14
0008	6.8	7.1	-	12.0	-	-	10	-	14	-	14
0011	9.9	10.2	-	17.5	-	-	20	-	14	-	14
0014	12.6	12.9	-	20.0	-	-	25	-	12	-	12
0021	18.9	18.9	-	30.0	-	-	35	-	10	-	10
0027	24.3	25.0	-	40.0	-	-	50	-	8	-	8
0034	30.6	30.6	-	50.0	-	-	60	-	8	-	8
0040	36.0	36.2	-	60.0	-	-	60	-	8	-	8
0052	46.8	48.9	-	80.0	-	-	90	-	6	-	6
0065	58.5	59.9	-	100.0	-	-	110	-	4	-	4
0077	69.3	72.5	-	125.0	-	-	125	-	3	-	3
0096	86.4	88.2	-	150.0	-	-	175	-	2	-	2
0124	111.6	112.4	-	175.0	-	-	200	-	1/0	-	1/0
0156	140.4	142.7	-	225.0	-	-	250	-	3/0 or 3 × 2P *1	-	3/0 or 3 × 2P *1
0180	162.0	163.5	-	250.0	-	-	300	-	4/0 or 2 × 2P *1	-	4/0 or 2 × 2P *1
0240	216.0	221.7	-	350.0	-	-	400	-	1/0 × 2P	-	1/0 × 2P
0302	271.8	272.5	-	450.0	-	-	500	-	2/0 × 2P	-	2/0 × 2P
0361	325.8	325.1	-	500.0	-	-	600	-	4/0 × 2P	-	4/0 × 2P

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0414	372.6	381.0	-	600.0	-	-	700	-	250 × 2P	-	250 × 2P
0480	432.0	438.7	-	Consult Factory	-	-	800	-	300 × 2P	-	300 × 2P
0590	531.0	539.5	-	Consult Factory	-	-	1000	-	2/0 × 4P	-	3/0 × 4P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.15 85% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	4.1	4.1	-	7	-	-	10	-	14	-	14
0008	6.5	6.7	-	10	-	-	10	-	14	-	14
0011	9.4	9.7	-	15	-	-	15	-	14	-	14
0014	11.9	12.2	-	20	-	-	20	-	12	-	12
0021	17.9	17.9	-	30	-	-	35	-	10	-	10
0027	23.0	23.7	-	40	-	-	45	-	8	-	10
0034	28.9	29.0	-	50	-	-	50	-	8	-	8
0040	34.0	34.3	-	50	-	-	60	-	8	-	8
0052	44.2	46.3	-	80	-	-	90	-	6	-	6
0065	55.3	56.7	-	90	-	-	110	-	4	-	4
0077	65.5	68.6	-	110	-	-	125	-	3	-	4
0096	81.6	83.4	-	125	-	-	150	-	2	-	2
0124	105.4	106.3	-	175	-	-	200	-	1/0	-	1/0
0156	132.6	135.0	-	225	-	-	250	-	3/0 or 3 × 2P *1	-	2/0
0180	153.0	154.6	-	250	-	-	300	-	3/0 or 3 × 2P *1	-	3/0 or 3 × 2P *1
0240	204.0	209.6	-	350	-	-	400	-	1/0 × 2P	-	1/0 × 2P
0302	256.7	257.6	-	450	-	-	500	-	2/0 × 2P	-	2/0 × 2P
0361	307.7	307.3	-	500	-	-	600	-	4/0 × 2P	-	4/0 × 2P
0414	351.9	360.1	-	600	-	-	700	-	4/0 × 2P	-	4/0 × 2P
0480	408.0	414.6	-	Consult Factory	-	-	800	-	300 × 2P	-	300 × 2P
0590	501.5	509.9	-	Consult Factory	-	-	1000	-	2/0 × 4P	-	2/0 × 4P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

