



**DEFENSE LOGISTICS AGENCY
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DLA LAND AND MARITIME-VAI

March 3, 2020

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Final Report: The purpose of this Engineer Practice Study (EPS) was to solicit the rectangular connector industry for new design that can be standardized into a new document or added to an existing military specification under the FSC 5935.
Project Number: 5935-2020-031

This memorandum is the final report on the subject for the EPS. The study solicited and received feedback from manufacturers and an OEM of military equipment. The survey revealed interest in developing military specifications for the line of ARNIC connectors, D-sub connectors already being manufactured to be developed into a military standard specification, and expanding the current line of the MIL-DTL-24308 military connectors. The Interconnection Branch office VAI will review information that was received for development of a new line or expansion of a military specification.

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If you do not have access to the internet, or you have problems downloading the document, printed copies may be obtained from Ed Wypasek, at (614) 692-0530, facsimile transmission (614) 692-6939, or by e-mail edmund.wypasek@dla.mil.

Sincerely,

/SIGNED/

ABDONASSER M. ABDOUNI
Chief,
Interconnection Branch

FINAL REPORT

ENGINEERING PRACTICE STUDY (EPS)

Federal Supply Class (FSC) – 5935 Connectors, Electrical
New Design and Specifications for Rectangular Connectors

PROJECT NUMBER: 5935-2020-031

3 March 2020

Prepared by:
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DLA Land and Maritime-VAI

ENGINEERING PRACTICE STUDY FSC 5935

Objective: The purpose of this EPS was to solicit the rectangular connector industry for new design that can be standardize into a new document or added to an existing military specification under the FSC 5935.

Background: The Standardization program is a vital part to the war fighter. Supporting such effort at DLA Land and Maritime is to conduct a market research for new development or expand on existing parts used in military equipment. The study is open for new technology or existing rectangular connectors that can be applicable to a military specification. Standardization is a cost savings for the manufacture, government, and end users. An area of interest would be the D-sub microminiature, and nanominiature rectangular connectors. A standardize connector assures a quality part and the safety that contributes the reliability of the connector.

Methodology: Obtain input from manufactures, military, OEM of military equipment, and industry.

Results: Received feedback from the manufactures and one OEM of military equipment. The EPS results collected provided potential for new and existing development that can contribute to the DLA Land and Maritime Standardization program. Below are the comments received from the EPS.

NGC

Per your request, and from where I see standards on 30+ programs at NGC, what we really need a specification to control the ARINC 600 connector, including the back end.

Omnetics

Omnetics will collect more information and provide feedback on expanding the nanominiature MIL-DTL-32139 and microminiature MIL-DTL-83513 connectors.

Axon Cable

Per the subject EPS, I would like to respond with three products our company already has in production.

Versatys® features removable power and signal contacts. The power contacts accept up to 12 AWG wire and signal contacts can accept coaxial cable. The advantage of this product line is that components (insulators, shells, contacts and wires) can be sold to the user as a kit so that they can configure as needed.

Our High Density Micro-D line has been sold for about ten years. It features contacts found in MIL-DTL-32139 but in a connector shell designed for MIL-DTL-83513. This offers a space savings with the more rugged micro-D design.

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MexiDens is a derivative of MIL-DTL-83513. It was developed for the oil and gas drilling industry and features more densely packaged contacts found in MIL-DTL-83513.

Positronics

1. Move the DSCC 8504* and 8505* specifications Combination D-sub (crimp removable and fixed solder cup) into a M24308 slash sheets. Many of our customers are not aware that the DSCC sheets exist. If this project goes forward we would like to suggest some additional variants.
2. High density Combination D-sub board mount connectors, mixture of size 22 and size 8 contacts and size 22 and size 16 in existing D-sub shells. These could be added to the 24308 slash sheets /29 thru /40.
3. If option 1 is accepted, we would like to add the High density Combination D-sub crimp connectors.
4. Press fit standard density and high density d-sub connectors. This would offer the standard 24308 shell sizes/variants with a solderless connection to the PCB.
5. Add the high density 104 variant to the M24308/23 and /24 spec sheets.
6. We are presently in development of a high-performance D-sub with machined aluminum shells that we have seen a lot of interest in from our mil-aero customer base. As this development progresses, we would appreciate the opportunity to work with DLA in creating a specification.

NEPAG

The committee express interest in submitting information in regards for connector development into a military specification.

Conclusion

DLA will take the feedback that was received to be review for new development or to expand the current existing military specifications. The review process will include follow up research to see if any of the propose connectors are already being procured by the government. Finally, the review process will involve the qualification area of the connector. The VAI Interconnection Branch will like to thank you for those who participated in the EPS.

ENGINEERING PRACTICE STUDY
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If there are any questions, please contact Mr. Ed Wypasek, phone DSN 850-0530/commercial, 614-692-0530, E-mail edmund.wypasek@dla.mil, or mail address: DLA Land and Maritime-VAI, Attn: Ed Wypasek, P.O. Box 3990, Columbus, OH 43218-3990.