

What I Check After an MCC Main Breaker Trip

A practical field sequence to find the cause and decide when it is safe to restore power.



ELECTRICAL FIELD NOTES



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1. PRESERVE THE EVIDENCE

The first few minutes contain the best information.

- Record trip indication
- Save event logs
- Note fault current / phase
- Check trip element
- Note time of trip

Do not reset before you read and record the trip information.



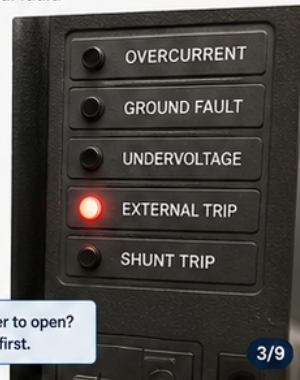
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2. CONFIRM WHAT ACTUALLY OPERATED

A breaker opening is not always caused by an electrical fault.

- Overcurrent
- Short Circuit
- Ground Fault
- Undervoltage
- External Trip / Shunt Trip
- Other Interlock or Logic

What told the breaker to open? Find the real reason first.



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3. LOOK DOWNSTREAM

Clues are often already waiting in the MCC.

- Feeder breaker trip
- Blown fuse
- Motor protection relay trip
- Ground-fault indication
- VFD / soft starter fault
- Contactor / overload status

One device may show the clue. Compare indications and timing.

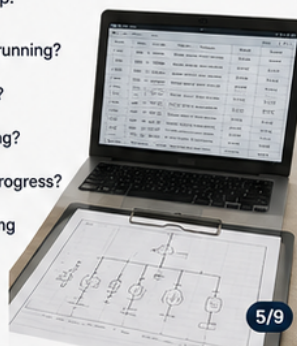


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4. RECONSTRUCT THE MOMENT OF FAILURE

Understand what was happening at the time of the trip.

- What equipment was running?
- What had just started?
- Was anything switching?
- Was maintenance in progress?
- Did the trip occur during a process upset?



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5. LOCATE THE FAULT

Divide the circuit to narrow down the fault location.



Typical Checks

- Megger test (cable / motor)
- Inspect terminals & connections
- Check for moisture or contamination
- Look for damage or overheating



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6. INSPECT THE MCC

A downstream fault can leave evidence upstream.

- Main breaker condition
- Busbar area
- Cable terminations
- Fuse holders
- Contactors / overloads
- Signs of arcing / discoloration
- Loose or damaged parts



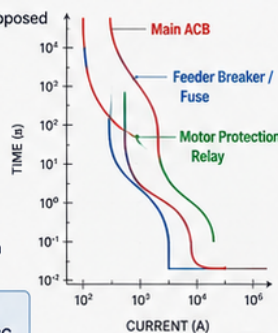
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7. REVIEW PROTECTION & COORDINATION

Was the correct device supposed to operate first?

- Main ACB settings
- Feeder breaker / fuse
- Motor protection relay
- Ground-fault settings
- Time-current coordination

A small fault should not shut down the entire MCC.



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8. DECIDE BEFORE RE-ENERGIZATION

- Faulted section identified
- Faulted feeder isolated
- MCC inspected
- Protection reviewed
- No unresolved damage
- Safe to restore per procedures
- Inform operations team

Fast is good. Correct and safe is better. Think. Verify. Then restore.



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FIELD CHECKLIST



**MCC MAIN
BREAKER TRIP**

After an MCC Main Breaker Trip



1 BEFORE RESETTNG

- ☐ Record trip indication
- ☐ Save event logs
- ☐ Check trip element
- ☐ Check upstream/
downstream status



3 BEFORE RE-ENERGIZATION

- ☐ Faulted feeder isolated
- ☐ No unresolved bus damage
- ☐ Main breaker checked
- ☐ Operations informed



2 FIND THE SUSPECT FEEDER

- ☐ Feeder trips / fuses
- ☐ Motor relay events
- ☐ VFD / soft starter faults
- ☐ What was running?



Full article + checklist: ElectricalFieldNotes.com



**ELECTRICAL
FIELD NOTES**

Practical knowledge.
Safer systems. Better decisions.