

# Applications

## ML20900 ECL

### 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 solenoid-operated remote locking and unlocking. The self-contained integral continuous-duty solenoid allows installation in 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. Also available is the patented Pyramid cylinder from Corbin Russwin, the most secure locking system available. Pyramid is especially recommended for installations that require superior protection against picking, drilling and other surreptitious entry. See the Pyramid catalog for additional information.

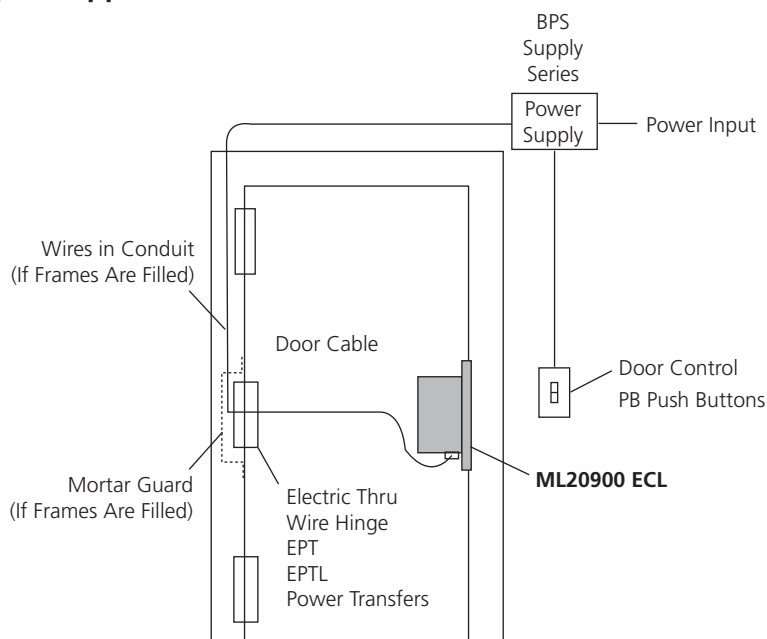
#### Aesthetics

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.

#### Key Advantages

- Available in 12 or 24 volt AC/DC
- Fail Safe or Fail Secure
- Minimal power requirements – lock is designed to lock or unlock as the situation demands
- Mechanical key override
- Patented Quick Reversible latchbolt, Patent # 6,349,982
- Full line of trims available, including the *Vineyard* Collection, the *Muséo* Collection and Vandal Resistant
- Increased security available by adding Pyramid cylinders

