MOTORS
Starting Current

USE: To provide maximum allowable motor starting currents.

PREVIOUS REVISION	ORIGINATED	PREVIOUS NUMBER
	03-94	ER 1000-B, 02-28-62

LATEST REVISION:

SPECIFICATION:

The Company will give careful attention to all proposed power installations and give all possible latitude permissible in particular cases consistent with rendering good service. The Company will be glad to give written expression of opinion to any Customer as to the acceptability of his proposed power installation.

Starters shall be used which limit the initial and all successive steps of current to the values of starting current listed in the tables and, they shall limit the time interval between steps to not less than one-half second. Starters shall be designed so that the circuit will not be opened when changing from one step to another of the starting position.

STARTING CURRENT consists of current values indicated by a suitable well-damped ammeter located in the motor circuit on the line side of the starter (if one is used) with the motor connected to its load and the starter in the position necessary to start the motor. The inrush of current at any interval in passing from starting position to full running position shall not exceed the following starting current values.

LOCKED ROTOR CURRENT is that current drawn from the line with the starting device or compensator in the full running position, with the rotor locked and with normal voltage on the motor terminals.

NOTE: If this value is to be secured by test in the field, one-fourth or one-half voltage should be used, because motors will not stand full voltage with the rotor locked long enough to take readings. If one-fourth voltage is used, multiply the current measured by four; if one-half voltage is used, multiply the current measured by two, to obtain correct locked rotor current values.

Current values for motors not listed should be interpolated as follows:

1. Current values and fuse rating vary inversely with the voltage.

2. Current values and fuse ratings vary directly with the horse power.

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Maximum allowable current values in the following tables apply to each individual motor.

Single Phase Motors--115 Volts Maximum Allowable Current Values	
Motor Horse Power	Current in Amperes
	Locked (Note 1) Rotor
1/6 and smaller	20
1/4	23
1/3	31
1/2	45
3/4	61
1	70

NOTE:

1. Locked Rotor Current Values Per ASA, C50.2 Par. 2-8.1, Table 13, Latest Revision.

Single Phase Motors--230 Volts Maximum Allowable Current Values		
Motor Horse Power	Current in Amperes	
	Starting	Locked (Note 1) Rotor
1 and less	27	35
1 - 1/2	30	40
2	38	50
3	52	70
5	75	100
per H.P. above 5	15	20

NOTE:

1. Locked Rotor Current Values Per ASA, C50.2, Par. 2-8.2, Table 14, Latest Revision.

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Three Phase Motors--208 Volts Maximum Allowable Current Values		
Motor Horse Power	Current in Amperes	
	Starting	Locked Rotor
1/2	10	13
3/4	14	19
1	19	25
1 - 1/2	28	37
2	36	48
3	48	63
5	71	95
7 - 1/2	95	127
10	118	158
15	174	232
20	229	307
25	288	385
30	245	460
40	460	612
50	574	766
Per H.P. Above 50	11.6	15.3

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Three Phase Motors--220 Volts Maximum Allowable Current Values		
Motor Horse Power	Current in Amperes	
	Starting	Locked (Note 1) Rotor
1/2	9	12
3/4	14	18
1	18	24
1 - 1/2	26	35
2	34	45
3	45	60
5	67	90
7 - 1/2	90	120
10	112	150
15	165	220
20	217	290
25	273	365
30	327	435
40	435	580
50	543	725
Per H.P. Above 50	11	14.5

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Three Phase Motors--440 Volts Maximum Allowable Current Values		
Motor Horse Power	Current in Amperes	
	Starting	Locked Rotor
3	23	30
5	34	45
7 - 1/2	45	60
10	56	75
15	83	110
20	115	145
25	127	183
30	164	218
40	218	290
50	272	363
Per H.P. Above 50	5.5	7.25

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Three Phase Motors--2300 Volts Maximum Allowable Current Values		
Motor Horse Power	Current in Amperes	
	Starting	Locked Rotor
7 - 1/2	8	11
10	11	14
15	16	21
20	21	28
25	26	35
30	31	42
40	41	55
50	52	69
Per H.P. Above 50	1.04	1.39

Three Phase Motors--4000 Volts Maximum Allowable Current Values		
Motor Horse Power	Current in Amperes	
	Starting	Locked Rotor
25	15	20
30	18	24
40	24	32
50	30	40
Per H.P. Above 50	0.6	0.8