



PROCESS  
INDUSTRY  
PRACTICES

September 2022

**Electrical**

**PIP ELTFT07**  
**Low Voltage Molded Case**  
**Circuit Breaker Maintenance**

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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 materials 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.

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### **PUBLISHING HISTORY**

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### Appendix A – Infrared Measurement Correction Data

#### Data Forms

ELTFT07-T01 – Low Voltage Circuit Breaker  
Maintenance

ELTFT07-T02 – Low Voltage Circuit Breaker  
Infrared Thermography Assessment

## 1. Scope

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This Practice covers minimum requirements for the maintenance of low voltage molded case circuit breakers for both thermal-magnetic and magnetic only circuit breakers.

## 2. References

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Applicable parts of the following industry codes and standards and publications 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.

### Industry Codes, Standards, and Publications

- Institute of Electrical and Electronic Engineers (IEEE)
  - IEEE 1458 – *IEEE Recommended Practice for the Selection, Field Testing, and Life Expectancy of Molded Case Circuit Breakers for Industrial Applications*
- InterNational Electrical Testing Association (NETA)
  - ANSI/NETA MTS – *Standard for Maintenance Testing Specifications for Electrical Power Equipment and Systems*
- National Fire Protection Association (NFPA)
  - NFPA 70 – *National Electric Code (NEC)*
  - NFPA 70B – *Recommended Practice for Electrical Equipment Maintenance*
  - NFPA 70E – *Standard for Electrical Safety in the Workplace*
- National Electrical Manufacturers Association (NEMA)
  - ANSI/NEMA AB 4 – *Guidelines for Inspection and Preventive Maintenance of Molded Case Circuit Breakers Used in Commercial and Industrial Applications*
- Publications
  - [1] *The New Weibull Handbook* – Dr. Robert B. Abernethy, Fourth Edition 2002
  - [2] *A Switch in Time, The Complete Guide to Electrical Insulation Testing* – Megger, 2017
  - [3] *A Guide to Low Resistance Testing* – Megger, 2017
  - [4] *Field Testing and Maintenance Guide* – Schneider Electric, Bulletin 0600IB1201, 2013
  - [5] *Applying Temperature Standards to IR Inspections of Electrical Systems* – Paul Grover, Maintenance Technology October 1993