BEYOND SECURITY

E-5700 & E-3700 Series Locks
CSI Specifications

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Keyless, electronic access control using HID Prox credential (cards, fobs, tags, etc.) and/or PIN (Personal Identification Number)

1.2 RELATED SECTIONS

A. Section 08710 – Door Hardware

1.3 REFERENCES

A. BHMA (Builders Hardware Manufacturers Association) – A156 series

B. DHI (Door and Hardware Institute) – Standard hardware positioning dimensions

C. NFPA 80 – Fire Doors and Windows

D. NFPA 101 – Life Safety Code

E. NFPA 252 – Fire Tests of Door Assemblies

F. ANSI/NFPA Pamphlet No. 80, Table 2-8A – Installation of Swinging Doors with Builders Hardware

G. ANSI A 117.1 – Accessible and Useable Buildings and Facilities

H. A156.1 – American National Standard for Materials and Finishes

I. IEEE 802.15.4 – ZigBee Wireless Mesh Networks

1.4 REGULATORY AGENCIES

A. Hardware for Doors in Fire Separations and Exit Doors: Conform to ACO (American Certification Organization) accredited by UL (Underwriters Laboratories Incorporated)

B. ADA (Americans with Disabilities Act)

1.5 SUBMITTALS

A. Section 01300 – Submittals: Submit one (1) sample of each hardware component with each specified finish

B. Samples:

1. Identify each sample by label indicating applicable manufacturer's brand number, required finish, and hardware package number

2. Approval samples will be returned for incorporation into the work

C. Hardware List:

1. Indicate specific hardware; identify make, model, material, function, size, finish, and other pertinent information

1.6 CLOSEOUT SUBMITTALS

A. Section 01780 – Closeout Submittals: Requirements for operation and maintenance manual

B. Provide operation and maintenance data for electronic access control for incorporation into manual

C. Advise maintenance staff regarding proper care, cleaning, and general maintenance

1.7 QUALITY ASSURANCE

A. Perform Work in accordance with the following requirements:

1. ANSI-BHMA, A156 Series
2. DHI – A115 Series
3. NFPA 80
4. NFPA 101
5. NFPA 252

B. Hardware Supplier Qualifications: Company specializing in supplying [commercial] [institutional] [_____] door hardware with [_____] years [documented] experience. [approved by manufacturers]

C. Hardware Supplier Personnel: Employ [an Architectural Hardware Consultant (AHC)] [a qualified person] to assist in the Work of this section

1.8 EXTRA MATERIALS

A. Section 01780 – Closeout Submittals: Provide maintenance materials

1.9 DELIVERY AND STORAGE

A. Section 01600 – Product Requirements: Deliver, store, handle, and protect products

B. Deliver materials in original package with identification labels intact

C. Package each item of hardware including fastenings, separately or in like groups of hardware. Label each package as to item definition and location

D. Store finishing hardware in locked, clean, dry area

1.10 PROJECT CONDITIONS

A. Section 01300 – Administrative Requirements: Coordination and meetings

B. Coordinate the Work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door/frame hardware and recessed items

A.11 **WARRANTY**

A. Section 01700 – Execution Requirements: Warranties

B. Manufacturer's Warranties:
   1. [three (3)] [_____] year limited warranty on Locks and Controllers that begins once power is applied
   2. [one (1)] [_____] year limited warranty on optional Wireless electronic accessories

1.12 MAINTENANCE PRODUCTS

A. Section 01700 – Execution Requirements: Operation and maintenance data

B. Provide special tools applicable to each different or special hardware component

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Acceptable Manufacturer: Kaba ADS Americas

B. Substitutions: Not permitted

C. Access Control products must be manufactured in the USA

D. Access Control products must meet BAA (Buy American Act) and NAFTA Guidelines

E. Wireless Systems must use ZigBee-based Gateways/Routers for communications between locks/controllers and stand-alone or networked PCs

2.2 STAND-ALONE ELECTRONIC ACCESS CONTROL

Stand-alone Electronic Access Control for High Security Applications

A. Access Control System:
   1. Access Credential:
      Single Credential – Token (HID Prox Card, Fob, or Tag) or PIN
      Dual Credential – PIN followed by Token
   2. ID Card Enrolling Station: Card Reader/Enroller that supports HID Prox Credentials
   3. Manual Lock Programming: 300 users at the reader using keypad in LearnLok™ mode
   4. Software Lock Programming and Auditing Unit: Laptop or Netbook PC with IrDA communications
   5. Number of Users: 300 in LearnLok mode; 3,000 with software
   6. Audit Trail: 30,000 most recent events, including Key Override use