2 Multiple Ratings for Z1000 AC Drives

Table 2.16 80% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	3.8	3.9	-	6	-	-	10	-	14	-	14
0008	6.1	6.3	-	10	-	-	10	-	14	-	14
0011	8.8	9.2	-	15	-	-	15	-	14	-	14
0014	11.2	11.5	-	20	-	-	20	-	14	-	14
0021	16.8	16.8	-	25	-	-	30	-	10	-	10
0027	21.6	22.3	-	35	-	-	40	-	10	-	10
0034	27.2	27.3	-	45	-	-	50	-	8	-	8
0040	32.0	32.3	-	50	-	-	60	-	8	-	8
0052	41.6	43.6	-	70	-	-	80	-	6	-	6
0065	52.0	53.5	-	90	-	-	100	-	4	-	6
0077	61.6	64.7	-	110	-	-	125	-	4	-	4
0096	76.8	78.6	-	125	-	-	150	-	2	-	3
0124	99.2	100.2	-	175	-	-	200	-	1/0	-	1
0156	124.8	127.2	-	200	-	-	250	-	2/0	-	2/0
0180	144.0	145.7	-	250	-	-	250	-	3/0 or 3 × 2P *1	-	3/0 or 3 × 2P *1
0240	192.0	197.5	-	300	-	-	350	-	1/0 × 2P	-	1/0 × 2P
0302	241.6	242.7	-	400	-	-	450	-	1/0 × 2P	-	1/0 × 2P
0361	289.6	289.5	-	500	-	-	500	-	3/0 × 2P	-	3/0 × 2P
0414	331.2	339.2	-	500	-	-	600	-	4/0 × 2P	-	4/0 × 2P
0480	384.0	390.6	-	Consult Factory	-	-	700	-	250 × 2P	-	250 × 2P
0590	472.0	480.3	-	Consult Factory	-	-	900	-	2/0 × 4P	-	1/0 × 4P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.17 75% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	3.6	3.7	-	6	-	-	10	-	14	-	14
0008	5.7	5.9	-	10	-	-	10	-	14	-	14
0011	8.3	8.6	-	15	-	-	15	-	14	-	14
0014	10.5	10.8	-	17.5	-	-	20	-	14	-	14
0021	15.8	15.8	-	25	-	-	30	-	10	-	10
0027	20.3	21.0	-	35	-	-	40	-	10	-	10
0034	25.5	25.7	-	40	-	-	50	-	8	-	8
0040	30.0	30.4	-	50	-	-	60	-	8	-	8
0052	39.0	41.0	-	70	-	-	80	-	6	-	8
0065	48.8	50.2	-	80	-	-	100	-	6	-	6

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0077	57.8	60.7	-	100	-	-	110	-	4	-	4
0096	72.0	73.8	-	125	-	-	125	-	3	-	3
0124	93.0	94.0	-	150	-	-	175	-	1	-	1
0156	117.0	119.4	-	200	-	-	225	-	2/0	-	2/0
0180	135.0	136.8	-	225	-	-	250	-	3/0 or 3 × 2P *	-	3/0 or 3 × 2P *
0240	180.0	185.4	-	300	-	-	350	-	1/0 × 2P	-	4/0 or 2 × 2P *
0302	226.5	227.8	-	350	-	-	450	-	1/0 × 2P	-	1/0 × 2P
0361	271.5	271.7	-	450	-	-	500	-	2/0 × 2P	-	2/0 × 2P
0414	310.5	318.3	-	500	-	-	600	-	4/0 × 2P	-	4/0 × 2P
0480	360.0	366.5	-	Consult Factory	-	-	700	-	250 × 2P	-	4/0 × 2P
0590	442.5	450.7	-	Consult Factory	-	-	900	-	1/0 × 4P	-	1/0 × 4P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.18 70% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	3.4	3.4	-	6	-	-	10	-	14	-	14
0008	5.3	5.6	-	9	-	-	10	-	14	-	14
0011	7.7	8.1	-	12	-	-	15	-	14	-	14
0014	9.8	10.2	-	17.5	-	-	20	-	14	-	14
0021	14.7	14.8	-	25	-	-	25	-	12	-	12
0027	18.9	19.7	-	30	-	-	35	-	10	-	10
0034	23.8	24.0	-	40	-	-	45	-	8	-	8
0040	28.0	28.4	-	45	-	-	50	-	8	-	8
0052	36.4	38.3	-	60	-	-	75	-	8	-	8
0065	45.5	47.0	-	80	-	-	90	-	6	-	6
0077	53.9	56.8	-	90	-	-	110	-	4	-	4
0096	67.2	69.0	-	110	-	-	125	-	3	-	4
0124	86.8	87.9	-	150	-	-	175	-	2	-	2
0156	109.2	111.6	-	175	-	-	200	-	1/0	-	1/0
0180	126.0	127.8	-	200	-	-	250	-	2/0	-	2/0
0240	168.0	173.2	-	300	-	-	300	-	4/0 or 2 × 2P *	-	4/0 or 2 × 2P *
0302	211.4	212.9	-	350	-	-	400	-	1/0 × 2P	-	1/0 × 2P
0361	253.4	253.9	-	400	-	-	500	-	2/0 × 2P	-	2/0 × 2P
0414	289.8	297.4	-	500	-	-	500	-	3/0 × 2P	-	3/0 × 2P

