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## CX-11 Plus R

### Switching Network

### *Installation Instructions*

MADE IN CANADA

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## Section 1

### General Description

The CX-11 Plus R is our latest generation multi-purpose timer. It is designed to be versatile yet **user friendly** with easy to understand terminology and adjustments!

Used as a make/break relay (or Switching Network) it will eliminate the **binding** of locked automatic doors by delaying the door operator while the strike or electromagnet (de)activates first.

The CX-11 Plus can also be used to sequence two vestibule doors. *SEE DIAGRAM 04*. A signal is sent to the first door, then after an adjustable delay the second door receives a signal. For bi-directional door sequencing, use model CX-21 (Bi-directional Door Sequencer).

The inputs to the CX-11 Plus may be either dry or wet (or both), meaning that 3-terminal radio receivers may be connected directly to the CX-11 without fear of malfunction. *SEE DIAGRAM 01*

Additionally, we provide a direct connection from an Apartment Interphone panel. Only Relay #1 (strike) will operate when 3 - 24V is applied to this input. *SEE DIAGRAM 03 a or b*.

A **new** feature of this model is the ability to select one of **3 Modes of operation** – momentary; maintained; or Latching.

In the **Momentary** position, even a stuck switch input, will allow the door to time out and close, thereby providing security to occupants. The CX-11 Plus will however, still operate normally if any other input is activated! Essentially, it ignores the faulty activation source, as all inputs are isolated.

You might want **Maintained** operation if you were connecting the CX-11 Plus to a fire alarm panel, or a Presence Sensor. *SEE DIAGRAM 02*.

In **Ratchet** mode, (aka latching, or alternate-action), a switch input will energise the strike relay (for the time indicated on potentiometer 1), then latch the

operator relay (relay #2) indefinitely, until another switch input is applied (thereby releasing the operator relay). Applications include Hospital Emergency entrances, or Overhead doors. *SEE DIAGRAM 05*.

## Section 2

### Installation

#### Mounting

The LED's are visible through the wrap-around sleeve, which also has cutouts for adjusting the potentiometers, and setting the jumper. Once the unit has been programmed, the relay may be tucked up in the header or affixed using the supplied velcro.

#### Wiring

**CAUTION:** Do not apply power to the unit until all secondary wiring is complete, and jumpers installed (if required). For 24V operation, use terminals #1 & 2. For 12V operation, use terminals # 2 & 3.

Connect a dry contact, such as a wall switch, to the **DRY INPUT/DRY COM** terminals (#12 & 13). Connect a wet output, as found on a 3-Terminal Radio Receiver, to the **INPUT** terminals marked **WET INPUT/WET COM** (#11 & 14). You may connect both types of inputs simultaneously.

A third input may be connected to **WET INT/PHONE INPUT & WET COM** terminals. When a signal is received here, only relay #1 activates.

Both relay outputs are Form C and are rated at 4 amps maximum. Use Relay #1 for the Strike/Electromagnet. Typically, the **NO** and **COM** terminals (#4 & 5) are used for a strike, and **COM** and **NC** (#5 & 6) are used with an electromagnet.

The door operator will be wired to Relay #2 **N.O. & COM** terminals (#7 & 8). In a Door Sequencing application, Door 1 is Relay #1 and Door 2 is Relay #2.

For latching function, install jumper wire (supplied) between terminals 12 & 15, *before applying power!*

## Section 3

### Set Up Instructions

As you make the following adjustments, refer to the diagrams for locations of the LED's, jumpers, and potentiometers.

Turn on power, and activate an input device. Observe LED1, which should light immediately. The length of time is determined by adjusting the pot marked DOR/RL1 clockwise for more time, counterclockwise for less time. This is typically your strike (magnet) (de)energize time.

The *delay-on-activate* for the door operator is observed with LED2, and adjusted with potentiometer DOO/RL2. While observing LED2, adjust the *delay-on-release* time with DOR/RL2. Add more time by turning clockwise, less time by turning counterclockwise.

Note that since most door operators have adjustable time delays it is preferable to add time via the operator time delay and *NOT* the CX-11+. In this case set the timer to just send a 1 or 2 second pulse to the door operator.