7. Authority Levels (6) – Allows control of who has access to specific lock operations:
   Master Guest Visitor/User
   Manager Service User
   Access User Maintenance Unit (PC M-Unit) User
8. Programmed Scheduling: Up to 16 different access schedules per lock, with up to 32 different holiday / vacation blocks per lock
9. Passage Mode Options (5):
   First manager or privileged-user in
   Automatic according to access schedules
   Manually toggled on/off at the lock keypad with preset duration from 1-24 hours
   Wirelessly toggled on/off with selectable duration from 1-24 hours
   Wirelessly using Global Passage command for Emergency access to all locks
10. Lockdown Mode Options (3)
   Manually toggled on/off at the lock keypad
   Wirelessly toggled on/off for each lock
   Wirelessly using Global Lockdown command for Emergency Lockdown of all locks

B. Stand-alone and Wireless Locks – General Information:
1. Style – HID Prox Card Reader and vandal-resistant Keypad with solid-metal pushbuttons
2. Lockset Electronic: ANSI/BHMA A156.25, Grade 1 Certification
3. Extra heavy-duty solid cast housings and solid cast levers, wear-tested for extensive use in both indoor and outdoor applications
4 Mounting: All electronics should be on the unsecured side of the door to prevent cables or wires through the door
   Batteries and other powering options should be located on the secured side of the door to prevent tampering and use by unauthorized persons
   All electronics should be on the unsecured side of the door to prevent cables or wires through the door
5. Standard Lock Finish: Satin Chrome 26D (626) housings & levers
6. Other Finishes Available: Bright Brass 03 (605), Satin Brass 04 (606), Bright Chrome 026 (625), and Dark Bronze (744-simulates 10B/613) housings and levers with Satin Brass (606) pushbuttons, Black (676) housings with Satin Chrome levers and accents
7. Items supplied with: Lock Assembly, Installation Manual, Template, Quick Reference Guide, Operations Manual, and required Hardware
   Additional Items supplied with Key-in-Lever Cylinder model ONLY:
   Universal Kaba 1599 6-pin cylinder with tailpiece, four (4) additional tailpieces, and two (2) nickel silver keys
8. Key Override: Key-in-lever cylinders, small format interchangeable cores, large format removable cores; Key Override use is indicated in audit events log
9. Authority Levels: Six (6) different Options:
   Master Level – Performs all set-up and programming functions
   Manager Level – Administers common programming functions
   Access User Level – Entry granted with valid credential
   Service Level – PIN or card for single event, or up to 4-day access with no expiry
   Guest Level – 365 day durations
   Maintenance Level – no access is granted, but information can be uploaded/ downloaded from the lock
10. User Parameters:
   PIN Length – adjustable to accept 4 to 8 digits
   Anti-Tamper Lockout – adjustable from 3 to 9 invalid attempts, with an adjustable period of 3 to 90 seconds

Re-Lock Time – adjustable from 2 to 20 seconds

11. Power: 3 Power Options:
    a. Standard – 4AA batteries (up to 120,000 cycles)
    b. High Capacity Battery Kit – 4 cells (up to 400,000 cycles—E-Plex 5700 only)
    c. 12-24 VDC Power Interface from standard off-the-shelf power interface units
12. Certification and Testing

ANSI-BHMA Certified:

A156.2	Cylindrical Locks	Grade 1
A156.3	Exit Device Locks	Grade 1
A156.13	Mortise Locks	Grade 1
A156.25	Electronic Locks	Grade 1

Accessibility Standard:
Americans with Disabilities Act (ADA) Compliant
Fire Rating: Three (3) hour UL/ULC fire door rating for “A” rated doors
Environmental: Indoor /Outdoor approved
Front Housing: -31°F (-35 °C) to +151°F (66 °C)
Rear Housing: -31°F (-35 °C) to +130 °F (55 °C)

