Raytron — Engineering Every Micron.

MV CCA Wire

Inquiry and validation checklist

For individual metallic screen wires, outside the insulation-screen system. Aluminum-core and aluminum-alloy-core options are specified separately.

1. Start with the construction you have

- Target country / market and the customer or utility document issue (or Not yet decided).
- Existing copper-wire drawing: wire diameter, count, actual metallic area and wire length / cable length factor k.
- Known R20 limit, core material / temper, copper fraction with vol.% or wt.% basis, trial quantity and spool needs.
- Screen-assigned fault current, duration, bonding, accessory and environmental requirements, when known.

2. Candidate specification and inspection records

A candidate wire specification defines diameter, core material, temper, copper content and its measurement basis, together with electrical and mechanical requirements.

Wire inspection covers dimensions, copper-layer continuity, electrical resistance and mechanical properties against the selected specification.

Evidence stages: wire-tested / cable-trial / customer-qualified / production-supply. A wire test is not a finished-cable release.

3. A labelled model reference — RT-WIRE-COMP-1

At k = 1, a 16 mm^2 copper reference entered at 100% IACS gives R20 = 1.0775625 ohm/cable km. A candidate entered at 65% IACS needs 24.61538462 mm^2 for the same model resistance.

The online tool also compares mass and wire cost. Without actual prices, quotation dates and matching currency / tax / freight basis, no saving percentage is given. Ideal densities 8.96 g/cm^3 copper and 2.70 g/cm^3 aluminum are model parameters only.

Equal resistance does not establish equal fault duty. Recheck wire count, space, outside diameter, connections and finished-cable requirements.

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From drawing review to project validation

1. Drawing and cost review

Your team: Current copper-wire arrangement or drawing, target market, known resistance and quantity.

Raytron technical support: Candidate wire specification, resistance and mass comparison, and a sample trial proposal.

Next stage: Agree the application, candidate material and sample task before ordering a trial.

2. Wire and machine trial

Your team: Agree trial quantity, spool, process checks and the cable-machine trial owner.

Raytron technical support: Agree inspection items, sample charges, responsibilities and the adjustment route if a trial does not meet the agreed requirements.

Next stage: Meet the agreed wire and processing criteria. Wire results alone do not release a finished cable.

3. Cable and accessory validation

Your team: Cable maker and project parties confirm fault, connection and environmental test scope, institution, costs and release owner.

Raytron technical support: Provide the agreed material inputs for the project validation plan.

Next stage: The responsible project parties approve the finished-cable and accessory evidence; timing is agreed per project.

Supply conditions and the applicable reference issue

The quotation sets sample quantity, charges, packaging, delivery and joint requirements for the selected wire specification.

Use the customer project specification; LV clauses do not establish MV approval. Read the source-scope guide.

Apply the material, finished-cable, fault-duty and accessory requirements specified for the MV project.

Open the MV metallic screen wire inquiry form