Also, in Latching and Maintained modes, the *delay-on-release* timer is inoperable. Relay 2 releases as soon as the input is released (in Maintained mode), or re-activated again (in Latching mode).

For most applications, it is desirable to set the jumper to the momentary (MOM) position. This way a stuck input will not hold the door open indefinitely. But where maintained output is desired, carefully pull the jumper off the two pins at M1 (MOM) position and replace in M2 (MAINT) maintained position. (Needle nose pliers work best for jumper removal & re-insertion). Even in maintained and latching positions, Relay # 1 will time out and release after the pre-set time. This avoids a potential strike burn-out.

## Section 4

### System Inspection Instructions

After the Installation and operational check of the system:

1. Place warning label on the door (as per ANSI A156.10 or A156.19 guidelines). This will advise the person entering the swing side zone that the door will move.
2. Instruct the owner on door system operation and how to test it. This should be checked on a daily basis.

3. Instruct the owner on what to do if the door or any of its components become damaged.
4. Strongly recommend to the owner that the complete entry be inspected twice a year as part of the service agreement.

## Section 5

### Technical Data

Model	CX-11 <i>Plus R</i>
Size	3 ¼" x 2 ¼" x ¾"
Mounting	Velcro patch ( <i>New!</i> )
Enclosure	Protective paper sleeve
Operating Voltage	12 – 24 Volts AC/DC
Current Draw	18 mA standby, 40 mA max.
Response Time	0.3 seconds
Inputs: Dry	N.O. dry contact only
Wet	3 - 30V AC/DC, Optically isolated, non-polarity sensitive
Relay Output	2 x Form C (SPDT)
Contact Rating	4 amps @ 120V AC/ 30VDC
Electrical Life	100,000 @ rated capacity
Time Delays	DOR #1 - 0.5 - 30 seconds DOO #2 - 0.5 - 30 seconds DOR #2 - 0.5 - 30 seconds, or, Infinity (Latching Mode)

