



# ML2000 Series

## Mortise Locksets

# Product Catalog

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# Features

## ML20900 ECL & ML20600NAC Series

### Features

#### Handing

Handed; quick reversible. The lockset can be re-handed without disassembling the lockcase.

#### Door Thickness

1-3/4" (44mm) standard. Optional door thicknesses available; see Quick Codes, page 80.

#### Backset

2-3/4" (70mm).

#### Lockcase

Heavy-gauge steel, 5-7/8" (149mm) x 4" (102mm) x 15/16" (24mm).

#### Front

Heavy gauge steel, 8" (203mm) x 1-1/4" (32mm) x 3/32" (2mm).  
Accommodates flat doors and doors beveled 1/8" (3mm) in 2" (51mm).

#### Armored Front

Wrought brass, bronze or stainless steel attached by machine screws to lockcase front.

#### Latchbolt

2-piece mechanical anti-friction insert, 5/8" (16mm) x 1" (25mm) x 3/4" (19mm) throw.

#### Auxiliary Latchbolt

9/16" (14mm) effective throw and 3/8" (10mm) effective auxiliary latch deadlocking.

#### Hub

- Knob: stainless steel, 9/32" (7mm) x 9/32" (7mm).
- Lever: steel, 5/16" (8mm). (Including )

#### Spacing

C. to c. knob/lever to cylinder: 3-5/8" (92mm)  
C. to c. knob/lever to thumbturn: 2-7/16" (62mm).

#### Strike

Wrought brass, bronze or stainless steel ANSI straight lip standard, 4-7/8" (124mm) x 1-1/4" (32mm) x 1-1/8" (29mm) lip to center. Optional strikes, lip lengths and ANSI wrought strike box available; see Quick Codes, page 80.

#### Trim

Available with all ML2000 Series trim designs including the Vineyard™ Collection and the Muséo® Collection. See pages 20-62.

#### Cylinder

Brass, 6-pin, L4 keyway, 0-bitted standard. Optional cylinders available; see Quick Codes, page 72.

#### Keys

Two nickel silver standard.

#### Warranty

Ten-year limited warranty on ML2000 mortise lockset. Two-year limited warranty on electronic components.

#### Electrical Specifications (Fail Safe/Fail Secure)

12/24VDC @ 15mA Continuous  
12/24VDC Peak current draw = .5A  
(Maximum of 2 locks per 1A Power Supply)  
Monitor Switch Rating: 2 amp @ 24VDC  
Note: Operating voltage not to exceed +/- 10%.  
See Quick Codes, page 82.

#### Environmental Specifications

**Operating Temperature**  
-13°F (-25°C) to 151°F (66°C)  
**Operating Humidity**  
5% to 95% relative humidity  
non-condensing

#### Monitor Options - ML2000 and ML20900 ECL Only

##### M91 - Latchbolt Monitor

Latchbolt monitoring is a SPDT switch which monitors the full extension of the main latch. Note: See page 82 for available functions.

##### M92 - Request to Exit Monitor

Request to Exit monitoring is a SPDT switch which monitors the activation of the trim. (Both levers activate switch) Note: See page 82 for available functions.

#### M105 - Security Monitor

Security Monitor is two switches in series that monitors lock status (locked or unlocked) and Auxiliary Latch position. Note: Monitoring options may only be ordered together as follows: M91xM92, M92xM105. Recommended for fail safe applications that require monitoring of the secure side when lock loses power. See page 82 for available functions.

#### Monitor Options – ML20600 NAC only

##### Internal End-of-Line Monitoring

Monitors the line from the access control panel to the lock, eliminating the risk of undetected tampering or damage.



##### PHR – Deadbolt Privacy Function

Engaging deadbolt disables remote access control unlocking (keypad or card reader) or scheduled unlock.

### Certification/Compliance

#### ANSI/BHMA

Certified A156.13 Series 1000, operational and security Grade 1.  
Meets A117.1 Accessibility Code.

#### UL/cUL

All locks listed for A label and lesser class doors, 4' x 10' single or 8' x 10' pair. Letter F and UL symbol on armored front indicate listing. Meets requirements of UL1034.

Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and Corbin Russwin, Inc. makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire-rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings.

#### California State Reference Code

(Formerly Title 19, California State Fire Marshal Standard)

All levers with returns comply; levers return to within 1/2" of door face.