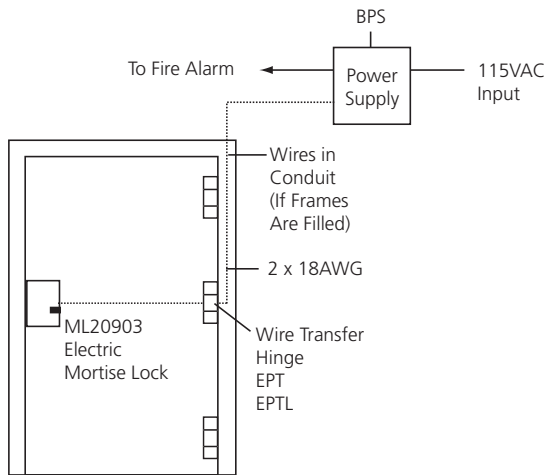
### Typical Application



# Typical System Components (For Reference Only)

## ML20900 ECL

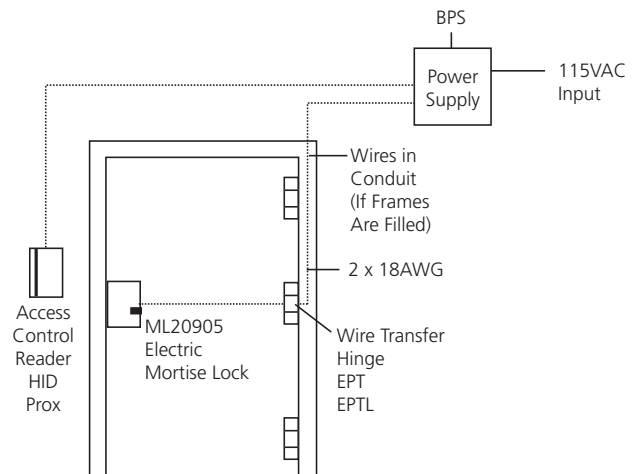
### Tower Stairwell



**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.

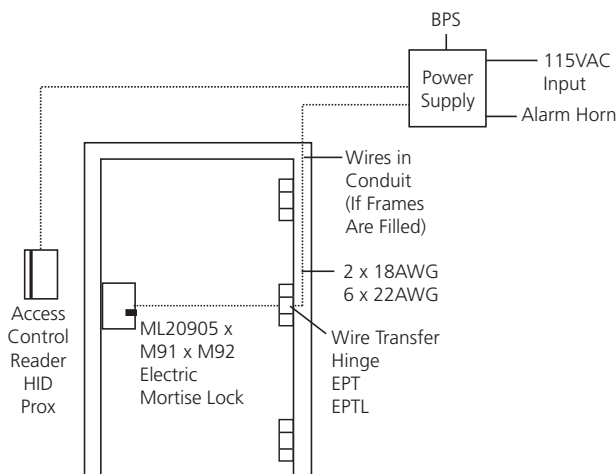
### Access Control on Employee Entrance



**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.

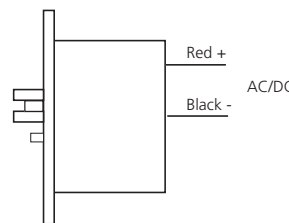


ElectroLynx®, a system of universal Molex® plug-in connectors and standardized color-coded wiring, makes installing electrified doorway components a snap!

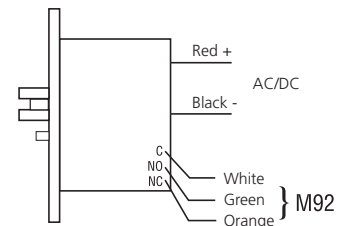


### Lock Schematics

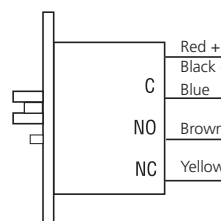
#### Power Leads



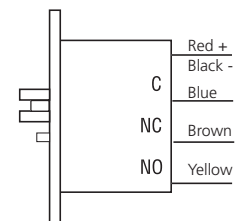
#### Power Leads x M92 (Request to Exit)



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



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



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

# Features

## ML20900 ECL

### 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 58.

#### Backset

2-3/4" (70mm).

#### Lockcase

Heavy-gauge chrome plated 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 )
-  3/8" (10mm) stainless steel.

#### 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 58.

#### Trim

Available with all ML2000 Series trim designs including the Vineyard™ Collection and the Muséo® Collection. See pages 14-49.

### Cylinder

Brass, 6-pin, L4 keyway, 0-bitted standard. Optional cylinders available; see Quick Codes, page 57.

### Keys

Two nickel silver standard.

### Warranty

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

See the Corbin Russwin Vineyard™ Collection catalog for warranty information on the Infini-T® finish.

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

12VAC/VDC @ 800mA

24VAC/VDC @ 390mA

Continuous duty solenoid.

Monitor Switch Rating: 4 amp @ 250 VAC

Note: Operating voltage not to exceed +/- 10%.

See Quick Codes, page 59.

### Monitor Options

#### M91 - Latchbolt Monitor

Latchbolt monitoring is a SPDT switch which monitors the full extension of the main latch.