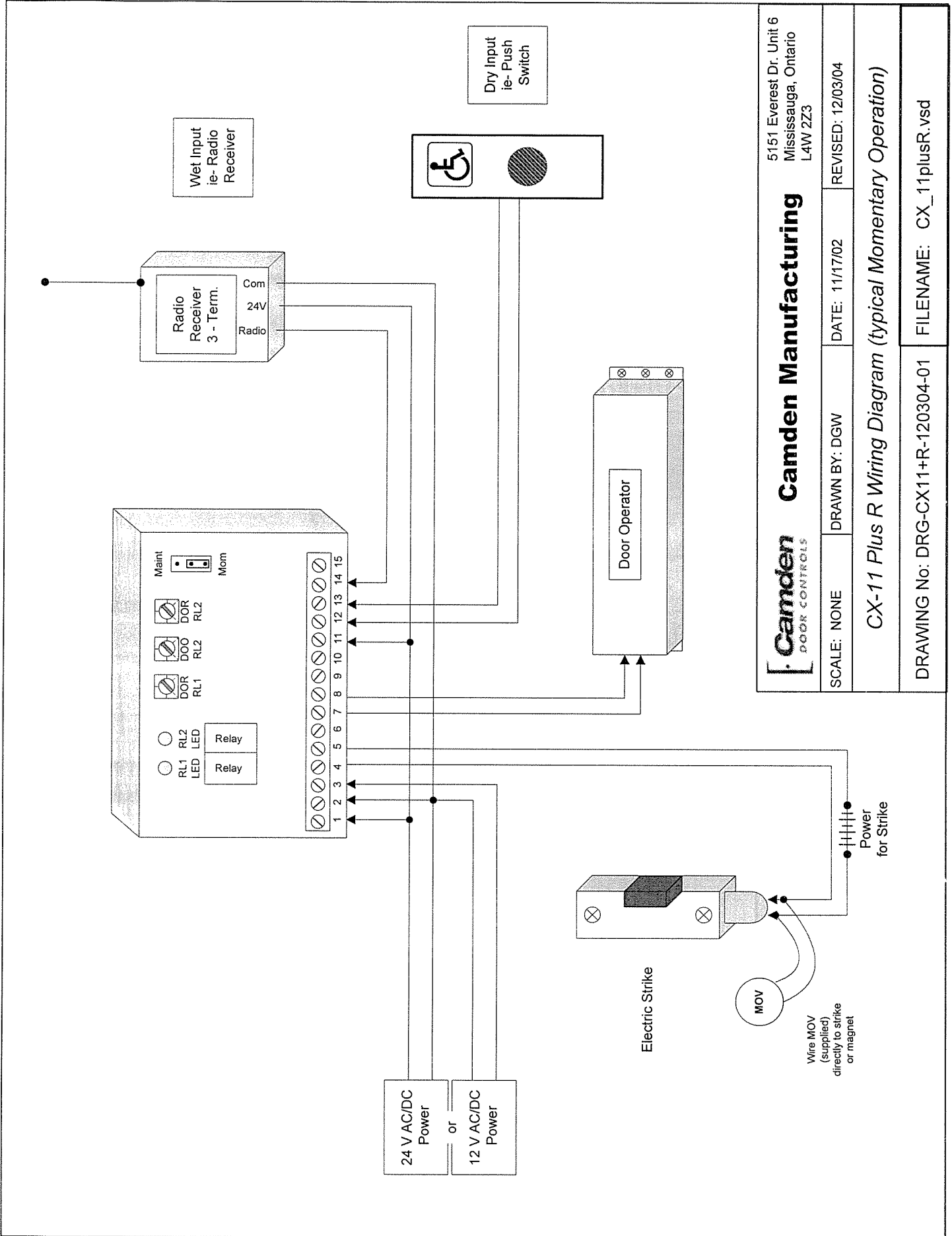
## Section 6

### Warranty

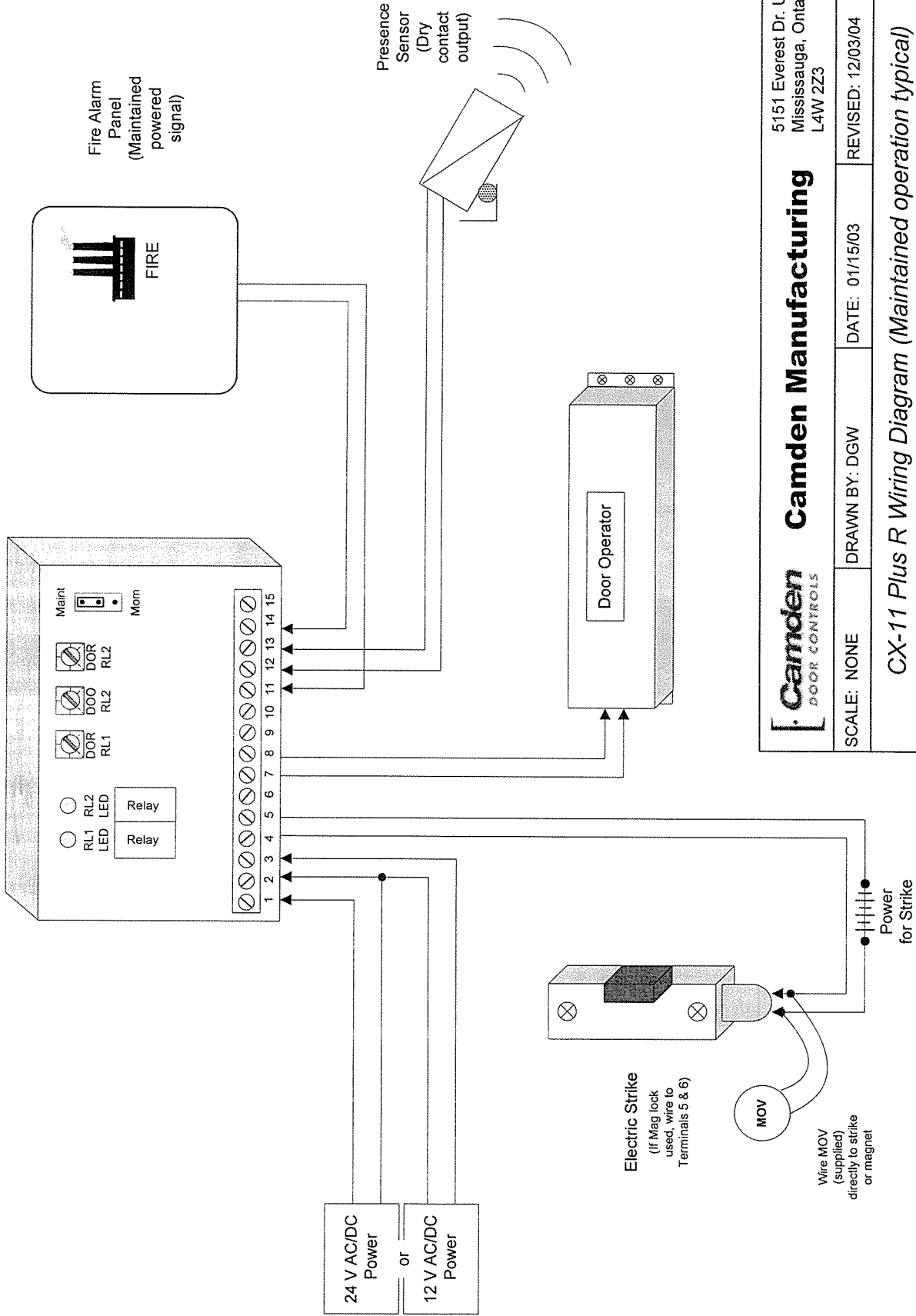
Camden Door Controls guarantees the CX-11 *Plus R* to be free from manufacturing defects for 3 years from date of sale. If during the first 3 years the CX-11 *Plus R* fails to perform correctly, it may be returned to our factory where it will be repaired or replaced (at our discretion) without charge. Except as stated herein, Camden extends no warranties expressed or implied regarding function, performance or service.

