

Wire Harness Assembly

Built to Power What Matters Most

Power + Integration, not just manufacturing

2. Overview / What It Is

- Definition of wire harness assemblies
- Emphasis on:
 - Integrated cable systems
 - Multiple terminations
 - Complex configurations
- Capabilities listed:
 - Cut
 - Crimp
 - Twist
 - Assemble

Key message: We handle complexity + precision assembly

3. Process Intelligence / Differentiation

- Use of digital work instructions
- Step-by-step procedures
- Focus on planning and execution

This is their “we’re not just builders, we’re controlled + repeatable” section

4. Assembly Methods

A. Crimping

- Strip wire
- Select terminal
- Crimp connection

B. Soldering

- Strip + tin wires
 - Solder to connectors
 - Apply heat shrink
- Shows technical credibility + options

5. Wire Harness Construction (Layers)

Core Layers:

- 1 Wire Conductors
 - Carry power/signals
- 2 Insulation Layer
 - Prevents shorts
 - Maintains integrity
- 3 Shielding (Optional)
 - EMI protection
- 4 Outer Jacket
 - Mechanical + environmental protection

This section explains:
how the product is physically built

6. Wire Harness Assembly Process (Step-by-Step)

Core Steps:

1. Wire preparation (cut + strip)
2. Crimping or soldering
3. Terminal assembly
4. Routing & bundling
5. Testing & inspection
6. Protective covering
7. Labeling & markingFinal QC + packaging

This is the manufacturing workflow section

7. Design Considerations

- Space requirements
- Installation preferences
- Power demands
- Environmental factors:
 - Temperature
 - Chemicals
 - Humidity
 - Flexibility

Important: They highlight engineering input, not just build

8. Industries Served

- Military
- Automotive
- Industrial Truck
- Aerospace
- Industrial machinery
- Electronics

Key takeaway:

Broad capability across high-reliability sectors

9. Proof / Credibility

- Customer testimonial (who could this come from?)
- Emphasis on:
 - Reliability
 - On-time delivery
 - Quality

10. Call to Action

“Harness Your Power” Contact info – Request a quote

Capability → Process → Engineering → Proof → CTA

“Wire harness assembly”You would do: “Vehicle Power Integration Systems”

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Built to Power What Matters Most

Power + Integration, not just manufacturing SBR Tech is a U.S.-based electronics manufacturing partner built for programs where reliability, precision, and integration matter. Our wire harness capabilities extend beyond build-to-print, delivering custom cable assemblies, electrical harness design, and high-voltage wiring systems engineered for demanding applications. From connectorization, terminal crimp validation, and overmolding processes to full system assembly, every step is executed with controlled, repeatable workflows. Our expertise in signal integrity, power distribution architecture, and ruggedized wiring solutions ensures consistent performance in harsh environments. SBR Tech helps OEMs simplify complex electrical systems while improving durability and long-term reliability.

At SBR Tech, wire harness assembly is approached as vehicle power integration systems, not just manufacturing . We design and build integrated cable systems with multiple terminations and complex configurations, supported by core capabilities such as:

- Cut, strip, and preparation
- Crimping and terminal crimp validation
- Soldering, tinning, and heat shrink application
- Routing, bundling, and final assembly

Our process is driven by digital work instructions and step-by-step execution, ensuring repeatability across every program. Each harness is constructed through a layered architecture designed for performance and protection:

- Conductors for power and signal transmission
- Insulation to prevent shorts and maintain integrity
- Optional shielding for EMI resistance and signal stability
- Outer jackets for mechanical strength and environmental sealing

From wire preparation through final QC and packaging, our workflow supports prototype-to-production scaling while maintaining strict quality assurance testing and supply chain integration.

We also bring engineering into every stage of development, evaluating space constraints, installation preferences, electrical load management, and environmental conditions such as temperature, chemicals, humidity, and flexibility. Our teams support automotive electrical integration, CAN bus systems, and mission-critical electronics across military, aerospace, industrial truck, and machinery markets. This combination of electromechanical assembly expertise and real-world application knowledge allows us to deliver harnesses that meet the highest expectations for reliability, on-time delivery, and performance. The result is a partner that moves beyond components – providing complete, application-ready systems designed to perform when failure is not an option.

