PROCESS INDUSTRY PRACTICES

COMPLETE REVISION
July 2018

Electrical

PIP ELSSG01
Design and Fabrication of Low-Voltage Metal-Enclosed AC Power Circuit Breaker Switchgear

PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

In an effort to minimize the cost of process industry facilities, this Practice has been prepared from the technical requirements in the existing standards of major industrial users, contractors, or standards organizations. By harmonizing these technical requirements into a single set of Practices, administrative, application, and engineering costs to both the purchaser and the manufacturer should be reduced. While this Practice is expected to incorporate the majority of requirements of most users, individual applications may involve requirements that will be appended to and take precedence over this Practice. Determinations concerning fitness for purpose and particular matters or application of the Practice to particular project or engineering situations should not be made solely on information contained in these materials. The use of trade names from time to time should not be viewed as an expression of preference but rather recognized as normal usage in the trade. Other brands having the same specifications are equally correct and may be substituted for those named. All Practices or guidelines are intended to be consistent with applicable laws and regulations including OSHA requirements. To the extent these Practices or guidelines should conflict with OSHA or other applicable laws or regulations, such laws or regulations must be followed. Consult an appropriate professional before applying or acting on any material contained in or suggested by the Practice.

This Practice is subject to revision at any time.

PRINTING HISTORY

September 1997	*Issued*	*July 2018*	*Complete Revision*
October 2004	*Complete Revision*		
October 2010	*Complete Revision*		

Not printed with State funds

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1. Scope

This Practice describes the requirements for metal-enclosed power switchgear assemblies employed in three-phase AC electrical systems having a voltage not greater than 1000 volts and located in a nonclassified area.

2. References

Applicable parts of the following Practices and industry codes and standards shall be considered an integral part of this Practice. The edition in effect on the date of contract award shall be used, except as otherwise noted. Short titles are used herein where appropriate.

2.1 Process Industry Practices (PIP)

- PIP ELSBD01 - *Design and Fabrication of Metal-Enclosed Nonsegregated-Phase Bus Duct Assemblies*
- PIP ELSBD01D - *Data Sheet for Design and Fabrication of Metal-Enclosed Nonsegregated-Phase Bus Duct Assemblies*
- PIP ELSBD02 – *Design and Fabrication of Metal-Enclosed Cable Bus Assemblies*
- PIP ELSBD02D – *Data Sheet for Design and Fabrication of Metal-Enclosed Cable Bus Assemblies*
- PIP ELSGS01 - *Design and Fabrication of High-Resistance Grounding System (600 Volts or below)*
- PIP ELSGS01D - *Data Sheet for Design and Fabrication of High-Resistance Grounding System (600 Volts or below)*
- PIP ELSSG12 - *Design and Fabrication of Outdoor Enclosures for Motor Controllers and Switchgear*

2.2 Industry Codes and Standards

- American National Standards Institute, Inc. (ANSI)
  - ANSI Z535.4 - *American National Standard for Product Safety Signs and Labels*
- American Society for Testing Materials (ASTM)
  - ASTM D1535-08 - *Standard Practice for Specifying Code by the Munsell System*
- American Society of Civil Engineers
  - ASCE/SEI 7 - *Minimum Design Loads for Building and Other Structures*
- Institute of Electrical and Electronic Engineers (IEEE)
  - IEEE C37.13 - *Standard for Low-Voltage AC Power Circuit Breakers Used in Enclosures*
  - IEEE C37.16 - *Standard for Preferred Ratings, Related Requirements, and Application Recommendations for Low Voltage AC (635 V and below) and DC (3200 V and below) Power Circuit Breakers*
  - IEEE C37.17 - *Standard for Trip Systems for Low Voltage (1000V and below) AC and General Purpose (1500 V and below) DC Power Circuit Breakers*
  - IEEE C37.20.1 - *Standard for Metal-Enclosed Low-Voltage Power Circuit-Breaker Switchgear*