#### **Questions?**

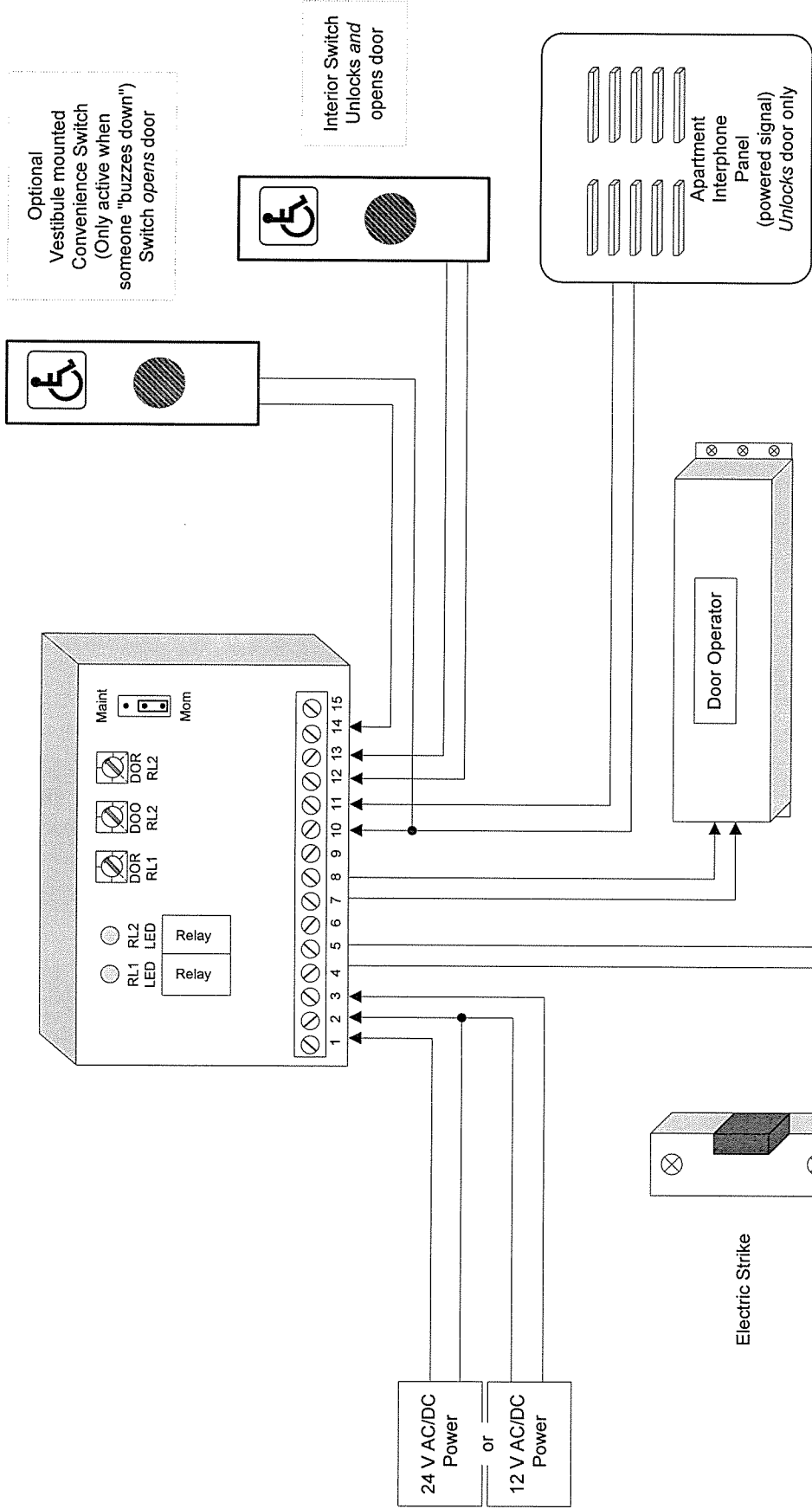
**Call us toll-free at 1-877-226-3369**



<b>Camden</b> DOOR CONTROLS <b>Camden Manufacturing</b>		5151 Everest Dr. Unit 6 Mississauga, Ontario L4W 2Z3	
SCALE: NONE	DRAWN BY: DGW	DATE: 11/17/02	REVISED: 12/03/04
<i>CX-11 Plus R Wiring Diagram (typical Momentary Operation)</i>			
DRAWING No: DRG-CX11+R-120304-01		FILENAME: CX_11plusR.vsd	



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SCALE: NONE	DRAWN BY: DGW	DATE: 01/15/03	REVISED: 12/03/04
<i>CX-11 Plus R Wiring Diagram (Maintained operation typical)</i>			
DRAWING No: DRG-CX11+R-120304-02		FILENAME: CX_11plusR Maint.vsd	