C. Locks – Cylindrical:
1. Style – HID Prox Card Reader and vandal-resistant Keypad with solid-metal pushbuttons
2. Locking Device Options:
   Cylindrical ½" (13mm) throw latch with floating face plate and 2¾" (70mm) bkst
   Cylindrical ½" (13mm) throw latch with floating face plate and $2^{3}/_{8}$" (60mm) bkst
   Cylindrical ¾" (19mm) throw latch with floating face plate and 2¾" (70mm) bkst
3. Backsets:
   2-¾" (70mm), $2-^{3}/_{8}$"(60mm); 3-¾" (95mm) and 5" (130mm) extensions available
4. Lockset Cylindrical: ANSI/BHMA A156.2, Grade 1 Certification
5. Extra heavy-duty cylindrical drive wear-tested for extensive use in both indoor and outdoor applications; knobs available if required
6. Key Override: Key-in-lever cylinders, small format interchangeable cores, large format removable cores
7. Lock Functions: Cylindrical, Cylindrical with Privacy
8. Optional Wireless Upgrade Kits available with inside or outside antennas

D. Locks – Mortise:
1. Style – HID Prox Card Reader and vandal-resistant Keypad with solid-metal pushbuttons
2. Locking Device Options:
   Mortise ASM, 1 ¼" Face Plate No Deadbolt (Non Handed, Field Reversible)
   Mortise ASM, 1 ¼" Face Plate with Deadbolt (Non Handed, Field Reversible)
3. Backset: 2-¾" (70mm)
4. Lockset ASM Mortise: ANSI/BHMA A156.13, Grade 1 Certification
5. Extra heavy-duty ASM Mortise wear-tested for extensive use in both indoor and outdoor applications
6. Key Override: Key-in lever cylinders, small format interchangeable cores, large format removable cores
7. Lock Function Customization: Mortise Locks are easily customized on-site via keypad to work as various BHMA lock functions, eliminating the requirement to stock multiple locks to meet different applications. Built-in Options include: Entry, Privacy, and Residence lock (thumbturn required for Privacy and Residence functions)
8. Optional Wireless Upgrade Kits available with inside or outside antennas

9. Back to Back Option: Entry/Exit, per BHMA F30 Asylum Function
   Power to both independent housings is supplied by a battery pack behind the mortise faceplate. Separate housings can be programmed alike or as independent openings

E. Locks – Exit Trim:
1. Style – HID Prox Card Reader and vandal-resistant Keypad with solid-metal pushbuttons
2. Exit Device compatibility: One Lock Model (SKU) must be universally compatible with all of the following Exit Devices:
   Arrow S1250
   Arrow S3883F/S3800
   Black & Decker (K-2) QED 111/112
   Cal Royal 9800
   Cal Royal 2200
   Corbin/Russwin® ED5200/5200A
   Detex 1001 BP1
   Detex® 10/F10 Series
   Dorex 8500R/8500F
   Dorex 9500PR/9500FR
   Dorma 9300/9300F
   Monarch® 18R*, F18R*
   Precision® 21/FL21
   Sargent 2828
   Sargent 3828
   Sargent® 8810E/8800
   Sargent 8888
   VonDuprin 22/22F
   Von Duprin® 98/98F
   Von Duprin® 99/99F
   Von Duprin XP98/99
   Yale® YME2100/2100
   Yale 7100
3. Backset: Dictated by chosen Exit Device Manufacturer
4. Exit Trim: ANSI/BHMA 156.3, Grade 1 Certification
5. Spring loaded tailpiece interfaces with all specified Exit Devices
6. Key Override: Key-in-lever cylinders, small format interchangeable cores, large format removable cores
7. Lock Function: Exit Trim
8. Optional Wireless Upgrade Kit available with inside antenna

F. Locks – Narrow Stile:
1. Style – HID Prox Card Reader and vandal-resistant Keypad with solid-metal pushbuttons
2. Interfaces with Adams Rite® locking devices below (Not Included):
   1850, 1950, 4070, 4510, 4520, 4530, 4710, 4720, 4730, 4900, 4920AN, MS 1850S, MS 1950S Series, and 8400
3. Backset: $3^{1}/_{32}$" minimum
4. Stile Thickness: 1 ¾" (44 cm) maximum
5. One model with add-on kit adapts to Adams Rite Deadlock or Deadlatch devices
6. Tested to ANSI-BHMA Grade 1 cycle tests: 1 million cycles
7. Retains existing AR inside trim and its functionality
8. Key Override: Mortise cylinder included with Schlage C keyway, optional mortise shell

accommodate small format interchangeable cores
9. Lock Function: Narrow Stile door outside trim; fits AR Deadlatch or Deadlock
10. Optional Wireless Upgrade Kit available with inside antenna