### ML20900 ECL Series Electrified Mortise Lockset

#### Simplicity

Combine simplicity and access control with the Corbin Russwin ML20900 ECL series electrically controlled mortise lock. Utilizing the proven ML2000 Series mortise lockset with the patented quick reversible latchbolt, the ML20900 series provides remote locking and unlocking. The electrified lock can be installed in a standard mortise prep with slight modification by door manufacturer. The ML20900 ECL is ideal for use where increased security is necessary at all times, such as tenant space, pharmacies, computer rooms, and high security areas.

#### Security

In applications where increased security is required, look no further than the ML2000VR Vandal Resistant Trim. This cast stainless steel trim features tapered edges, double through bolts, torx-pin tamper resistant screws and the lever remains attached to the escutcheon when the spindle is broken.

#### Aesthetics

Access control doesn't mean a loss of visual appeal. The Vineyard™ Collection and the Muséo® Collection feature beautifully designed levers, perfect for high-profile applications where pleasing aesthetics is a must.

#### Additional Features

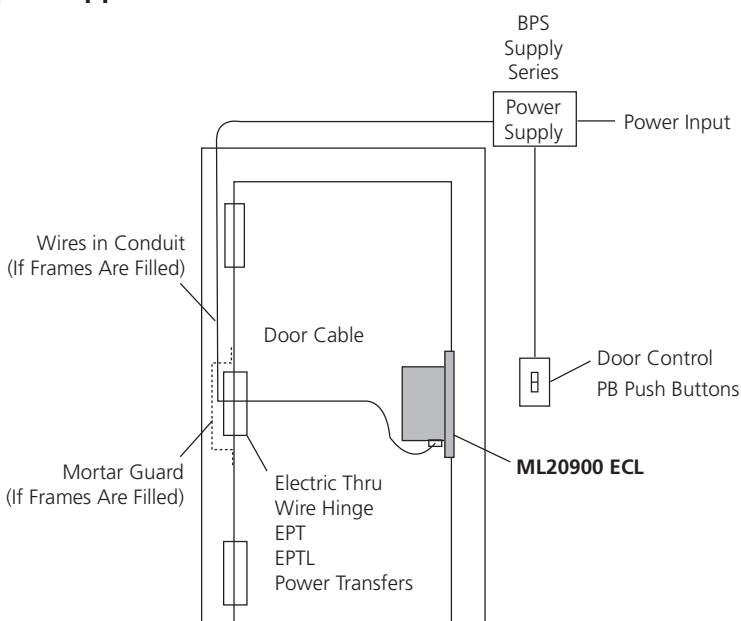
- Mechanical key override
- Patented Quick Reversible latchbolt (Patent pending and/or patent [www.assaabloydss.com/patents](http://www.assaabloydss.com/patents).)

#### Featuring EcoFlex® Technology:

- Reduces energy consumption up to 96%, as certified by GreenCircle
  - Lower operating costs
  - Assists with load reduction in optimizing energy performance credit in LEED
  - Reduces number of power supplies required
- Field configurable to fail-safe or fail-secure
- Operates from 12-24VDC, offering greater flexibility in system design
- Innovative actuator design provides superior reliability
  - Higher performance and reduced maintenance
  - Ability to have longer cable runs without negatively impacting lock function
  - Reduces risk of voltage drops and eliminates inductive kickback
  - Lower total cost of ownership

Note: EcoFlex Technology is not available with master ring cylinders. Solenoid provided.

