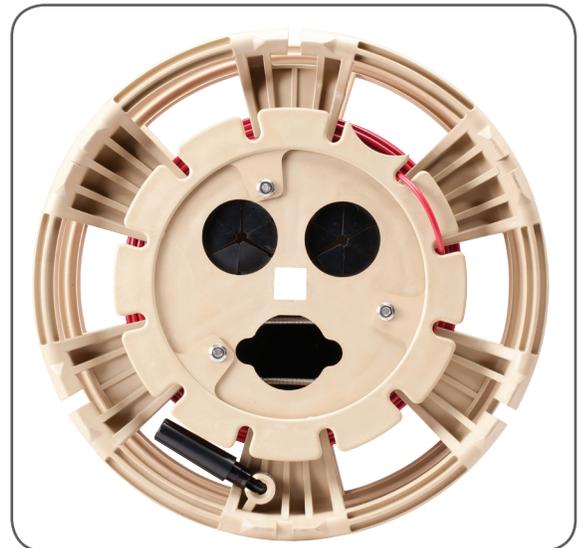


Qualification of MARS Reels to U.S. Army CECOM Specification

OCC’s MARS cable reels are the industry’s first lightweight cable deployment reel system designed specifically for the demanding needs of harsh-environment fiber optic installations. The MARS reel is a lightweight, modular system constructed of an impact modified polymer that is easily transported and is ideal for applications where cable needs to be deployed and retrieved quickly and stored efficiently.

The MARS reel system has recently been issued National Stock Numbers (NSN’s) from the United States Defense Logistics Agency (DLA). The NSN indicates a review and approval for use within the military’s logistics supply chain. US military services, the Department of Defense (DoD), disposition services, federal agencies (such as GSA, FAA, DHS, etc.), the North Atlantic Treaty Organization (NATO), and many governments around the world use NSNs. To achieve this status, the MARS reels underwent strict qualification testing to the U.S. Army CECOM Specification A336463A, resulting in the following:

- **Performance:** The cable reel stores and allows for the deployment and retrieval of fiber optic cable assemblies in a variety of environmental and mechanical conditions without damaging or affecting performance of these assemblies.
- **Materials:** The reel flanges are made from light-weight, durable, and non-porous material that meets the fiber optic cable assembly requirements specified in CECOM drawings A3159863, A3159864, and A3302584. The flanges and handles, excluding the attached hardware and drum, are fabricated from non-conductive materials. All parts are non-rusting.
- **Finish:** Colors include, but not limited to, Black, (Desert) Tan 33446 and Olive Drab 34088 as identified in table 3 of FED-STD-595. The finish is lusterless, non-reflective, and fade-resistant.
- **Field Transportable:** The reel is designed to enable ease of transport by grasping the flange frame at multiple points with a single bare or gloved hand.
- **Connector Storage:** The reel is capable of securely storing fiber optic connectors within the drum of the reel without need for tools for removal or storage of the connectors.
- **Operation:** The reel design easily supports deployment or retrieval of fiber optic cable in either manual or automated modes. A folding handle is available for manual cable retrieval. The modular design allows operation on a simple axle or with any number of cable reel accessories. MARS accommodates either round or square drive acles and reeling machines.
- **Stacking:** The reels are capable of being vertically stacked securely to a height of 5 feet without deforming, distorting or damaging any of the reels.
- **Testing:**



| Parameter | Test Specification | Performance Range |
|--------------------------------|---|--|
| Operating Temperature | A336463 | -30°C to +71°C |
| Storage Temperature | A336463 - 48 hours | -57°C to +85°C |
| Temperature - Humidity Cycling | A336463 - in accordance with MIL-STD-1678-3, measurement 4030 | +25°C to +65°C, RH 90-98% |
| Cold Drop Test | A336463 | 3.5 feet drop at -30°C |
| Flammability | UL-94 HB | Pass (HB Rating) |
| Vibration | A336463 | 3 axis, 10-33-10Hz, Horizontal 0.020 (in), Vertical 0.030 (in) |

