

Table 11(A) Class 2 and Class 3 Alternating-Current Power Source Limitations

Power Source		Inherently Limited Power Source (Overcurrent Protection Not Required)				Not Inherently Limited Power Source (Overcurrent Protection Required)			
		Class 2		Class 3		Class 2		Class 3	
Source voltage V_{\max} (volts) (see Note 1)		0 through 20*	Over 20 and through 30*	Over 30 and through 150	Over 30 and through 100	0 through 20*	Over 20 and through 30*	Over 30 and through 100	Over 100 and through 150
Power limitations VA_{\max} (volt-amperes) (see Note 1)		—	—	—	—	250 (see Note 3)	250	250	N.A.
Current limitations I_{\max} (amperes) (see Note 1)		8.0	8.0	0.005	$150/V_{\max}$	$1000/V_{\max}$	$1000/V_{\max}$	$1000/V_{\max}$	1.0
Maximum overcurrent protection (amperes)		—	—	—	—	5.0	$100/V_{\max}$	$100/V_{\max}$	1.0
Power source maximum nameplate rating	VA (volt-amperes)	$5.0 \times V_{\max}$	100	$0.005 \times V_{\max}$	100	$5.0 \times V_{\max}$	100	100	100
	Current (amperes)	5.0	$100/V_{\max}$	0.005	$100/V_{\max}$	5.0	$100/V_{\max}$	$100/V_{\max}$	$100/V_{\max}$

Note: Notes for this table can be found following Table 11(B).

*Voltage ranges shown are for sinusoidal ac in indoor locations or where wet contact is not likely to occur.

For nonsinusoidal or wet contact conditions, see Note 2.

Table 11(B) Class 2 and Class 3 Direct-Current Power Source Limitations

Power Source		Inherently Limited Power Source (Overcurrent Protection Not Required)					Not Inherently Limited Power Source (Overcurrent Protection Required)			
		Class 2			Class 3		Class 2		Class 3	
Source voltage V_{\max} (volts) (see Note 1)		0 through 20*	Over 20 and through 30*	Over 30 and through 60*	Over 60 and through 150	Over 60 and through 100	0 through 20*	Over 20 and through 60*	Over 60 and through 100	Over 100 and through 150
Power limitations VA_{\max} (volt-amperes) (see Note 1)		—	—	—	—	—	250 (see Note 3)	250	250	N.A.
Current limitations I_{\max} (amperes) (see Note 1)		8.0	8.0	$150/V_{\max}$	0.005	$150/V_{\max}$	$1000/V_{\max}$	$1000/V_{\max}$	$1000/V_{\max}$	1.0
Maximum overcurrent protection (amperes)		—	—	—	—	—	5.0	$100/V_{\max}$	$100/V_{\max}$	1.0
Power source maximum nameplate rating	VA (volt-amperes)	$5.0 \times V_{\max}$	100	100	$0.005 \times V_{\max}$	100	$5.0 \times V_{\max}$	100	100	100
	Current (amperes)	5.0	$100/V_{\max}$	$100/V_{\max}$	0.005	$100/V_{\max}$	5.0	$100/V_{\max}$	$100/V_{\max}$	$100/V_{\max}$

*Voltage ranges shown are for continuous dc in indoor locations or where wet contact is not likely to occur.

For interrupted dc or wet contact conditions, see Note 4.

Notes for Table 11(A) and Table 11(B)

1. V_{\max} , I_{\max} , and VA_{\max} are determined with the current-limiting impedance in the circuit (not bypassed) as follows:

V_{\max} : Maximum output voltage regardless of load with rated input applied.

I_{\max} : Maximum output current under any noncapacitive load, including short circuit, and with overcurrent protection bypassed if used. Where a transformer limits the output current, I_{\max} limits apply after 1 minute of operation. Where a current-limiting impedance, listed for the purpose, or as part of a listed product, is used in combination with a nonpower-limited transformer or a stored energy source, e.g., storage battery, to limit the output current, I_{\max} limits apply after 5 seconds.

VA_{\max} : Maximum volt-ampere output after 1 minute of operation regardless of load and overcurrent protection bypassed if used.

2. For nonsinusoidal ac, V_{\max} shall not be greater than 42.4 volts peak. Where wet contact (immersion not included) is likely to occur, Class 3 wiring methods shall be used or V_{\max} shall not be greater than 15 volts for sinusoidal ac and 21.2 volts peak for nonsinusoidal ac.

3. If the power source is a transformer, VA_{\max} is 350 or less when V_{\max} is 15 or less.

4. For dc interrupted at a rate of 10 to 200 Hz, V_{\max} shall not be greater than 24.8 volts peak. Where wet contact (immersion not included) is likely to occur, Class 3 wiring methods shall be used, or V_{\max} shall not be greater than 30 volts for continuous dc; 12.4 volts peak for dc that is interrupted at a rate of 10 to 200 Hz.