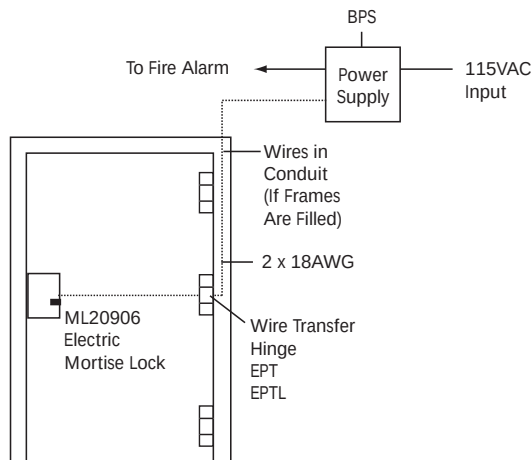
#### Typical Application



# Typical System Components (For Reference Only)

## ML20900 ECL Series

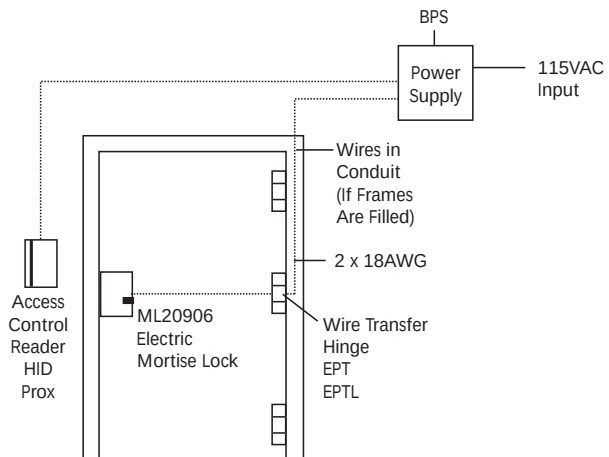
### Tower Stairwell



#### Operation:

Free egress at all times. Door is locked at all times preventing entry from the stairwell to a floor. Fire alarm activation will allow re-entry from the stairwell to the floor. Power failure will allow re-entry from the stairwell to the floor.

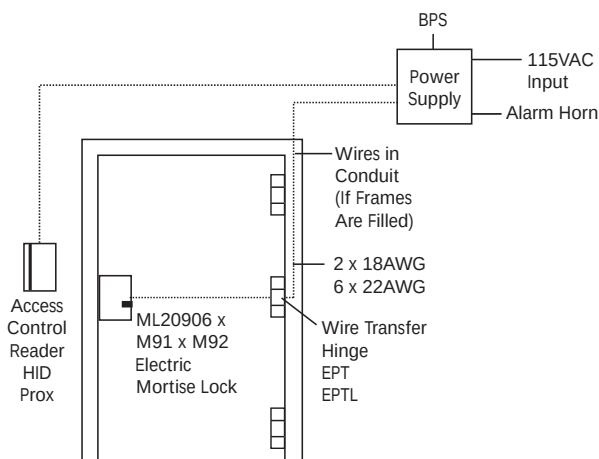
### Access Control on Employee Entrance



#### Operation:

Free egress at all times. Door is locked at all times preventing unauthorized entry. Authorized entry is permitted by presenting a valid user card.

### Controlled Entry With Alarm



#### Operation:

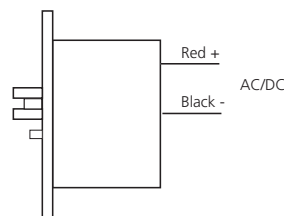
Free egress at all times. User exits through the door which triggers the M92 switch which shunts the alarm. Door is locked at all times preventing unauthorized entry. Authorized entry is permitted by presenting a valid user card. Forced entry will trigger M91 switch and activate alarm. Alarm is deactivated by a valid user card.

ElectroLynx®, a system of universal Molex® plug-in connectors and standardized color-coded wiring, makes installing electrified doorway components a snap!

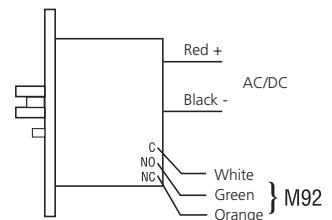


### Lock Schematics

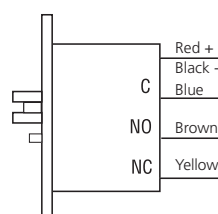
#### Power Leads



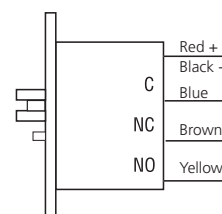
#### Power Leads x M92 (Request to Exit)



#### Power Leads x M91 (Latchbolt Monitor)



#### Power Leads x M105 (Security Monitor)



Consult factory for electrical system layouts, riser and wiring diagrams.

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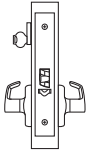
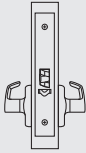
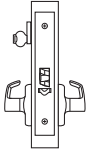
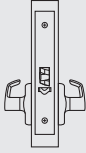
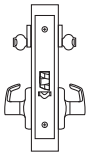
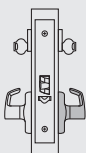
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# Functions

## ML20900 ECL Series

### Fail Safe

The following functions are unlocked when power is off and locked when the power is on.

