Wiring Instructions for 8KW and 9KW Series Electrified Cylindrical Locks with Request-to-exit

Wiring diagram

The diagram below shows how to wire 8KW and 9KW electrified locks.

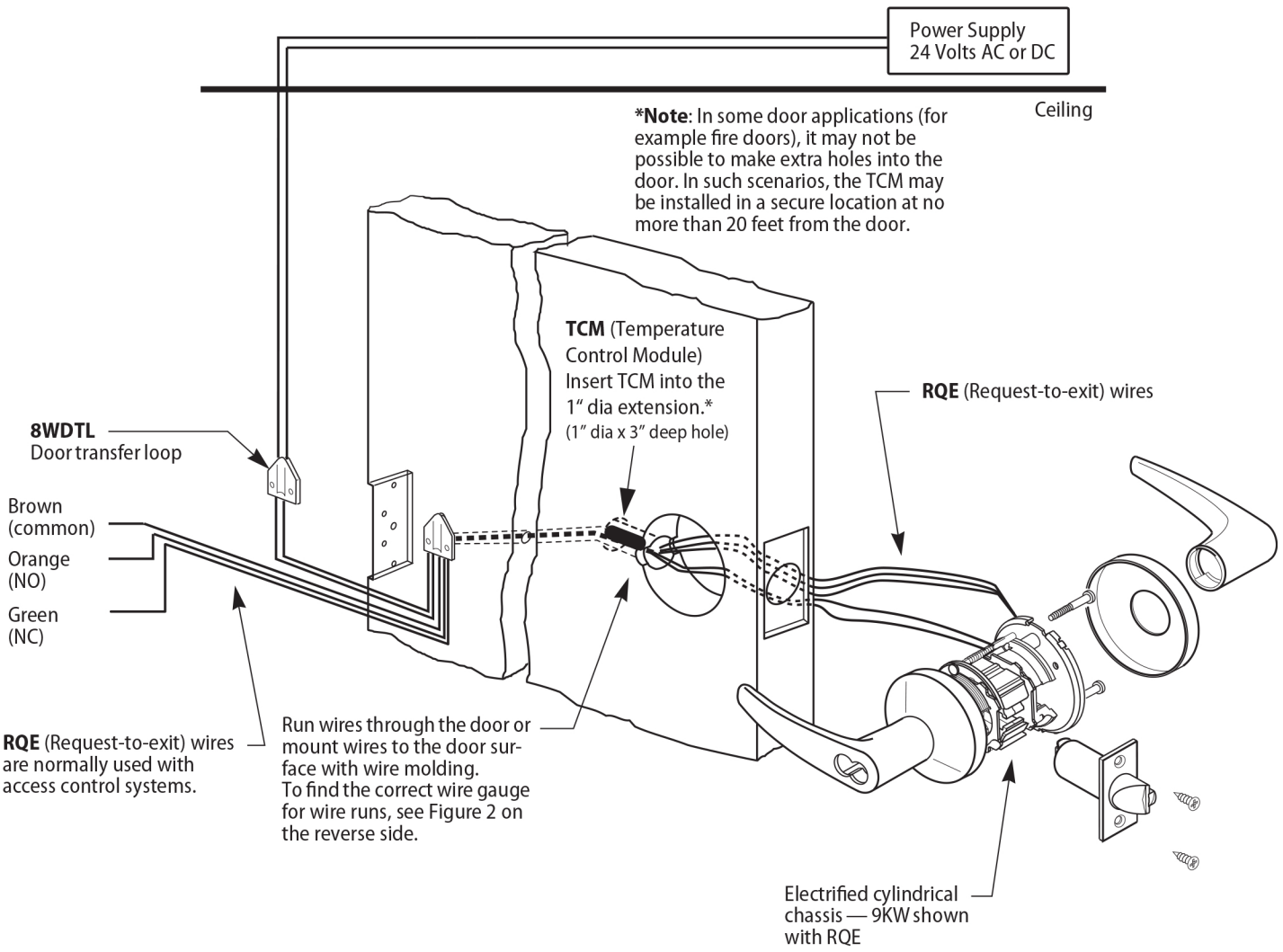


Figure 1—Wiring diagram for 8KW and 9KW electrified locks (9KW with RQE shown)

Electrical requirements

The following table describes the voltage and current specifications for the 8KW and 9KW locks, with RQE (REX) switch, and door monitoring switch.

Unit	Voltage	Current
8KW (RQE not available)	24 volts AC or DC	0.18 amp continuous duty
9KW with and without RQE	24 volts AC or DC	0.18 amp continuous duty
RQE switch	30 volts AC or DC maximum	0.7 amp inductive 0.7 amp resistive

Minimum gauge wire chart for lock circuits

The chart in Figure 2 helps you find the minimum wire gauge needed for a specific length wire run. It assumes that the lock circuit is made of two conductor cable. The chart also factors in a 15% voltage loss at 24 volts.

