

NEMA WC 55021

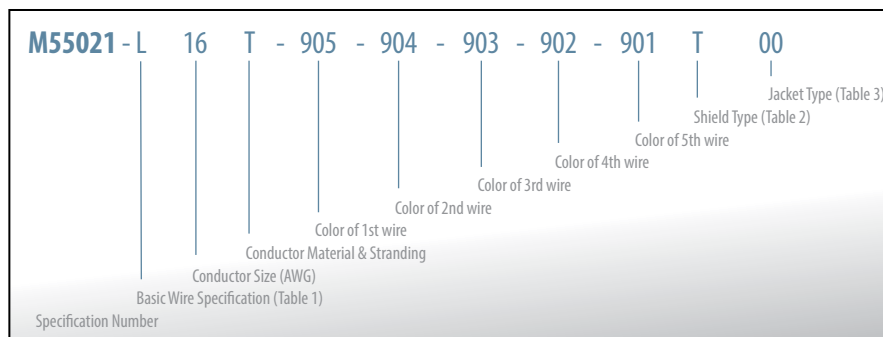
Shielded and Unshielded Military

APPLICATION

The NEMA WC 55021 specification is used to describe both shielded and unshielded cable constructions for internal wiring for electronic equipment. The specification allows the user a wide variety of construction choices. Circuit identification, conductor size, insulation type, number of conductors, shielding material, and jacket compound may all be specified using this document. Single conductor, twisted pairs, triple, quad, quintuple, and multi-conductor cables through 5 components are all included.

Marmon Aerospace & Defense is able to provide a wide range of NEMA WC 55021 constructions. Although this brief catalog sheet cannot list all the detailed testing and specification requirements contained in the complete NEMA WC 55021 document, we have summarized the major construction features of the specification and listed those that Marmon Aerospace & Defense produces. Please refer to NEMA WC 55021 for complete performance details.

ANATOMY OF A PART NUMBER



| Symbol | Basic Wire Specifications | Insulation Type | Temp. Rating | Voltage |
|--------|----------------------------|-----------------|--------------|---------|
| L | NEMA HP 5 (XLPE) | TPC | 125°C | 600V |
| LL | NEMA HP 5 (XLPE) | TPC | 125°C | 1000V |
| LS | NEMA HP 8 (XLPO) | TPC | 125°C | 600V |
| LX | NEMA HP 5 (XLPE) | TPC | 125°C | 3000V |
| S | NEMA HP 6 (SILICONE) | TPC/SPC | 150°C/200°C | 600V |
| SS | NEMA HP 6 (SILICONE) | TPC/SPC | 150°C/200°C | 1000V |
| SSB | NEMA HP 6 (SILICONE/GLASS) | TPC/SPC | 150°C/200°C | 1000V |
| ZH | NEMA HP 8 (ZH-POLYOLEFIN) | TPC | 125°C | 600V |
| ZHDM | NEMA HP 8 (ZH-POLYOLEFIN) | TPC | 125°C | 600V |
| ZHDH | NEMA HP 8 (ZH-POLYOLEFIN) | TPC | 125°C | 600V |
| ZHS | NEMA HP 6 (ZH-SILICONE) | TPC/SPC | 150°C/200°C | 600V |
| ZHSS | NEMA HP 6 (ZH-SILICONE) | TPC/SPC | 150°C/200°C | 1000V |
| ZHX | NEMA HP 8 (POLYOLEFIN) | TPC | 125°C | 1000V |

| Letter Symbol Type | Shield Material | Maximum Temperature Limit for Shield Material (Information only) |
|--------------------|----------------------|------------------------------------------------------------------|
| U | Unshielded | --- |
| N | Nickel Plated Copper | 260°C |
| S | Silver Plated Copper | 200°C |
| T | Tin Plated Copper | 150°C |

| Letter Symbol Type | Jacket Material Type and Color | Maximum Temperature Limit for Jacket Material (Information only) |
|--------------------|-----------------------------------------------------|------------------------------------------------------------------|
| 00 | Unjacketed | --- |
| 01 | Extruded white polyvinyl chloride (PVC) | 90°C |
| 02 | Extruded clear polyamide | 90°C |
| 27 | Extruded white Cross-linked Polyolefin | 105°C |
| 28 | Extruded white Cross-Linked Zero Halogen Polyolefin | 105°C |
| 29 | Extruded white Silicone | 200°C |
| 30 | Extruded white Zero Halogen Silicone | 200°C |



NEMA WC 55021

Recommended Shield and Jacket Types for Components Listed

CONDUCTOR

Various platings and strandings

INSULATION

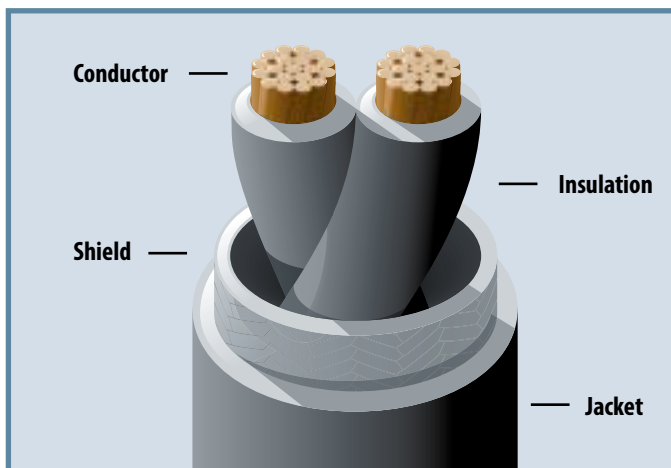
Various insulation types

SHIELD

Various materials
(available unshielded)

JACKET

Various materials
(available unshielded)



| Symbol | Basic Wire Specifications | Shield Material | Jacket Material | Temperature Rating | Voltage Rating |
|---------|-----------------------------|-----------------|-----------------|--------------------|----------------|
| Table 1 | Table 1 | Table 2 | Table 3 | | |
| L | NEMA HP5 (MIL-DTL-16878/14) | | | | 600V |
| LL | NEMA HP5 (MIL-DTL-16878/15) | U | 00 | 105°C | 1000V |
| LX | NEMA HP5 (MIL-DTL-16878/16) | T | 27 | | 3000V |
| ZHS | NEMA HP6 | U | 00 | 150°C | 600V |
| ZHSS | NEMA HP6 | T | 30 | | 1000V |
| ZH | NEMA HP8 | U | 00 | 125°C | 600V |
| ZHX | NEMA HP8 | | | | 1000V |
| LS | NEMA HP8 | T | 28 | | 600V |

The above products represent the more popular constructions. However, other designs are available upon request.
All products are manufactured to meet RoHS compliance. For exceptions, please contact our sales department.