| Outside                                                                                    | Inside                                                                                                                                                                            | Series/Function | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>A01   |                                                                                                  | ML20906 x SAF   | <ul style="list-style-type: none"> <li>Latchbolt by grip either side, unless outside grip is locked by energizing lock.</li> <li>Latchbolt by key outside when lock is energized.</li> <li>Inside grip always free.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>                                                                                                                                                                                                                                                                              |
|                                                                                            |                                                                                                  | ML20907 x SAF   | <ul style="list-style-type: none"> <li>Latchbolt by grip either side, unless outside grip is locked by energizing lock.</li> <li>Inside grip always free.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>                                                                                                                                                                                                                                                                                                                                        |
| <br>A01  |                                                                                                 | ML20914 x SAF   | <ul style="list-style-type: none"> <li>Latchbolt by grip either side, unless both grips are locked by energizing lock.</li> <li>Latchbolt by key outside when lock is energized.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>                                                                                                                                                                                                                                                                                                                 |
|                                                                                            |                                                                                                | ML20915 x SAF   | <ul style="list-style-type: none"> <li>Latchbolt by grip either side, unless both grips are locked by energizing lock.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                           |
| <br>A01 | <br><br>A01 | ML20932 x SAF   | <ul style="list-style-type: none"> <li>Latchbolt by grip either side, unless both grips are locked by energizing lock.</li> <li>Latchbolt by key inside or outside when lock is energized.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>                                                                                                                                                                                                                                                                                                       |
| <br>A01 | <br><br>A01 | ML20987 x SAF   | <ul style="list-style-type: none"> <li>Latchbolt by grip outside, unless outside grip is locked by energizing lock.</li> <li>Latchbolt by key both sides.</li> <li>Inside grip always rigid.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul> <p>Notes:</p> <ul style="list-style-type: none"> <li>- This function does not allow free egress and can pose a life safety hazard in the event of an emergency. Installation should be in accordance with approved codes only.</li> <li>- Not available with L, R, or V escutcheon trim.</li> </ul> |

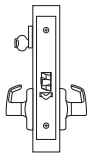
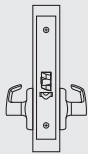
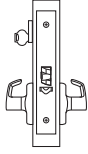
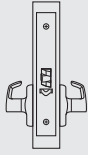
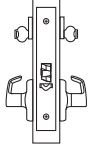
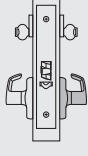
 Indicates rigid grip.

# Functions

## ML20900 ECL Series

### Fail Secure

The following functions are locked when power is off and unlocked when the power is on.

| Outside                                                                                    | Inside                                                                                                                                                                            | Series/Function | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>A01   |                                                                                                  | ML20906 x SEC   | <ul style="list-style-type: none"> <li>Latchbolt by grip either side only when lock is energized.</li> <li>Outside grip locked when lock is not energized.</li> <li>Latchbolt by key outside when lock is not energized.</li> <li>Inside grip always free.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>                                                                                                                                                                                                                                                                     |
|                                                                                            |                                                                                                  | ML20907 x SEC   | <ul style="list-style-type: none"> <li>Latchbolt by grip either side only when lock is energized.</li> <li>Outside grip locked when lock is not energized.</li> <li>Inside grip always free.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>                                                                                                                                                                                                                                                                                                                                   |
| <br>A01  |                                                                                                 | ML20914 x SEC   | <ul style="list-style-type: none"> <li>Latchbolt by grip either side only when lock is energized.</li> <li>Both grips locked when lock is not energized.</li> <li>Latchbolt by key outside when lock is not energized.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>                                                                                                                                                                                                                                                                                                         |
|                                                                                            |                                                                                                | ML20915 x SEC   | <ul style="list-style-type: none"> <li>Latchbolt by grip either side only when lock is energized.</li> <li>Both grips locked when lock is not energized.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                       |
| <br>A01 | <br><br>A01 | ML20932 x SEC   | <ul style="list-style-type: none"> <li>Latchbolt by grip either side only when lock is energized.</li> <li>Both grips locked when lock is not energized.</li> <li>Latchbolt by key inside or outside when lock is not energized.</li> <li>Auxiliary latch deadlocks latchbolt</li> </ul>                                                                                                                                                                                                                                                                                                |
| <br>A01 | <br><br>A01 | ML20987 x SEC   | <ul style="list-style-type: none"> <li>Latchbolt by grip outside when lock is energized.</li> <li>Outside grip locked when lock is not energized.</li> <li>Latchbolt by key both sides.</li> <li>Inside grip always rigid.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul> <p>Notes:</p> <ul style="list-style-type: none"> <li>- This function does not allow free egress and can pose a life safety hazard in the event of an emergency. Installation should be in accordance with approved codes only.</li> <li>- Not available with L, R, or V escutcheon trim.</li> </ul> |

 Indicates rigid grip.