

**The Builders Hardware Manufacturing Association**  
***BHMA Hardware Highlights***  
**For**  
**ANSI/BHMA A156.23 -2017**  
**ELECTROMAGNETIC LOCKS**

A156.23-2017 establishes requirements for electromagnetic locks and includes cyclical, dynamic, operational, strength and finish tests. This product is used for access control. For further information about electromagnetic locks, consult the full standard, ANSI/BHMA A156.23 for Electromagnetic Locks.

BHMA has created this series of *Hardware Highlights* to provide useful, accessible information about Builders Hardware for architects, specifiers, builders, building code officials – anyone with an interest in the devices that hang, control, secure, and trim the doors.

BHMA is the North American Trade Association, which represents almost all of the North American manufacturers of Builders Hardware. One of their main activities since 1983 has been the development and maintenance of ANSI-approved standards for 35 separate product categories.

**Product Performance** – Purchasers of Bored Locks certified to A156.23 (<http://www.buildershardware.com/cpd>) can be assured their products will perform to their expectations.

Below are an explanation and some examples of the evaluations conducted for certification:

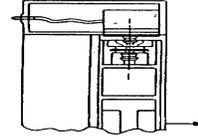
DURABILITY	STRENGTH AND SECURITY	ELECTRICAL TESTS	APPEARANCE
Obviously building products are expected to last a long time and builders hardware is no exception. Grade 1 electromagnetic locks, for example, must withstand <i>one million cycles</i> of opening and closing and continue to meet electrical and strength requirements.	Holding force and impact resistance are among the tests performed to ensure the locks are capable of providing the required strength and security. The product is rated in increments; holding force for example, starts at 500 pounds, and continues through 2000 and beyond.	Five separate electrical tests are conducted to address the reliability and operation of the product: Residual magnetism Over voltage Inductive kickback Dielectric voltage withstand and Temperature rise	An additional duty of builders hardware is to be aesthetically attractive, and stay that way. Electromechanical locks are required to pass salt spray testing and humidity testing per ANSI/BHMA A156.18-2006 for Materials and Finishes.

**Building Codes:** Builders hardware provides several attributes that are essential to building safety and performance, including egress and fire protection. BHMA electromagnetic locks are designed to comply with all applicable requirements. Electromagnetic locks used on labeled fire door assemblies shall be listed or labeled for fire doors by a nationally recognized independent testing laboratory and be subject to a periodic in-plant follow-up inspection service.

**Sustainability:** Locksets contribute to building sustainability through their verified durability, as well as material characteristics such as recycled content and recyclability. The reliable closing and sealing of openings can also contribute to energy conservation. BHMA has developed Product Category Rules, which will further define sustainability requirements and guide life cycle assessments and environmental performance declarations.

**Type Numbers:** Another significant contribution of standards for product specification is a numbering system for electromagnetic lock types. Please consult A156.23 for the full list; examples is provided here:

E08571  
Shear lock is mortised in header. Armature recessed in top of door. For out swinging doors. Lock and armature are in shear (parallel) contact when locked.



E08531  
Lock mounted on face of header. Armature mounted on pull side of door with an angle bracket.