G. Locks – Stand-alone Access Controller (SAC):
1. Style – HID Prox Card Reader and vandal-resistant Keypad with solid-metal pushbuttons
2. Locking Device compatibility: Magnetic Locks, Electric Strikes, Parking Gates, Turnstiles, etc.
3. Power Requirement: 12-24 VDC with battery backup (Securitron, Altronics, etc)
4. Tamper-Proof Indicator: Prevents Access if Keypad/Reader is vandalized
5. Alarm Shunt: Normally Open or Normally Closed with field-selectable duration settings
6. Contact Closure: Normally Open or Normally Closed
7. Lock Function: Stand-alone Access Controller or Keypad/Reader
8. Optional Wireless Upgrade Kit available with outside antenna

H. System Software – Optional
1. Host Application PC Server with multiple workstations support using Thin Client interface over network (for same machine)
2. SQL database with critical data components encrypted for highest security
3. Wireless Option included which enables Wireless management and programming of locks with wireless conversion kits installed using ZigBee-based Gateways and Routers.
4. Programmed Scheduling: Up to 16 different access schedules per lock, with up to 32 different holiday / vacation blocks per lock
5. Passage Mode Options Using Software:
   First manager or privileged-user in
   Automatic according to access schedules
   Global passage using Wireless Option
6. Access Groups allow single point and click assignment of multiple Users to multiple doors with their respective access rights and schedules
7 Allows up to 20,000 users at a time to be imported from existing databases using Import Utility Feature
8. Audit capability can process up to 30,000 events from each lock with sorting and filtering to create presentation-ready reports

2.2 USE OF FASTENERS AND FUNCTIONAL DETAILS

2.2.0 Fasteners supplied and recommended by manufacturer must include one bolt that transfers power from the secured side of the door and compensates for expansion and contraction of both metal and wood doors. Cables or wires through the door are not allowed

2.2.1 Do not over tighten Kaba E-Plex® 5000 Series Cylindrical Lock: Do not over tighten the LectroBolt™ that transfers power from the secured side of the door

2.2.1.1 Numeric Keypad: Vandal resistant, 12 button, metal keys with key override. Records [3] [4] [5] [6] [7] [8] [9] attempts

2.2.1.1.1 Optional Microsoft® Windows®-based Enterprise software with included Wireless Option: retrieves audit trail, schedules, holidays, manages 3,000 users per door and up to 10,000 doors per site. Wireless Option adds real-time monitoring, immediate audit retrieval, remote

programming, plus Global Emergency Commands (Lockdown and Passage).

2.2.1.2 Lock Housing: Extra heavy-duty solid cast housing, cast stainless steel cylindrical drive components, solid cast zinc lever, 70 mm (2-3/4 inch) backset

2.2.1.2.1 Function Options:

1 Exit Trim (E.T.)
3 Cylindrical Lock (cyl)
5 Cylindrical with Privacy (cyl)
6 American Steel Mortise (ASM)

2.2.1.2.2 Electronics: Battery with [audible] [visual] and optional remote [wireless] indicator for low life Controller – 12-24 volts DC; battery backup required

2.2.1.2.3 Locking Device Options:

Exit Trim, Universal – interfaces with over 15 different exit device models
Cylindrical ½" (13mm) throw latch with floating face plate and 2¾" (70mm) bkst
Cylindrical ½" (13mm) throw latch with floating face plate and 2 3/8" (60mm) bkst
Cylindrical ¾" (19mm) throw latch with floating face plate and 2¾" (70mm) bkst
Mortise ESM, LH – 1" (25mm) Face Plate No Deadbolt
Mortise ESM, RH – 1" (25mm) Face Plate No Deadbolt
Mortise ESM, LH – 1" (25mm) Face Plate With Deadbolt
Mortise ESM, RH – 1" (25mm) Face Plate With Deadbolt
Mortise ASM, 1 ¼" Face Plate No Deadbolt (Not Handed)
Mortise ASM, 1 ¼" Face Plate With Deadbolt (Not Handed)
[3-hour] [__] UL/ULC Fire Door Rating

