



## WIRE HARNESS ASSEMBLY SERVICES

### WHY CME?

CME designs and manufactures wire assemblies for automotive, transportation, energy, and aerospace/defense applications ranging from single-circuit designs up to 500 circuits with varying complexity. As an effective wire harness manufacturing supplier, CME applies customer proven processes. We are people and process oriented and our electrical/electronic assembly and wire harness production and test capabilities are an important part of our production operations and quality assurance.

CME, a certified Woman Business Enterprise (WBE) founded by Dr. Nancy Crews, CEO/President, provides wire harness manufacturing and engineering services to meet the most demanding device application specifications; something we have been doing for 18 years now! CME has earned Quality Management System (QMS) registrations including, ISO 9001 and AS9100C registrations as well as ISO/TS 16949 Conformance.

As a skilled, small business operating since 1997 and in the supply chain of Fortune 500 companies and the Federal Government, CME is well-qualified to manufacture automotive wiring harnesses and assemblies. CME brings significant supply chain experience in manufacturing for both OEMs and the aftermarket to provide reliable assemblies for your specific application.



CME

Wire Harness Manufacturing & Engineering Services

### APPLICATIONS

Applications for CME wire harness or special cable assembly builds includes:

- Automotive wiring and cable
- Board-to-board connections
- Integrated sensor cables
- Specialty wire harnesses
- Lighting wire sets
- Battery, converter and inverter cables
- Multi-conductor assemblies
- EMI/RFI suppression products
- RF and coaxial cable assemblies
- Other electrical integration systems.

### CAPABILITIES

CME's Manufacturing Operations group employs production staff and operators trained in automotive quality assurance and technical process requirements. CME production associates are certified under IPC/WHMA-A-620, *Requirements and Acceptance for Cable and Wire Harness Assemblies*; IPC J-STD-001, *Requirements for Soldered Electrical and Electronic Assemblies*; as well as IPC-A-610, *Acceptability of Electronic Assemblies*.

All production personnel are also trained and certified in ESD protection and prevention. In terms of Engineering, CME employs design and engineering capabilities comparable to leading original equipment and Tier companies. This includes SolidWorks, Pro-E, and AutoCAD. When required, CME's overmolding competency enables a gas tight product ensuring high durability against the effects of vibration, temperature and moisture.

*We Love to Design and Build!*

Custom Manufacturing & Engineering™ ♦ ISO 9001:2008 & AS9100C Registered & ISO/TS16949:Compliance  
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## SUMMARY

CME can provide many discrete cable assemblies utilizing proven components. These cable assemblies are designed to suit the customer and application, all terminated with in-house application tooling supporting low to medium volume production. In addition to wire harness manufacturing, CME can also apply engineering resources to support the design and design verification test of product solutions needed. In-house process control workstations include wire stripping, tinning, soldering, crimping, IDC termination and wire wrapping. This ensures efficient process manufacturing for lower costs. Complete overmolding, four-color ink stamping, ultrasonic welding, UV curing, epoxy sealing, cord coiling and testing support the build of custom wire harness or cable products that meet your specification.

We use a Cami Research CableEye M3U for cable continuity and resistance testing, and have designed special fixtures for test-while-build capability using the M3U. With our cable and harness testers, we can easily find defective or mis-wired cables instantly before they damage equipment or waste valuable technician time. The CableEye tester has a unique, patented graphic wiring display to visually pinpoint problems when wiring errors are detected, and offer one-second pass/fail testing for production environments. Quickly locate intermittent connections and identify their position in the cable. We can expand CableEye to over 2000 test points for large cables and wiring harnesses, and measure cables of up to 4000 feet (1219.200 m) in length. With CME's Model M3U tester, we can set two resistance thresholds, one for good connections down to 0.3 ohms, and one for isolation up to 10 Megohms. We can also measure embedded resistors and resistor networks, check the orientation of diodes, and measure diode forward voltage. Additional test and measurement instrumentation includes: hi-pot, signal generators, function generators, and spectrum and network analyzers for RF measurements from 20 Hz to 40 GHz. In addition, there are temperature chambers for environmental testing and local outside facilities for additional environmental testing as needed.

We offer customers turnkey solutions for wire harness assembly, integration, and test to include:

- Electronic/electrical assembly
- Process, Material, and/or Equipment specification
- Application/Process development
- Prototype fabrication and design verification testing
- Encapsulation and Potting (including vacuum)
- Subcontract application services
- Acceptance and Qualification test services
- Design/Engineering services



*We Manufacture Various Electronic/Electrical Assemblies, Special Cables/Harnesses, and Overmolded Cables*

