



NYC Department of Buildings
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Report of Materials and Equipment Acceptance Division

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use subject to the terms and conditions contained herein.

MEA 367-02-M Vol. 2

Manufacturer: Inclinor Company of America, 601 Gibson Blvd., Harrisburg, PA 17104

Trade Name(s): Inclinor

Product: Elevator hoist way door electro-mechanical interlock assemblies – MEA Index #240 – Elevator Interlock

Pertinent Code Section(s): 27-990

Prescribed Test(s): RS 18-1 (ANSI A17.1), UL 104

Laboratory: Canadian Standard Association

Test Report(s): File No. 1219832 (LR92179), dated September 4, 2002 and revised August 6, 2007.

Description: The 24VAC EM-7 and 24VAC/24VDC EM-6 hoist way door combination mechanical lock and electric contact consists of a rotating steel cam with 2 steel pins and a steel lock pin which is engaged by a slot in the cam. The locking pin is lifted by a 24 volt solenoid. If the pin is up (solenoid energized), the cam is free to rotate approximately 80 degrees. If the pin is down, the cam can only rotate 30 degrees. A lock bar fastened to the door engages the cam pins as the door opens or closes and rotates the cam. As the cam rotates from closed to open or vice versa, the spring goes over the center and the cam is held in position. The interlock contains 3 switches (4 on the EM-5). Switch #1 is operated by the door and switches 24 volts to switch #2 when the door is open or to switch #3 (and switch #4) when the door is fully closed. Switch #2 is operated by the cam and operates the solenoid. Switch #3 is operated by the lock pin and completes the common hoist control safety circuit when the pin is down and in the locked position. On EM-5 models, switch #4 adds redundancy to switch #3.

With the car at landing and the door closed, the first 1/4" of door travel operated switch #1 and switches 24 volts from the hoist control safety circuit to the locking pin solenoid through switch #2. The lock pin is raised by the solenoid and the disc is free to rotate as

the door continues to open. As the cam continues to rotate, switch #2 opens causing the solenoid to de-energize. The lock pin drops and rides on the outside diameter of the cam. With the lock pin in the raised position (door unlocked), switch #3 (and switch #4 on the EM-5) is pen which disables the common control safety circuit. As the lock bar clears the lock, the spring goes slightly over the center and the cam remains in the open or unlocked position. Closing the door reverses the procedure. When in the closed position, the spring acts to maintain the door closed and switch #1 is depressed. The EM-(7,6) S1 is the same as the EM-(7,6) except for the addition of a 4th terminal and a small notch cut in the outer edge of the rotating cam. The EM-S1 is used in conjunction with a standard EM-assembly when 2 doors on the same floor are to be interlocked.

Terms and Conditions: The above-described electro-mechanical elevator door interlocking devices are accepted under the following conditions:

1. The interlock device shall be installed and adjusted as per manufacturer's instruction and subject to the approval of the Elevator Inspection Department at the installation site.
2. Approval of all electrical equipment, apparatus, materials and devices shall be obtained from the Department's Electrical Advisory Board before installation.
3. All shipments and deliveries of such equipment shall be provided with a metal tag, suitably placed, certifying that the equipment shipped or delivered is equivalent to that tested and accepted for use, as provided in Section 27-131 of the New York City Building Code.

Note: In accordance with Section 27-131(d), all materials tested and accepted for use shall be subject to periodic retesting as determined by the Commissioner; and any material which upon retesting is found not to comply with Code requirements or the requirements set forth in the approval of the Commissioner, shall cease to be acceptable for the use intended. During the period for such retesting, the Commissioner may require the use of such material to be restricted or discontinued if necessary to secure safety.

Final Acceptance February 21, 2008

Examined By Steven Derkhdan