



06/22/2022, Updated 8/16/24 (updated sections in red)

Subject: Change to USCAR-12, Rev 6 (Revision Letter #4)

Changes have been made to the USCAR-12 specification. Comments and questions can be sent to EWCAP@uscar.org.

Situation:

USCAR-12 did not have design expectations for high voltage connectors.

Resolution:

A new section has been added with the information shown. Note that these are design expectations for most connectors. Specific connectors will be specified as required.

#	REQUIREMENT	CRITERIA
HV1	HV Designs default to the following: a) Application Voltage: 1000 VDC b) Pollution Degree: 2 (per IEC 60664) c) Altitude: 5,000 m d) No Reinforcement multipliers	Confirm design is... a) 1000 VDC, unless insufficient for design. b) Pollution Degree 2 is specified. c) Altitude correction is applied for 5000 m. d) Reinforcement per IEC 60664 is not used .
HV2	“Material group classification” is to be based on minimum CTI for plastic components located along the HV creepage path where: Material Group 1 : 600 ≤ CTI Material Group 2: 400 ≤ CTI < 600 (Material group and CTI is per IEC 60664, 4.8.1.3)	Confirm group classification is correctly defined. (Use of Materials Group 3a and 3b not recommended).
HV3	Design creepage with the following spacing: Material Group 1: Creepage ≥ 5.00 10.0mm Material Group 2: Creepage ≥ 7.10 14.2mm	Confirm creepage meets requirements using a CAD study for both mated and unmated states.
HV4	Design clearance with the following spacing Material Group 1: Clearance ≥ 4.44 8.14mm Material Group 2: Clearance ≥ 4.44 8.14mm	Confirm clearance meets requirements using a CAD study for both mated and unmated states.