CSA C83:22

Communication and power line hardware

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Technical Committee on Communication and Power Line Hardware

S. E. Dinsmore	Slacan Industries, Inc., Brantford, Ontario, Canada *Category: Producer Interest*	*Vice-Chair*
I. Albanese	TELUS, Burnaby, British Columbia, Canada	*Non-voting*
S. Bell	K-Line Insulators Ltd, Toronto, Ontario, Canada	*Non-voting*
J. Bettinelli	Polefab Incorporated, Sharon, Ontario, Canada *Category: Producer Interest*	
T. Boyachek	Manitoba Hydro, Winnipeg, Manitoba, Canada	*Non-voting*
C. Burrell	Circa/ Hydel, Vaughan, Ontario, Canada	*Non-voting*
A. J. Carreira	K-Line Insulators Limited, Scarborough, Ontario, Canada	*Non-voting*
K. R. Chaudhari	Circa Metals, Vaughan, Ontario, Canada	*Non-voting*
S. Faubert	Bell Canada, Newmarket, Ontario, Canada *Category: Carriers*	
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E. Grondin	T&D High Voltage Consulting Ltd, White Rock, British Columbia, Canada	*Non-voting*
A. P. Goel	AG Engineering Innovations, Richmond Hill, Ontario, Canada *Category: General Interest*	

R. Hine	British Columbia Hydro, Burnaby, British Columbia, Canada *Category: Electricity Transmission Interest*	
D. G. Kendall	Hydro-Québec, Montréal, Québec, Canada	
C. Kleberg	Hydro One, Toronto, Ontario, Canada *Category: Electricity Distribution Interest*	
K. Kumar	AltaLink, Calgary, Alberta, Canada *Category: Electricity Transmission Interest*	
D. Ladin	Kinectrics Inc., Toronto, Ontario, Canada *Category: General Interest*	
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J. A. McFadgen	Nova Scotia Power Inc., Halifax, Nova Scotia, Canada *Category: Electricity Distribution Interest*	
R. McKeown	Toronto Hydro-Electric System LTD, Toronto, Ontario, Canada	*Non-voting*
G. Migirditsian	Hydro-Québec-Distribution, Montréal, Québec, Canada *Category: Electricity Distribution Interest*	
M. R. Murphy	Newfoundland Power Inc., St. John's, Newfoundland and Labrador, Canada *Category: Electricity Transmission Interest*	
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D. R. Orr	Manitoba Hydro, Winnipeg, Manitoba, Canada *Category: Electricity Distribution Interest*	

Patterson	Calgary, Alberta, Canada *Category: General Interest*	
I. Pollock	Preformed Line Products (Canada) Limited, Cambridge, Ontario, Canada *Category: Producer Interest*	
T. Walker	TELUS, Calgary, Alberta, Canada *Category: Carriers*	
E. H. Wiebe	Innovative Solutions Engineering Inc., Winnipeg, Manitoba, Canada *Category: General Interest*	
J. M. Wilson	Hubbell Power Systems, Inc., Centralia, Missouri, USA	*Non-voting*
S. Amjad	CSA Group, Toronto, Ontario	*Project Manager*

Preface

This is the fifth edition of CSA C83, *Communication and power line hardware.* It supersedes previous editions published in 2017, 1996, 1987 and 1980.

Changes to this edition include the following:

a) General requirements for hardware used in the construction of communication and power lines have been updated.
b) Approximately 23 Item Standards have been updated by converting all bolt dimensions to imperial only.
c) One new Item Standard has been included: C83.149, Suspension clamp.

This Standard was prepared by the Technical Committee on Communication and Power Line Hardware, under the jurisdiction of the Strategic Steering Committee on Power Engineering and Electromagnetic Compatibility (SCOPE), and has been formally approved by the Technical Committee.

Notes:

1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
3) *This Standard was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include "Request for interpretation" in the subject line:*
   a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
   b) *provide an explanation of circumstances surrounding the actual field condition; and*
   c) *where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.*

   Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are available on the* Current Standards Activities *page at standardsactivities.csa.ca.*
5) *This Standard is subject to review within five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include "Proposal for change" in the subject line:*
   a) *Standard designation (number);*
   b) *relevant clause, table, and/or figure number;*
   c) *wording of the proposed change; and*
   d) *rationale for the change.*

CSA C83:22
Communication and power line hardware

1 Scope

1.1
This Standard covers the general requirements for hardware used in the construction of communication lines and power lines including distribution and transmission lines.

1.2
Detailed requirements for individual items of hardware as numerically listed in Table 5 are covered in separate Item Standards, e.g., C83.46 for cable rack; C83.49 for strain link; and C83.75 for thimble guy rod.

Notes:

1) *Table 5 provides a numerical listing of the Item Standards and Table 6 provides a listing of Item Standards by subject.*
2) *Annexes A and B provide information on sampling and inspection of line hardware. Annexes A and B are included to assist those unfamiliar with statistical sampling or in need of ready reference for sampling plans acceptable to industry in general. The presence of the sampling tables in the appendices should not be thought to preclude the use of any other sampling plans that will satisfy the AQL requirements specified in the Standard for inspection purposes.*
3) *Annex C provides a cross reference of comparable Standards and property classes for metric and imperial fasteners. It is intended to be referred to and accepted by the manufacturer and purchaser until such time as metric fasteners become readily available.*
4) *Annexes D and E provide information for the corona testing of transmission line hardware fittings.*
5) *Annex F provides design rationale for the transmission line fittings.*
6) *Annex G provides recommendations for the everyday load limits for threaded items in tension.*
7) *Annex H provides information on hardness measurements for process control of steel items.*
8) *For information on grades of construction and strength requirements for overhead lines, see CSA C22.3 No. 1.*

1.3
In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the Standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the Standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.