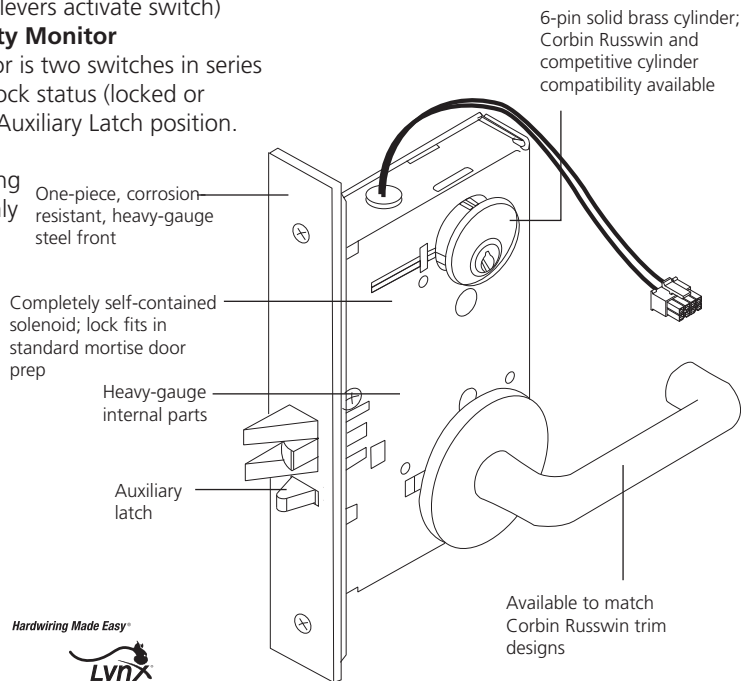
#### M92 - Request to Exit Monitor

Request to Exit monitoring is a SPDT switch which monitors the activation of the trim. (Both levers activate switch)

#### 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.



### Certification/Compliance

#### ANSI

Meets A156.13 Series 1000, operational Grade 1.

Meets A117.1 Accessibility Code.

#### Federal

Meets FF-H-106C.

#### UL /ULC

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.

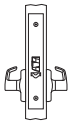
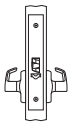

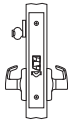

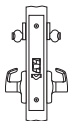

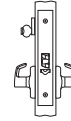
#### California State Reference Code

(Formerly Title 19, California State Fire Marshal Standard)

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

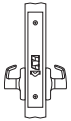
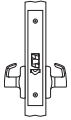

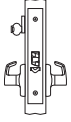

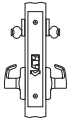

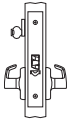
### Fail Safe

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

Outside	Inside	Series/Function	Description
		ML20910 (HS) (VR)	<ul style="list-style-type: none"> <li>Latchbolt by grip either side, unless outside grip is locked by energizing solenoid.</li> <li>Inside grip always free.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>
		ML20920 (HS) (VR)	<ul style="list-style-type: none"> <li>Latchbolt by grip either side, unless both grips are locked by energizing solenoid.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>
 A01		ML20901 (HS) (VR)	<ul style="list-style-type: none"> <li>Latchbolt by grip either side, unless both grips are locked by energizing solenoid.</li> <li>Latchbolt by key outside when solenoid is energized.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>
 A01	 A01	ML20902 (HS) (VR)	<ul style="list-style-type: none"> <li>Latchbolt by grip either side, unless both grips are locked by energizing solenoid.</li> <li>Latchbolt by key inside or outside when solenoid is energized.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>
 A01		ML20903 (HS) (VR)	<ul style="list-style-type: none"> <li>Latchbolt by grip either side, unless outside grip is locked by energizing solenoid.</li> <li>Latchbolt by key outside when solenoid is energized.</li> <li>Inside grip always free.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>

### Fail Secure

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

Outside	Inside	Series/Function	Description
		ML20930 (HS) (VR)	<ul style="list-style-type: none"> <li>Latchbolt by grip either side only when solenoid is energized.</li> <li>Outside grip locked when solenoid is not energized.</li> <li>Inside grip always free.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>
		ML20940 (HS) (VR)	<ul style="list-style-type: none"> <li>Latchbolt by grip either side only when solenoid is energized.</li> <li>Both grips locked when solenoid is not energized.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>
 A01		ML20904 (HS) (VR)	<ul style="list-style-type: none"> <li>Latchbolt by grip either side only when solenoid is energized.</li> <li>Both grips locked when solenoid is not energized.</li> <li>Latchbolt by key outside when solenoid is not energized.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>
 A01	 A01	ML20912 (HS) (VR)	<ul style="list-style-type: none"> <li>Latchbolt by grip either side only when solenoid is energized.</li> <li>Both grips locked when solenoid is not energized.</li> <li>Latchbolt by key inside or outside when solenoid is not energized.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>
 A01		ML20905 (HS) (VR)	<ul style="list-style-type: none"> <li>Latchbolt by grip either side only when solenoid is energized.</li> <li>Outside grip locked when solenoid is not energized.</li> <li>Latchbolt by key outside when solenoid is not energized.</li> <li>Inside grip always free.</li> <li>Auxiliary latch deadlocks latchbolt.</li> </ul>

(HS) Indicates function availability in ML2000HS.

(VR) Indicates function available in Vandal Resistant trim.