2 Multiple Ratings for Z1000 AC Drives

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0480	336.0	342.4	-	Consult Factory	-	-	600	-	4/0 × 2P	-	4/0 × 2P
0590	413.0	421.0	-	Consult Factory	-	-	800	-	300 × 2P	-	300 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.19 65% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	3.1	3.2	-	5	-	-	10	-	14	-	14
0008	4.9	5.2	-	9	-	-	10	-	14	-	14
0011	7.2	7.5	-	12	-	-	15	-	14	-	14
0014	9.1	9.5	-	15	-	-	15	-	14	-	14
0021	13.7	13.8	-	20	-	-	25	-	12	-	12
0027	17.6	18.3	-	30	-	-	35	-	10	-	10
0034	22.1	22.4	-	35	-	-	40	-	10	-	10
0040	26.0	26.5	-	45	-	-	50	-	8	-	8
0052	33.8	35.7	-	60	-	-	60	-	8	-	8
0065	42.3	43.7	-	70	-	-	80	-	6	-	6
0077	50.1	52.9	-	90	-	-	100	-	4	-	6
0096	62.4	64.2	-	110	-	-	125	-	4	-	4
0124	80.6	81.8	-	125	-	-	150	-	2	-	2
0156	101.4	103.8	-	175	-	-	200	-	1/0	-	1
0180	117.0	118.9	-	200	-	-	225	-	2/0	-	2/0
0240	156.0	161.1	-	250	-	-	300	-	4/0 or 2 × 2P *1	-	3/0 or 3 × 2P *1
0302	196.3	197.9	-	300	-	-	350	-	1/0 × 2P	-	1/0 × 2P
0361	235.3	236.0	-	400	-	-	450	-	1/0 × 2P	-	1/0 × 2P
0414	269.1	276.5	-	450	-	-	500	-	3/0 × 2P	-	2/0 × 2P
0480	312.0	318.3	-	Consult Factory	-	-	600	-	4/0 × 2P	-	4/0 × 2P
0590	383.5	391.4	-	Consult Factory	-	-	700	-	250 × 2P	-	250 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.20 60% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	2.9	3.0	-	5	-	-	10	-	14	-	14
0008	4.6	4.8	-	8	-	-	10	-	14	-	14

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0011	6.6	7.0	-	12	-	-	10	-	14	-	14
0014	8.4	8.8	-	15	-	-	15	-	14	-	14
0021	12.6	12.6	-	20	-	-	25	-	12	-	12
0027	16.2	17.0	-	25	-	-	30	-	10	-	10
0034	20.4	20.7	-	35	-	-	40	-	10	-	10
0040	24.0	24.5	-	40	-	-	45	-	8	-	8
0052	31.2	33.0	-	50	-	-	60	-	8	-	8
0065	39.0	40.5	-	70	-	-	80	-	6	-	8
0077	46.2	48.9	-	80	-	-	90	-	6	-	6
0096	57.6	59.4	-	100	-	-	110	-	4	-	4
0124	74.4	75.6	-	125	-	-	150	-	3	-	3
0156	93.6	96.0	-	150	-	-	175	-	1	-	1
0180	108.0	109.9	-	175	-	-	200	-	1/0	-	1/0
0240	144.0	148.9	-	250	-	-	250	-	3/0 or 3 × 2P*1	-	3/0 or 3 × 2P*1
0302	181.2	183.0	-	300	-	-	350	-	1/0 × 2P	-	1/0 × 2P
0361	217.2	216.9	-	350	-	-	400	-	1/0 × 2P	-	1/0 × 2P
0414	248.4	255.6	-	400	-	-	500	-	2/0 × 2P	-	1/0 × 2P
0480	288.0	294.2	-	Consult Factory	-	-	500	-	3/0 × 2P	-	3/0 × 2P
0590	354.0	361.7	-	Consult Factory	-	-	700	-	4/0 × 2P	-	4/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.21 55% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	2.6	2.8	-	4.5	-	-	10	-	14	-	14
0008	4.2	4.5	-	7	-	-	10	-	14	-	14
0011	6.1	6.4	-	10	-	-	10	-	14	-	14
0014	7.7	8.1	-	12	-	-	15	-	14	-	14
0021	11.6	11.6	-	20	-	-	20	-	14	-	12
0027	14.9	15.6	-	25	-	-	30	-	10	-	12
0034	18.7	19.1	-	30	-	-	35	-	10	-	10
0040	22.0	22.5	-	35	-	-	45	-	10	-	10
0052	28.6	30.4	-	50	-	-	60	-	8	-	8
0065	35.8	37.2	-	60	-	-	60	-	8	-	8
0077	42.4	44.9	-	70	-	-	80	-	6	-	6
0096	52.8	54.6	-	90	-	-	100	-	4	-	4
0124	68.2	69.5	-	110	-	-	125	-	3	-	3