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In addition to meeting the specification requirements in CECOM's A336463A, the MARS reels underwent user evaluation by the U.S. Army Signal School at Fort Gordon, Georgia in 2012 to determine if the product could withstand day-to-day use. Signal classes utilized the reel for communications exercises as well as conducted their own endurance and confidence testing. The Signal School evaluators offered high praise for significant weight reduction and increased ruggedness and durability over standard steel reels. The MARS reels are currently specified on multiple U.S. Army and Marine Corps cable assembly drawings and specifications. With the assignment of NSN's to the MARS family of reels, U.S. and allied defense agencies will be able to specify and acquire the specific model of reel or reels required to satisfy their mission requirements.



NSN Assignments:

| Part Number | Description | Color | Reel Size/Capacity | Specifications | NSN Number |
|----------------|-------------------------|------------|--------------------|---------------------|------------------|
| AFO-0100-G-X-1 | Military Cable Reel | Green | 100 Meters | 1" Round Axle Hole | 8130-01-618-7424 |
| AFO-0100-T-X-1 | Military Cable Reel | Desert Tan | 100 Meters | 1" Round Axle Hole | 8130-01-618-4342 |
| AFO-0300-G-X-2 | Military Cable Reel | Green | 300 Meters | 1" Square Axle Hole | 8130-01-618-4339 |
| AFO-0500-G-X-2 | Military Cable Reel | Green | 500 Meters | 1" Square Axle Hole | 8130-01-618-0553 |
| AFO-0750-G-X-2 | Military Cable Reel | Green | 750 Meters | 1" Square Axle Hole | 8130-01-618-2132 |
| AFO-1000-G-X-2 | Military Cable Reel | Green | 1000 Meters | 1" Square Axle Hole | 8130-01-618-2139 |
| AFO-0100-G-X-2 | Military Cable Reel | Green | 100 Meters | 1" Square Axle Hole | 8130-01-618-7430 |
| AFO-0100-T-X-2 | Military Cable Reel | Desert Tan | 100 Meters | 1" Square Axle Hole | 8130-01-618-4337 |
| AFO-0300-T-X-2 | Military Cable Reel | Desert Tan | 300 Meters | 1" Square Axle Hole | 8130-01-618-4335 |
| AFO-0500-T-X-2 | Military Cable Reel | Desert Tan | 500 Meters | 1" Square Axle Hole | 8130-01-618-2371 |
| AFO-0750-T-X-2 | Military Cable Reel | Desert Tan | 750 Meters | 1" Square Axle Hole | 8130-01-618-2130 |
| AFO-1000-T-X-2 | Military Cable Reel | Desert Tan | 1000 Meters | 1" Square Axle Hole | 8130-01-618-2134 |
| K2000-KAC001 | Cable Reel Cleaning Kit | N/A | N/A | 4/12 CH M83526 | 6080-01-618-4575 |
| K2000-KTC001 | Cable Reel Cleaning Kit | N/A | N/A | 2 CH TFOCA | 6080-01-618-9312 |
| K2000-KAC002 | Cable Reel Cleaning Kit | N/A | N/A | 4/12 CH M83526 | 6080-01-618-4579 |
| K2000-KTC002 | Cable Reel Cleaning Kit | N/A | N/A | 2 CH TFOCA | 6080-01-618-9329 |

Optical Cable Corporation (OCC) is a MIL-STD-790F certified manufacturing facility and has been providing the United States and allied militaries with ground tactical fiber optic cables, tactical fiber optic connectors, and deployable fiber optic cable assemblies for over 20 years. Now we have expanded that expertise to include our MARS reel system. As a premium manufacturer of these components, we are proud to have many of the major worldwide defense agencies as our customers. To learn more about OCC's military tactical communications solutions, contact an OCC sales professional or visit us at www.occfiber.com.



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