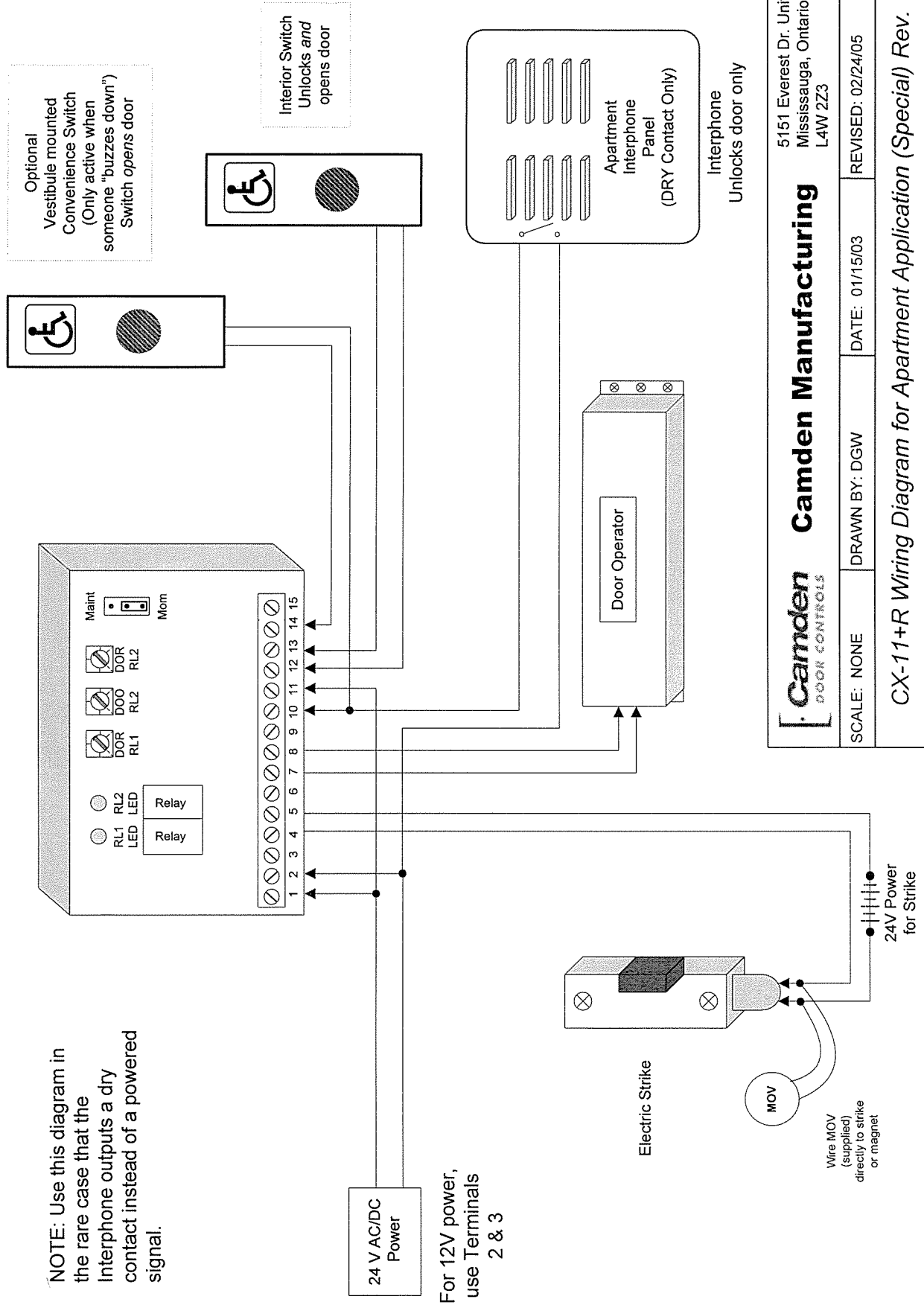
**Camden** DOOR CONTROLS **Camden Manufacturing** 5151 Everest Dr. Unit 6  
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SCALE: NONE DRAWN BY: DGW DATE: 01/15/03 REVISED: 02/24/05

*CX-11+R Wiring Diagram for Apartment Application (typical) Rev.*

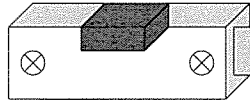
DRAWING No: DRG-CX11+R-120304-03 FILENAME: CX\_11plusR Apt.vsd

NOTE: Use this diagram in the rare case that the Interphone outputs a dry contact instead of a powered signal.



24 V AC/DC Power

For 12V power, use Terminals 2 & 3



Electric Strike

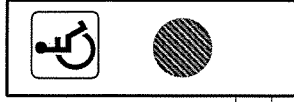


Wire MOV (supplied) directly to strike or magnet

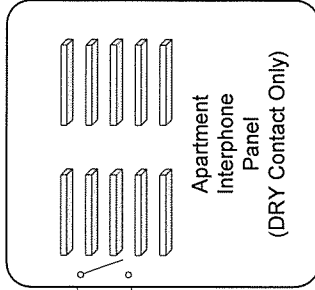
24V Power for Strike



Optional Vestibule mounted Convenience Switch (Only active when someone "buzzes down") Switch opens door

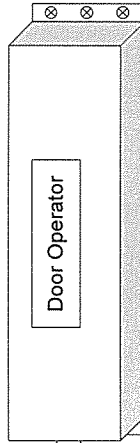


Interior Switch Unlocks and opens door



Apartment Interphone Panel (DRY Contact Only)

