



RFQ PLANNING GUIDE // CUSTOM WIRE HARNESS MANUFACTURING

WIRE HARNESS FACTORY REQUIREMENTS CHECKLIST

The 60 specifications and documents to confirm with your supplier before you release an RFQ — so you get an accurate quote the first time.



60	9	24h	Free
CHECKPOINTS	CATEGORIES	QUOTE RESPONSE	PRINTABLE PDF

Most quoting delays and field failures trace back to one thing — an incomplete brief. Work through all nine categories below before you send a wire harness factory your RFQ. The more you define up front, the faster and more accurate your quote, and the fewer surprises in production.

HOW TO USE - PRINT THIS CHECKLIST, TICK EACH ITEM WITH YOUR ENGINEERING & PROCUREMENT TEAM, ATTACH IT TO YOUR RFQ.

01 DRAWINGS & DOCUMENTATION

6 CHECKPOINTS

- 2D assembly drawing with overall and branch dimensions plus tolerances
- Wire list / from-to schedule: every conductor's gauge, color, length, both endpoints
- Connector and pinout diagram for each connector position
- BOM with exact manufacturer part numbers (avoid "or equivalent" unless pre-approved)
- Revision number and date on every drawing and document
- Approved-alternates list for long-lead or allocated components

02 WIRE & CABLE

6 CHECKPOINTS

- Conductor gauge (AWG or mm²) for each circuit
- Insulation type and temperature rating (PVC, XLPE, PTFE/ETFE, silicone)
- Voltage rating per circuit
- Shielding requirement: braid or foil, and required coverage %
- Jacket material and color
- Conductor stranding (fine-strand for flex / continuous-flex applications)

03 CONNECTORS & TERMINALS

5 CHECKPOINTS

- Connector manufacturer and exact part numbers: housing, terminals, and seals
- Terminal plating (tin, gold, or silver) per application
- Crimp specification and approved applicator / tooling
- Gender, keying, and polarization for each connector
- Cavity plugs / seals for unused positions on sealed connectors

04 MECHANICAL & ASSEMBLY

7 CHECKPOINTS

- Overall length and each branch length, with tolerances
- Breakout points and their dimensions
- Protection: convoluted loom, conduit, braided sleeving, or tape — and coverage
- Strain relief / overmold spec, including pull-force and minimum bend radius
- Labeling and marking: wire markers, heat-shrink labels, and exact printed content
- Mounting hardware: clips, cable ties, tie-mounts, P-clamps, and positions
- Maximum bundle diameter or routing constraints

05 ELECTRICAL & PERFORMANCE

5 CHECKPOINTS

- Continuity / point-to-point map for 100% verification
- Hipot (dielectric withstand) voltage and dwell time, if required
- Insulation resistance threshold
- Impedance and twist requirements for data or signal pairs
- Maximum current per circuit

06 TESTING & QUALITY

7 CHECKPOINTS

- Is 100% continuity testing required?
- Is hipot testing required, and to what spec?
- Crimp pull-force testing and sampling plan
- Target IPC/WHMA-A-620 class (Class 1, 2, or 3)
- First Article Inspection (FAI / AS9102) required?
- PPAP level required (automotive)?
- Test reports and Certificate of Conformance with each shipment?

07 COMPLIANCE & CERTIFICATIONS

5 CHECKPOINTS

- RoHS and REACH compliance
- UL recognition and required style numbers
- Industry QMS: IATF 16949 (automotive), ISO 13485 (medical), AS9100 (aerospace)
- Region-specific marks (CE, etc.)
- Material certificates and required level of lot traceability

08 COMMERCIAL & LOGISTICS

7 CHECKPOINTS

- Quantities: prototype count and estimated annual usage (EAU)
- Minimum order quantity (MOQ) and price-break tiers
- Lead time for prototype and for production
- Tooling / NRE cost and ownership terms
- Packaging: anti-tangle, ESD, individual bagging, or kitting requirements
- Incoterms and shipping method
- Payment terms

- A single engineering point of contact (engineer-to-engineer)
- Expected response-time / turnaround
- Sample approval gate required before production release
- Change control / ECN process
- NDA signed before sharing drawings

READY TO QUOTE?

Send WellPCB your drawings and this completed checklist — our engineering team responds within 24 hours with a realistic timeline and a transparent quote.

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