



Canadian Standards Association
Mississauga, Ontario
To the Part I Committee

Subject No. 3064

Chair: B Savaria

Date: March 22, 2005

Title: Use of Neutral Grounding Devices, Rule 14-102

Submitted by: Robert Hart of IPC Resistors Inc., 7615 Kimbel St. Unit 1, Mississauga, Ontario, L5S 1A8, Tel: (905) 673-1553, Fax: (905) 673-8472 on April 9, 2002.

Proposal: Change Rule 14-102 to add a preamble as follows:

14-102 Ground Fault Protection (see Appendix B). Where a system does not contain a neutral grounding device as defined by Rules 10-1100 to 10-1108 and is solidly grounded the following rules will apply:

- (1) Ground fault protection.....

Reasons for Request: There is a great deal of confusion in the field when it comes to ground fault protection and the need to de-energize all circuits. We are often in the position of explaining to others that neutral grounding devices can be used which meet with the requirements of Rules 10-1100 to 10-1108 because many people look at the existing Rule 14-102 and do not realize that there are alternatives to solidly grounded systems and the need to de-energize all normally ungrounded conductors of a faulted circuit.

Chair's Comments: This could be a helpful clarification, but cross-reference to other rules can be dangerous if rules change. What do others feel?

First Round Ballot Results

Agree	4
Agree with comments	3
Disagree	2

Subcommittee Members Comment

1. A preference for Rules that do not reference other Rule Numbers in another Section in case of number changes.
2. Cross reference to Section 10 is necessary for clarification.

3. Title should be changed to: 14-102 Ground Fault Protection (see Appendix B) when an electrical power distribution system is solidly grounded, the following rules shall apply.
4. There is a case for the installation of neutral grounding devices to be moved from Section 10 to Section 14.

Subcommittee Members Objections

5. Change Title to: 14-102 Ground Fault Protection (see Appendix B) where a system does not contain a neutral grounding device as provided for in Section 10, and is solidly grounded the following rules will apply:
6. Change Title to: 14-102 Ground Fault Protection (see Appendix B) except where the system contains a neutral grounding device installed per Section 10, the following rules apply:

Chair's Comments

Moving the rules concerning the installation of neutral grounding devices to Section 14 maybe beneficial but is beyond the scope of this proposal.

Most Members feel clarification is needed to ensure that Rule 14-102 does not apply to systems where neutral grounding devices are installed. Members felt that a reference to Section 10 would clarify the application of Rule 14-102.

Chair's Proposal 2nd Round (Revised)

TITLE

14-102 Ground Fault Protection for solidly grounded circuits (see Appendix B)

Add Subrule 14-102(1)(c) to read

~~Subrules 14-102-(1)(a) and (1)(b) do not apply to circuits with neutral grounding devices installed in accordance with Section 10.~~

14-102(c) This Subrule does not apply to circuits with neutral grounding devices installed in accordance with Section 10.

Subcommittee Deliberation:

SECOND ROUND (REVISED) RESULTS:-

Agree with Chair's second round proposal 7

Agree with Chair's second round proposal
(with comments) 1

Subcommittee Recommendation

14-102 title change to:-

14-102 Ground Fault Protection for solidly grounded circuits(see Appendix B)

Add Subrule 14-102(1) (c) to read as follows:-

14-102(1)(c) This Subrule does not apply to circuits with neutral grounding devices installed in accordance with Section 10.

Chair's Comments (Second Round): Two negative ballots were received from the Part-1 review of our Section-14 Proposal 3064, Round-2 Recommendation:

Subcommittee Round-2 Recommendation

14-102 title change from "Ground Fault Protection" to:-

14-102 Ground Fault Protection for solidly grounded circuits(see Appendix B)

Add Subrule 14-102(1) (c) to read as follows:-

14-102(1)(c) This Subrule does not apply to circuits with neutral grounding devices installed in accordance with Section 10.

Since 2002 when this Proposal was first launched, other changes to the CEC, Section-10 have been incorporated. Those changes to 10-204, 10-812 and 10-814, Appendix-B Notes as well as Figures 1 to 4 therein, erase the confusion suggested by the submitter in his original Proposal.

The changes that we agreed to here, not knowing about the Section-10 enhancements, make our changes unhelpful.

1. I now propose that we agree to reverse our decision to these Round-2 changes.
2. However, in the course of reviewing 14-102, it has been noted that use of the undefined term, "solidly grounded circuits", has crept into our Rule. This term should read "solidly grounded systems" as defined in the Code. Therefore, I recommend the following changes for your consideration:

14-102 (1) (a) In solidly grounded ~~circuits~~ **systems** rated...

and

14-102 (1) (b) In solidly grounded ~~circuits~~ **systems** rated...

Chair's Comments (Second Letter Ballot)

" On the recent ballot, one negative was written pointing out that this Section-14 Proposal was unhelpful and no longer addressed the original submitter's need for clarification. This statement was made in light of changes to Section-10 Rules agreed-to since the 2002 edition was published. The negative made a case for recinding the Section-14 Proposal taking us back to the 2002 publication Rule, and included two word changes.

On a whim, I took this back to the Section-14 Sub-committee for their agreement. We have consensus at Section-14 to return to the 2002 publication Rule, including two word changes.

The two word changes are:

In the course of reviewing Rule 14-102, it has been noted that use of the undefined term, "solidly grounded circuits", has crept into our Rule. This term should read "solidly grounded systems" as defined in the Code. Therefore, I recommend the following changes for your consideration:

1. 14-102 (1) (a) In solidly grounded ~~circuits~~ **systems** rated...

and

2. 14-102 (1) (b) In solidly grounded ~~circuits~~ **systems** rated..."

Subcommittee Recommendation (Second Letter Ballot): That the two word changes shown above be approved.