



04/19/2023 (Revised Oct 24, 2023 as described at end).

Subject: Change to USCAR-12, Rev 6 (Revision Letter #7)

Changes have been made to the USCAR-12 specification. Comments and questions can be sent to [EWCAP@uscar.org](mailto:EWCAP@uscar.org).

**Situation:**

USCAR-12 does not currently have a section describing what design expectations are unique to 48-Volt connectors.

**Resolution:**

A new section called “MV” (for mid-voltage, >24VDC but <60VDC) has been added to USCAR-12. This section lists the default design requirements for MV connectors. Note that these are defaults and not requirements.

#	REQUIREMENT	CRITERIA
MV	Definition: A “Mid-voltage” connector (MV) is a connector intended to be used with voltages greater than 24VDC but less than 60VDC. The name is intended to be functionally the same as “48-Volt connector.”	
MV1	ENVIRONMENT  MV Designs default to the following conditions for performance: a) Application Voltage: <60 VDC b) Environmental conditions match to the “Pollution Degree 2” (per IEC 60664) c) Max. service altitude is 5,000 m	Confirm design is described correctly. Note that the IEC 60664 factor of pollution degree does not impact the connector design since the voltage is low enough that 14-Volt configurations meet requirements.
MV2	IDENTIFICATION  If an identifying color is wanted, use light blue per RAL 5012 or RAL 5015. (Note	Confirm color is correct, if light blue is specified, confirm connector color is similar to RAL 5012 or RAL 5015. An exact color match is not required. (Note: the color of cable and

	that MV connectors can be any color per customer request.)	cable coverings are not controlled in this requirement; check to see if light blue color is requested per another spec.)
MV3	<p>ARC SUPPRESSION</p> <p>MV Connectors are not expected to be unmated while powered, so there is no requirement for arc suppression.</p>	Identify any “arc suppression” claims by supplier. If a claim is made that a connector will suppress an arc, the confirmation method will be determined by agreement between supplier and customer.
MV4	<p>INTERLOCK CIRCUIT</p> <p>Mid voltage connectors do not need additional circuits for interlock functionality</p>	Confirm that there is understanding between the supplier and customer about any interlock requirements. Details will be defined by the customer.

Revised Oct 24, 2023 to reword requirement MV2 and allow RAL 5015 as an acceptable light blue color.