RS-485
Serial Port - ESD / EFT / Surge Protection

Objective
RS-485 (TIA/EIA-485) is a balanced data transmission scheme that uses voltage levels from -7 V to +12 V (max.) at data rates up to 10 Mbps. This solution provides protection against ESD, EFT, power and surge faults.

Solution
2 TBU® High-Speed Protectors: TBU-CA065-300-WH
2 MOVs: MOV-10D201K
1 TVS Diode Array: CDSOT23-SM712

Compliance
IEC 61000-4-2 ESD Level 4 (8 kV / 15 kV)
IEC 61000-4-4 EFT
IEC 61000-4-5 Surge / Lightning

Alternate Recommendations
SMBJ6.5A and SMBJ12A TVS Diodes with MF-RM012/240 Multifuse® PPTC Resettable Fuse

Benefit
This solution provides excellent protection for both indoor and outdoor applications. It also protects against 28 V_RMS and 120 V_RMS power cross condition.

The schematic above illustrates the application protection and does not constitute the complete circuit design. Customers should verify actual device performance in their specific applications.

Bourns® PortNote® solutions provide protection recommendations for typical port threats.

For more information, go to:
www.bourns.com
or email: protection@bourns.com