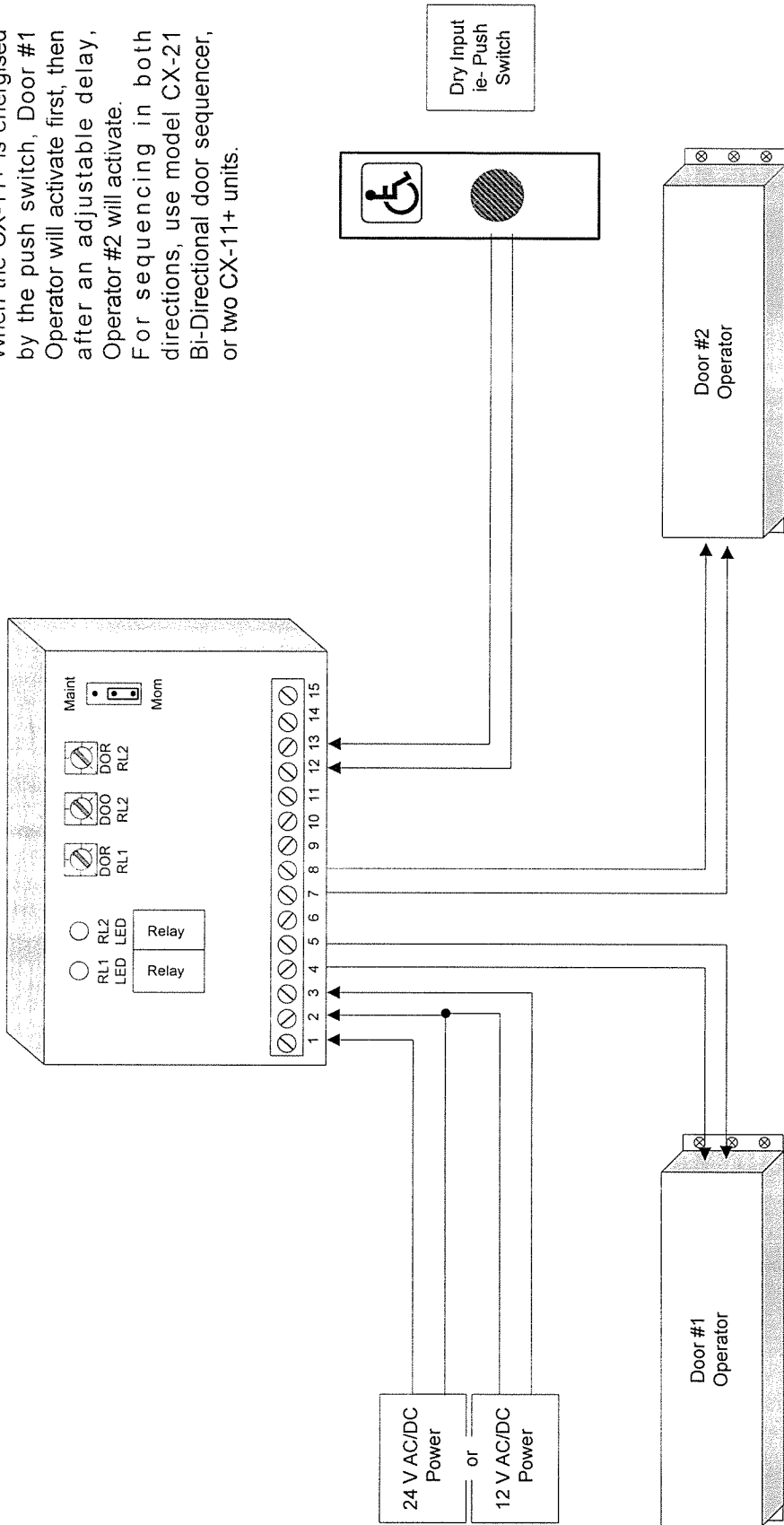
Interphone Unlocks door only



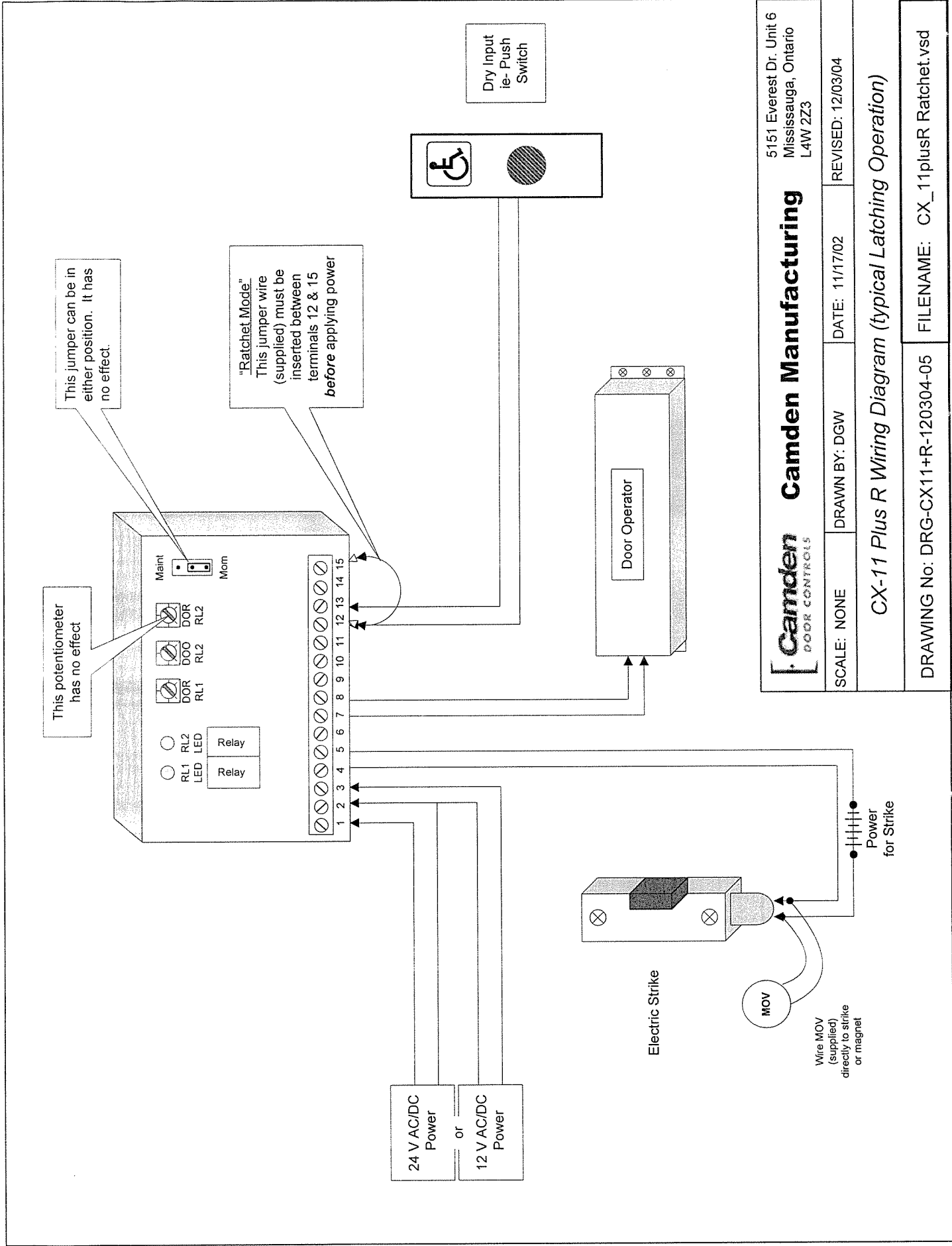
Door Operator

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SCALE: NONE	DRAWN BY: DGW	DATE: 01/15/03	REVISED: 02/24/05
CX-11+R Wiring Diagram for Apartment Application (Special) Rev.			
DRAWING No: DRG-CX11+R-120304-03b		FILENAME: CX_11plusR Apt_b.vsd	

**NOTE:**  
 When the CX-11+ is energised by the push switch, Door #1 Operator will activate first, then after an adjustable delay, Operator #2 will activate. For sequencing in both directions, use model CX-21 Bi-Directional door sequencer, or two CX-11+ units.



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SCALE: NONE		REVISED: 12/03/04	
<b>CX-11 Plus R Wiring Diagram (Door Sequencer Operation)</b>			
DRAWING No: DRG-CX11+R-120304-04		FILENAME: CX_11plusR sequence.vsd	



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*CX-11 Plus R Wiring Diagram (typical Latching Operation)*

DRAWING No: DRG-CX11+R-120304-05    FILENAME: CX\_11plusR Ratchet.vsd