ACCESS CONTROL
WIRE GAUGE CHART

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To determine the correct wire gauge:

- Gather voltage and total current draw (amps) of all locks and other devices on circuit.
- Determine total distance in feet from the power supply to the furthest lock.

Locate the correct wire gauge by referencing the amperage and wire length on the charts below.

Minimum Wire Gauge for 24 volts AC or DC

AMPS	25ft	50ft	75ft	100ft	150ft	200ft	250ft	300ft	350ft	400ft	500ft
0.125	20	20	20	20	20	20	20	20	20	20	20
0.25	20	20	20	20	20	20	20	18	18	18	16
0.35	20	20	20	20	20	18	18	18	16	16	14
0.50	20	20	20	20	18	18	16	16	16	14	14
0.75	20	20	20	18	16	16	16	14	14	14	
1.00	20	20	18	18	16	16	14	14			
1.50	20	18	18	16	16	14					
2.00	18	18	16	16	14						
2.50	18	18	16	14	14						
3.00	18	16	14	14	14						
3.50	18	16	14	14							
4.00	16	16	14								
5.00	16	14	14								

Minimum Wire Gauge for 12 volts AC or DC

AMPS	25ft	50ft	75ft	100ft	150ft	200ft	250ft	300ft	350ft	400ft	500ft
0.125	20	20	20	20	20	20	20	18	18	18	16
0.25	20	20	20	20	18	18	16	16	16	14	14
0.35	20	20	20	18	18	16	16	14			
0.50	20	20	18	18	16	14	14				
0.75	20	18	18	16	14	14					
1.00	20	18	16	14	14						
1.50	18	18	16	14							
2.00	18	16	14	14							
2.50	18	14	14	14							
3.00	16	14	14								
3.50	16	14									
4.00	14										
5.00	14										

If the above values are not suitable for your application, it may be necessary to split the devices into two or more separate circuits.

It is recommended to install two circuits, one circuit for the locking device and one circuit for access controllers and signaling devices. This allows for smaller gauge wire, increased distance and helps to protect more sensitive devices from the potential of damage caused by inductive load devices.

Note: All wiring required to be installed in accordance with all state and local codes.