SPI-3, rev 7, Section 7, Table Restructuring Proposal

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- **Replace note at bottom of Table 15 and Table 25 with: "A combination of LVD/MSE devices and HVD devices on the same bus could result in damage to the DIFFSENS input of the LVD/MSE device."**

Table 15 - Electrical input requirements at the device connector

Mode	Minimum	Maximum	Notes
SE (passive negation) input voltage	-0,5 V D.C.	5,5 V D.C.	Absolute maximum at all operating conditions, SCSI devices meeting the passive negation requirements in table 17.
SE (active negation) input voltage	-0,5 V D.C.	4,1 V D.C.	Absolute maximum at all operating conditions, for SCSI devices meeting the active negation requirements in table 17.
LVD/MSE input voltage (D.C. V + or - signal to local ground)	-0,5 V D.C.	4,1 V D.C.	Absolute maximum at all operating conditions all signals except DIFFSENS.
DIFFSENS for LVD/MSE input voltage	-0,5 V D.C.	4,1 V D.C.	Absolute maximum at all operating conditions for the DIFFSENS connection.
Note: LVD/MSE SCSI devices may be damaged by DIFFSENS voltage from HVD devices.			

- **Change the title of Table 15 to: "Absolute electrical limits at the device connector"**

- **In Table 16, remove the words, "current magnitude" from the Value column and change the "Value" column heading to: "Transceiver Type".**

Table 16 - Input current requirements at the device connector for lines not being driven by the device

Value	Maximum	Notes
MSE current magnitude	± 20 µA D.C.	Measured from + or - signal $0 < V_{IN} < 4,1$ V to local ground for each signal pin.
LVD current magnitude	± 20 µA D.C.	Measured from + or - signal $V_{IN} < 2,5$ V to local ground for each signal pin.

- **In Table 18, make the following changes where found:**
  “0.0V D.C. to 0.8 V D.C.” becomes “0.8 V D.C. maximum”
  “2.0 V D.C. to 5.25 V D.C.” becomes “2.0 V D.C. minimum”

Table 18 - SE input voltage characteristics

Maximum transfer rate	SE input voltage characteristics
Fast-5	a) VIL (low-level input voltage) = 0,0 V D.C. to 0,8 V D.C. (signal true); b) VIH (high-level input voltage) = 2,0 V D.C. to 5,25 V D.C. (signal false) c) IIL (low-level input current) = - 0,4 mA to 0,0 mA at VI = 0,5 V D.C.; d) IIH (high-level input current) = 0,0 mA to 0,1 mA at VI = 2,7 V D.C.; e) Minimum input hysteresis = 0,2 V D.C.
Fast-10	a) VIL (low-level input voltage) = 0,0 V D.C. to 0,8 V D.C. (signal true); b) VIH (high-level input voltage) = 2,0 V D.C. to 5,25 V D.C. (signal false) c) IIL (low-level input current) = ± 20 µA at VI = 0,5 V D.C.; d) IIH (high-level input current) = ± 20 µA at VI = 2,7 V D.C.; e) Minimum input hysteresis = 0,3 V D.C.
Fast-20	a) VIL (low-level input voltage) = 1,0 V D.C. maximum (signal true); b) VIH (high-level input voltage) = 1,9 V D.C. minimum (signal false) c) IIL (low-level input current) = ± 20 µA at VI = 0,5 V D.C.; d) IIH (high-level input current) = ± 20 µA at VI = 2,7 V D.C.; e) Minimum input hysteresis = 0,3 V D.C.

Note:
1 SE input voltage characteristics specified by the maximum transfer rate shall apply even if a slower transfer rate is negotiated.
2 Due to the tighter voltage thresholds for fast-20, the power supply should have a maximum ±5% tolerance of the nominal voltage.
3 All values apply to both active negation and passive negation devices.

- **Remove “SE” from the statement in 7.3.5 (see below) because it implies that DIFFSENS is somehow part of the SE bus signaling scheme and not a variable voltage. It was probably intended to mean that the line is a non-differential line, but this could prove confusing with all the other “SE” references in the spec.**
  Change the last sentence to read:
  “...using its own transmission and detection scheme.”

- **7.3.5 SE/HVD transmission mode detection**
  HVD is not defined in this standard. For information on HVD SCSI device implementation see the SCSI Parallel Interface-2 Standard (X3.302-1998).
  Transmission mode detection by LVD SCSI devices of SE and HVD SCSI devices is accomplished through the use of the DIFFSENS line. Requirements for SCSI devices and terminators for DIFFSENS are not the same as for "signal" lines because DIFFSENS is driven and detected using its own ~~SE~~ transmission and detection scheme