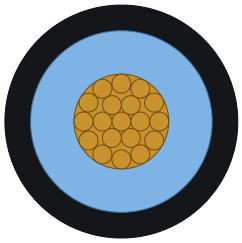
Custom Wire Harness and Cable Assembly — Build-to-Print

SORIVO Product Series: **build-to-print harness and cable assembly** | Workmanship IPC/WHMA-A-620 Class 2 | PV, industrial and low-voltage families | 100% continuity and polarity check



Schematic cross-section of the H1Z2Z2-K solar cable used on photovoltaic assemblies — not to scale.

SCOPE

Build-to-print assembly of harnesses and cable sets from a customer drawing, sample or connector set: cutting, stripping, crimping, marking, bundling and shield termination, with 100% electrical inspection before release.

PROCESS

Input
Drawing (PDF / DWG / STEP), physical sample or customer connector set

Crimp control
Tool, strip length and crimp height set for the terminal and verified on the first article, then held for the run

Assembly
Cut, strip, crimp, seal, mark, bundle and breakout to drawing

Inspection
First article for written approval, then 100% continuity and polarity

Documentation
Inspection and test records retained for each batch

FAMILIES

- Photovoltaic DC harnesses with MC4-type connectors on H1Z2Z2-K cable
- Industrial harnesses for control cabinets, sensors and valve islands
- Low-voltage harnesses for vehicles and mobile equipment

KEY FEATURES

- Assembly rated on the lower of cable and connector
- Cable extruded in our own plant

STANDARDS AND WORKMANSHIP

- IPC/WHMA-A-620 Class 2 — workmanship and acceptance basis (process standard, not a certification)
- GB/T 3956-2008 — conductors of insulated cables
- GB/T 5023.3-2008 and JB/T 8734.2-2016 — PVC insulated wires where specified
- Connector and cable standards of the customer drawing govern the component build

PHOTOVOLTAIC ASSEMBLIES

Cable
H1Z2Z2-K single-core solar cable

Conductor Sizes
4 mm² standard; 6 mm² on request (AWG 12 / 10)

Connector
MC4-type pair, Ø 4 mm contact system

Rated Current
30 A continuous / 50 A peak — lower of cable and connector

Rated Temperature
-40 °C to +85 °C (connector limit)

Forms
Module jumpers, string leads, combiner-box jumpers, pre-terminated leads

BADGES

Class 2	100%	30 A
IPC/WHMA-A-620	continuity & polarity	PV assembly rating

ASSEMBLY SCOPE

Table 1 — Three families and the basis of each rating

APPLICATION	CONDUCTOR RANGE	CONNECTOR / TERMINATION	RATING BASIS
Photovoltaic DC — modules, strings, combiners, inverters	H1Z2Z2-K single core: 4 mm² standard, 6 mm² on request (AWG 12 / AWG 10)	MC4-type connector pair, Ø 4 mm	Lower of cable and connector: 30 A continuous / 50 A peak; -40 °C to +85 °C

Only the photovoltaic family carries published ratings, because those are the values supported by our own connector and cable data. For industrial and low-voltage harnesses the conductor, connector and rating are fixed by the customer drawing. A 4 mm² PV cable carries 55 A in free air at 60 °C ambient, but the finished assembly is rated 30 A because that is the connector limit — the assembly figure, not the conductor ampacity, is the number to design to.

INSPECTION AND DOCUMENTATION

Table 2 — Inspection programme and records

ITEM	SCOPE
First article	Sample assemblies with inspection records, submitted for written approval before bulk production
Continuity and polarity	100% of assemblies against the approved wiring schedule
Crimp verification	Crimp height and pull force verified on a sampling basis using the parameters set for the specified terminal
Marking	Wire numbering, ferrules, labels and heat-shrink marking to drawing
Documentation	Inspection and test records retained per batch; RoHS and REACH declarations apply

Disclaimer. The information in this datasheet is for guidance only and is subject to change without notice. Dimensions and masses are nominal and subject to manufacturing tolerance; confirm against the certificate of the delivered product. This document is uncontrolled once printed or forwarded — the current revision, issued under document number SORIVO-TM-WH-001, governs. © 2026 SORIVO. All rights reserved. Industrial and low-voltage harnesses are built to the customer drawing and the specified materials. Where a drawing cites an industry or automotive standard, the assembly is executed to that drawing and is not presented as a qualification held by SORIVO. MC4 is a registered trademark of Stäubli.