2.2.1.2.4 Optional Features:

Remote Unlock
12-24 VDC Power Interface Kit
High Capacity Battery Kit

2.2.1.2.5 Strike: ASA and standard strike plate

2.2.1.2.6 Door Thickness: 1-3/8 inch (35 mm) to 2-1/4 inch (57 mm) [_____] (specify)

2.2.1.2.7 Door handing: Non-handed, Field Reversible

2.2.1.2.8 E-Plex 5700 Weight: Cylindrical and Exit Trim Models 9.5 lbs. (4.3 kg)
Mortise Models 11.5 lbs (5.2 kg)
E-Plex 3700 Weight: 5.1 lbs. (2.3 kg)

2.2.1.3 Finished to ANSI/BHMA standard for Materials and Finishes:

2.2.1.4 Finish Options:

605 Bright Brass (03) – PVD finish
606 Satin Brass (04) – PVD finish
625 Bright Chrome (026)
626 Satin Chrome (26D)

676 Black (19) (with Satin Chrome Accents)
744 Dark Bronze with Brass accents (simulated 10B/613)

2.3 ACCESSORIES

2.3.0 Fasteners: Must include at least one bolt that transfers power from the secured side of the door and compensates for expansion and contraction of both metal and wood doors by maintaining the fastener in constant tension from both sides of the door

2.3.0.1 Screws, bolts, expansion shields and other fastening devices required for installation and smooth operation of hardware

2.3.0.2 Exposed fastening devices to be compatible with hardware finish

2.3.1 Key Override Function Options:
K-I-L Kaba Cylinder (Kaba 90 Keyway) Included (XK)
K-I-L Kaba Cylinder (Schlage C Keyway) Included (XS)
I/C Best & Equivalents (6 or 7 Pin Length) , Cylinder Not Included (B)
R/C Corbin/Russwin , Cylinder Not Included (C)
R/C Medeco®/ASSA/Yale, Cylinder Not Included (M)
R/C Sargent, Cylinder Not Included (R)
R/C Schlage, Cylinder Not Included (S)

2.3.1.1 [Standard key-in-lever cylinder.] [Removable core cylinder.]

2.3.1.2 Compatible with cylinders from Manufacturer: [ASSA,] [Abloy®,] [Corbin/Russwin,] [Medeco,] [Sargent,] [Schlage,] [Schlage Primus,] [Arrow,] [Australian,] [Kaba,] [Marks]

2.3.1.3 Interchangeable cores: small format Best and compatibles (6 or 7-pin length)

2.3.1.4 Removable cores: [ASSA,] [Corbin/Russwin,] [Medeco,] [Schlage,] [Yale]

2.3.1.5 Key override use indicated in audit events log

2.3.2 Type and Finish: Same surface finish with compatible material as substrate

2.3.3 Wireless Option:

2.3.3.1 Optional Wireless Hardware Conversion Kits for all lock types and controllers

2.3.3.2 Gateway/Router Unit for Wireless communications between locks/controllers and stand-alone or networked PCs

2.4 FABRICATION

2.4.0 Fabricate keyless lock with clutch free, direct-drive design

2.4.1 Provide both Levers or Knobs:
Options: Winston Lever (WL)
Winston Knob (available with Cylindrical only) (WK)

PART 3 EXECUTION

3.1 EXAMINATION

3.1.0 Section 01700 – Execution Requirements: Verification of existing conditions before starting work

3.1.1 Verify that doors and frames are ready to receive work and dimensions are as [indicated on shop drawings.] [instructed by the manufacturer.]

3.1.2 Installation of Fasteners

3.2 INSTALLATION

3.2.0 Provide wood or metal door and frame manufacturers with instructions and templates for preparation of the work to receive hardware

3.2.1 Provide hardware manufacturers' instructions for installation of hardware components

3.2.2 Use fasteners recommended by manufacturer

3.2.3 Do not over tighten fasteners

3.3 FIELD QUALITY CONTROL

3.3.0 Section 01400 – Quality Requirements: Field inspection, testing, and adjusting

3.3.1 Architectural Hardware Consultant will inspect installation and certify that hardware and installation has been provided and installed in accordance with manufacturer's instructions [and as specified]

3.4 ADJUSTING

3.4.0 Section 01700: Adjusting installed work

3.4.1 Adjust hardware for smooth operation

3.5 PROTECTION OF FINISHED WORK

3.5.0 Section 01700: Protecting installed work

3.5.1 Do not permit adjacent work to damage hardware or finish

3.6 SCHEDULE

3.7 PROTECTION

3.7.1 Section 01700: Protecting installed work

3.7.2 Do not permit adjacent work to damage hardware or finish

END OF SECTION

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