



Canadian Standards Association
Mississauga, Ontario
To the Part I Committee

Subject No. 3215

Chair: M. Smith

Date: March 31, 2005

Title: Horsepower Ratings of General Use Switches, Appendix B Note to Rule 28-602(3)(a)

Submitted by: P. Desilets of Leviton Manufacturing of Canada Limited, 165 Hymus Blvd, Pointe-Claire, QC H9R 1E9, Tel: (514) 213-3363, Fax: (514) 954-1853 on November 18, 2004.

Proposal: Addition of Appendix B Note on Horsepower rating of General-use AC Switches in Rule 28-602-a):

The request covers the addition of an Appendix B note that would read:

Horsepower rating marking of General-use AC Switches is optional on the device itself but horsepower rating of device may be found on the instruction sheet or smallest unit package. For reference, as per CSA C22.2-111, for a 15-amp General-use AC Switch, horsepower rating is ½ HP @ 120 VAC or 2 HP @ 240 VAC; for a 20-amp General-use AC Switch, horsepower rating is 1 HP @ 120 VAC or 2 HP @ 240 VAC; and for a 30-amp General-use AC Switch, horsepower rating is 2 HP @ 120 VAC or 2 HP @ 240 VAC.

Reasons for Request: Horsepower rating marking on a device is optional for General-use AC Switches. Since these devices are small and there is very little space or none left for engraving with optional markings, some manufacturers have not been able to provide this rating information readily visible after the device has been installed. Some installations were rejected because such marking was not readily visible. Technical substantiation can be found in CSA C22.2-111, Section 7.2 Supplementary Markings.

The intent of this proposal is to eliminate unnecessary rejection of installations because such marking is not readily visible.

Chair's Comments: Please review and provide comments.

Would it be more appropriate if the proposed Appendix B Note applied to Rule 28-602(e).

With respect to Rule 28-602(e), is the Appendix B Note required? Based on Table 45, and the associated full load currents for the horsepower's and voltages in the proposal, the intent of Rule 28-602(e) is met without additional markings.

Subcommittee Deliberations:

There was some confusion over the reference by the chair in the initial comments. Further discussion and clarification was provided by the Chair;

The rule that the Chair had intended to reference is 28-602(3)(e).

First to clarify, as Mr. Desilets has stated, his proposal is to add an Appendix B Note for Rule 28-603(3)(a).

In the proposal there is a list of HP ratings at various voltages, which are all single phase ratings. I made the observation that it would appear that Rule 28-603(3)(e) satisfies the proposed note and that the note may not be necessary.

The note is being proposed as some inspectors have rejected installations of switches which meet the intent of the code but which are not marked.

Mr. Mancini has suggested alternate wording.

Please re-review the subject with respect to both Mr. Desilets, and Mr. Mancini's comments, and advise if you agree or disagree with the original proposal, or with the suggested change.

Eleven of fifteen members responded, two supporting the proposal and nine not supporting the proposal.

Most of the comments not in favour of the proposal stated that Rule 28-602(e) is sufficient.

Comments

1. Disagree

I agree with the Chair's comment that Rule 28-602(3)(e) and Table 45 are sufficient. However, there is confusion among some inspectors, hence the equipment rejections. Should this be addressed through education of the inspectors, or with the addition of the said paragraph to Appendix B.

I favour the education option because I am concerned this issue, and others, each requiring an addition to the CEC Part 1 for clarification only, will significantly increase the size of this publication.

There are other publications specifically designed to clarify the code rules.

2. Disagree

The horsepower ratings specified in the suggested Appendix B Note are aligned with Table 15 of C22.2 No. 111. It is correct that hp ratings are not mandatory, but are optional. If there is no hp rating marked on the switch, then unless there is a rating sheet available at the time of installation, the electrical inspector would assume that the switch does not have an hp rating.

Unfortunately, the proposed Appendix B Note does not help to solve the issue, and in fact leads to an incorrect conclusion. If you read the proposed note carefully it states "Horsepower rating marking...is optional on the device... but may be found on the instruction sheet...". One could be led to the conclusion that an hp rating is standard, but the marking is optional.

There are two options: 1) the switch may have a horsepower rating and 2) if the device is horsepower rated, the marking indicating suitability for this use may be on the device or on the packaging or on a specification sheet packed with the unit.

If we agree that such a note is necessary my preference would be something along the lines of Horsepower ratings on General-use AC Switches are optional. If a switch has been approved with an optional horsepower rating, the horsepower rating may appear on the switch, the unit package, or on a specification sheet that is packed with the switch.

3. Agree I would assume that the Chair is making reference to 28-602(a) and not (e). I do not support the Chair's comments as it does not provide enough clarification to resolve the issue. I support the submitters Appendix B Note.
(Chairs comment – I was referring to 28-602(e) & not 28-602(a))

4. Agree Provided by the submitter.
I am confused by the comments. I wish to clarify some of what has been circulating. Please review your comments accordingly if necessary.

The Rule I wish to append is 28-602-(3)-(a) and it also applies to 28-602-(3)-(e).

The proposed Appendix B Note is covering the use of an AC general purpose switch used as a motor isolating, starter or disconnect. The HP rating is mandatory for AC general purpose switches and the mandatory HP rating is as per my submission. Marking is optional. (Nino: your comment is ambivalent in that respect).

The problem we are faced as a manufacturer is that there is very little space on the device to show the markings, therefore when the installation is inspected, several inspectors turn down the installation because they do not find immediate evidence of compliance. This is what this proposal is all about. The Rule is OK, it is the extra-safe application of the Rule by Inspection Authorities which causes rejection of adequate installations (Rick: your comment about the correctness of the Rule is true, it is the application in the field that leaves to be desired).

I hope this little text helps.

There is consensus on this subject. Although there is some agreement that there is a problem in the field, the consensus is to educate rather than add additional notes to the Code.

Subcommittee Recommendation: Reject and close the subject.