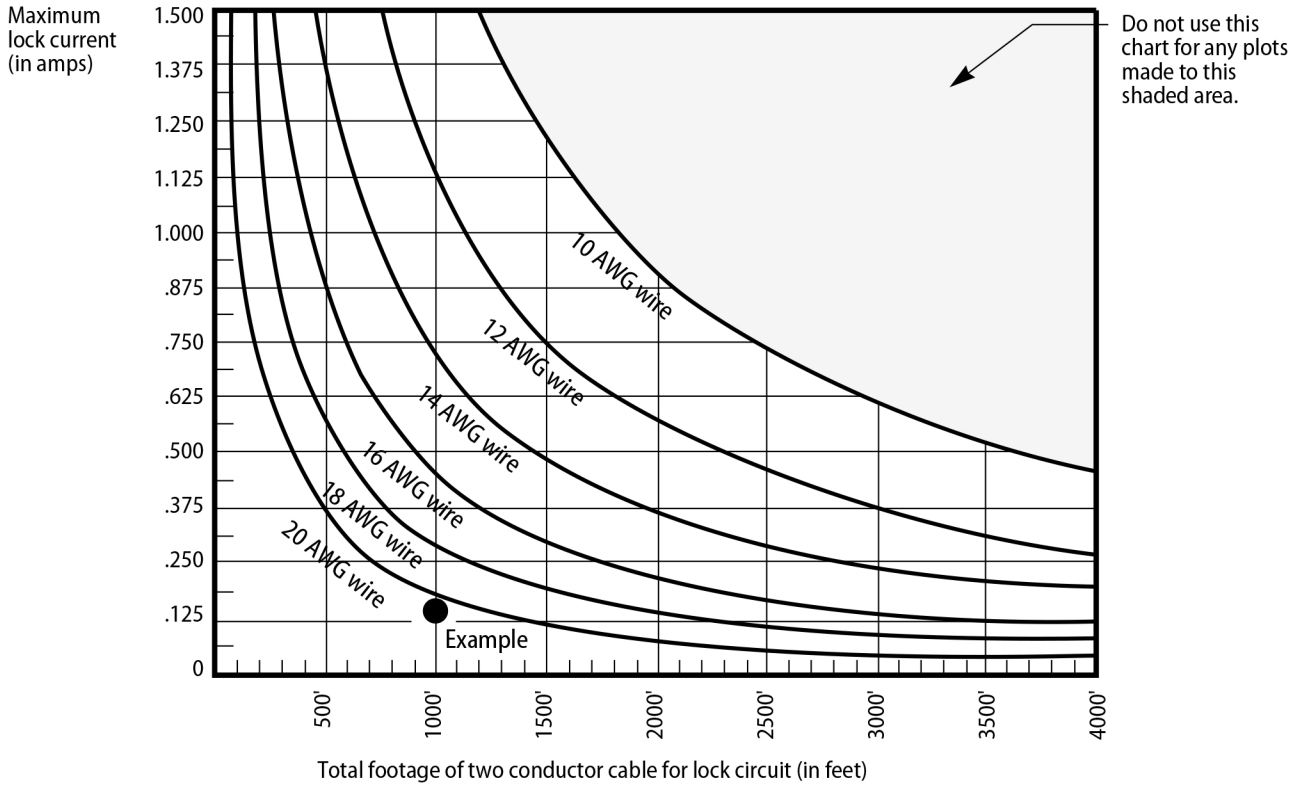


Figure 2—Minimum gauge wire chart for lock circuits

To find the correct gauge wire

1 Determine the maximum lock current and find that value on the left side of the chart.
2 Determine the total footage of cable to be used in the lock circuit and find that value at the bottom of the chart.
3 Locate the intersection of current and footage. The line above or to the right of the intersection shows what minimum gauge wire you need.

Example

- ▲ Lock current: 0.18 amp maximum
- ▲ Total wire run: 1000 feet

Wire gauge needed: 20 AWG two conductor cable

Note: *For 12 volt locks, double the maximum lock current, then use that value on the left side of the chart.*

Installation hints

1 Wire gauge (or size) determines how efficiently the lock will operate. Consider wire gauge before installation. To find the recommended minimum wire gauge for all wire runs, see Figure 2.
2 Use wire of 20 AWG (gauge) or larger. We do not recommend using a smaller wire gauge than 20 AWG.
3 When wiring two or more locks to a single power supply, make sure that the power rating of the power supply is 1 ½ times greater than the sum of the lock's power requirement.

Example

For two locks powered by one supply:

- ▲ Lock 1 (9KW) is rated at 24 volts, 0.18 amps—24 volts × 0.18 amps = 4.32 volt-amps
- ▲ Lock 2 (45HW) is rated at 24 volts, 0.75 amps—24 volts × 0.75 amps = 18 volt-amps

Choose a transformer with a rating of at least: (4.32 volt-amps + 18 volt-amps) × 1 ½ = **33.48 volt-amps**

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