2 Multiple Ratings for Z1000 AC Drives

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0156	85.8	88.2	-	150	-	-	175	-	2	-	2
0180	99.0	101.0	-	175	-	-	200	-	1/0	-	1
0240	132.0	136.8	-	225	-	-	250	-	3/0 or 3 × 2P ^{*1}	-	2/0
0302	166.1	168.0	-	250	-	-	300	-	4/0 or 2 × 2P ^{*1}	-	4/0 or 2 × 2P ^{*1}
0361	199.1	199.1	-	300	-	-	350	-	1/0 × 2P	-	1/0 × 2P
0414	227.7	234.6	-	400	-	-	450	-	1/0 × 2P	-	1/0 × 2P
0480	264.0	270.1	-	Consult Factory	-	-	500	-	2/0 × 2P	-	2/0 × 2P
0590	324.5	332.0	-	Consult Factory	-	-	600	-	4/0 × 2P	-	4/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Table 2.22 50% Ratings for Z1000 AC Drives (Three-Phase 480 V)

Drive Model			Protection					Cable Sizing			
Drive Model	Drive Rated Output Current [Arms]	Drive Rated Input Current [Arms]	Class CC, J, or T Fuse (Z1000 Manual)	Class CC, J, or T Fuse (Max Allow)	Semiconductor Fuse (Z1000 Manual)	MCCB (Z1000 Manual)	MCCB (Max Allow)	Input Cable (Z1000 Manual) [AWG]	Input Cable @ 125% Rated Current [AWG]	Motor Cable (Z1000 Manual) [AWG]	Motor Cable @ 125% Rated Current [AWG]
0005	2.4	2.5	-	4	-	-	10	-	14	-	14
0008	3.8	4.1	-	7	-	-	10	-	14	-	14
0011	5.5	5.9	-	10	-	-	10	-	14	-	14
0014	7.0	7.4	-	12	-	-	10	-	14	-	14
0021	10.5	10.6	-	17.5	-	-	20	-	14	-	14
0027	13.5	14.3	-	20	-	-	25	-	12	-	12
0034	17.0	17.4	-	30	-	-	30	-	10	-	10
0040	20.0	20.6	-	35	-	-	40	-	10	-	10
0052	26.0	27.7	-	45	-	-	50	-	8	-	8
0065	32.5	33.9	-	50	-	-	60	-	8	-	8
0077	38.5	41.0	-	70	-	-	80	-	6	-	8
0096	48.0	49.8	-	80	-	-	90	-	6	-	6
0124	62.0	63.3	-	110	-	-	125	-	4	-	4
0156	78.0	80.4	-	125	-	-	150	-	2	-	3
0180	90.0	92.0	-	150	-	-	175	-	1	-	1
0240	120.0	124.6	-	200	-	-	225	-	2/0	-	2/0
0302	151.0	153.0	-	250	-	-	300	-	3/0 or 3 × 2P ^{*1}	-	3/0 or 3 × 2P ^{*1}
0361	181.0	181.3	-	300	-	-	350	-	1/0 × 2P	-	1/0 × 2P
0414	207.0	213.7	-	350	-	-	400	-	1/0 × 2P	-	1/0 × 2P
0480	240.0	245.9	-	Consult Factory	-	-	450	-	2/0 × 2P	-	1/0 × 2P
0590	295.0	302.3	-	Consult Factory	-	-	600	-	3/0 × 2P	-	3/0 × 2P

*1 UL508A does not allow parallel conductors smaller than 1/0 AWG.

Revision History

Date of Publication	Revision Number	Revised Content
February 2026	-	First release

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In the event that the end user of this product is to be the military and said product is to be employed in any weapons systems or the manufacture thereof, the export will fall under the relevant regulations as stipulated in the Foreign Exchange and Foreign Trade Regulations. Therefore, be sure to follow all procedures and submit all relevant documentation according to any and all rules, regulations and laws that may apply.

Specifications are subject to change without notice for ongoing product modifications and improvements.

Original Instructions

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TOEPYAISUP29

TOEPYAISUP29
Revision: A <0>-0
February 2026
Published in U.S.A.