

EXPECTED IMPLEMENTATION JULY 2011

785 INTELLIGENT TRANSPORTATION SYSTEMS - INFRASTRUCTURE. (REV 11-10-10) (FA 1-5-11) (7-11)

SUBARTICLE 785-2.4.4 (of the Supplemental Specifications) is deleted and the following substituted:

785-2.4.4 SPD for Low-Voltage Power, Control, Data and Signal

Systems: Install a specialized SPD on all conductive circuits including, but not limited to, data communication cables, coaxial video cables, and low-voltage power cables. Ensure that these devices comply with the functional requirements shown in Table 785-1 for all available modes (i.e. power L-N, N-G; data and signal center pin-to-shield, L-L, L-G, and shield-G where appropriate).

Table 785-1				
SPD Minimum Requirements				
Circuit Description	Clamping Voltage	Data Rate	Surge Capacity	Maximum Let-Through Voltage
12 VDC	15-20 V	N/A	5kA per mode (8x20 μ s)	<150 Vpk
24 VAC	30-55 V	N/A	5kA per mode (8x20 μ s)	<175 Vpk
48 VDC	60-85 V	N/A	5kA per mode (8x20 μ s)	<200 Vpk
120 VAC at POU	150-200 V	N/A	20kA per mode (8x20 μ s)	<550 Vpk
Coaxial Composite Video	4-8 V	N/A	10kA per mode (8x20 μ s)	<30 Vpk
RS422/RS485	8-15 V	Up to 10 Mbps	10kA per mode (8x20 μ s)	<30 Vpk
T1	13-30 V	Up to 10 Mbps	10kA per mode (8x20 μ s)	<30 Vpk
Ethernet Data	7-12 V	Up to 1 Gbps	1kA per mode (10x1000 μ s)	<30 Vpk

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Install a SPD that has an operating voltage matching the characteristics of the circuit. Ensure that these specialized SPDs are UL 497B or UL 497C listed, as applicable.

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