

Summary	MCPS Retro to System 4 Controller				
Products Affected	Efaflex MCPS controller				
Key Word Tags					
Tools/Equipment (If Required)	Lock out tag out, wire strippers, flat blade and phillips terminal screw drivers, wire label tape, wall anchors and fasteners.				
Parts/Materials (If Required)	System 4 Controller retro kit				
Related Media					
Author	Mason Barnett / Sam Last	Issue Date	12/15/2020	Status	active

Please Read the Entire Bulletin Before Proceeding



WARNING: Do not open the controller until the power disconnect is in the OFF position, a lockout/tagout is complete, and at least five (5) minutes have elapsed.

Components in the controller hold a charge when the door is not in operation, which can cause shock, burns, or death.



***** Before starting any work verify with a meter there is no **
** voltage present at terminals L1, L2, L3. *****

- 1. Label and document all wiring terminations of the current MCPS board.**
 - a. Care should be taken to label terminals with a -U & -L when there are matching terminals on both the Upper and Lower terminals of the MCPS.**
- 2. Remove the L1, L2 and L3 from the controller, cap the wires and remove them from the control box.**
- 3. Remove the T1, T2 and T3 along with motor brake wires, BN-BR from the terminals and remove from the control box.**

4. Remove remaining wires from the terminals.

5. There will be wires from the controller to the VFD (Mitsubishi) that will be removed and not used again. These are listed below

MCPS---()---VFD

" _ " SD

RT MRS

SR STR

SF STF

RH RH

RM RM

RL RL

6. Once all the wiring has been disconnected from the MCPS, the VFD and field power terminals, you can remove the conduit from the bottom of the control box.

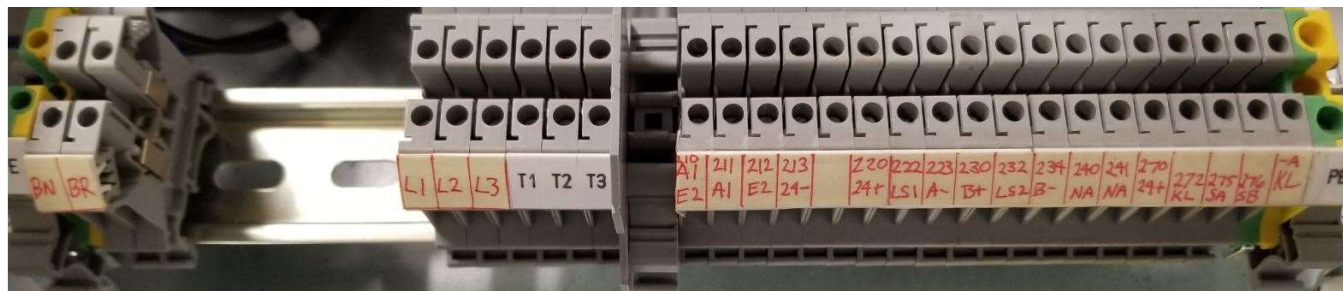
7. Remove the control box from the wall.

8. Remove metal conduit plate from the bottom of the existing control panel and use as a template to drill new conduit entry holes on the new enclosure. **DO NOT drill holes with the enclosure upside down to prevent shavings from getting onto the controller and shorting it out.

9. Carefully guide the wiring back through the bottom of the enclosure and fasten the conduit to the enclosure.

10. Using the appropriate fasteners, attach the new control box to the wall.

11. Begin to land the low voltage wiring utilizing the conversion sheet below. Each control panel may be unique to your set up and will require additional help from Technical Support to land and program special functions.



Encoder wiring

MCPS	SYSTEM 4
24+ BROWN	270
-A BLUE	277
SA WHITE	275
SB BLACK	276
KL BROWN	277
KL WHITE	272

12. Now, lets land the photo eye wiring. You will need 2 pairs of photo eyes to make the System 4 controller work. We are NOT able to bypass the photo eye terminals in the field. If you do not have both front and rear photo eyes, you will need to get both mounted and wired to make the door work.

13. Front PE wiring

24+ from receiver and transmitter to T220

LS1 receiver signal to T222

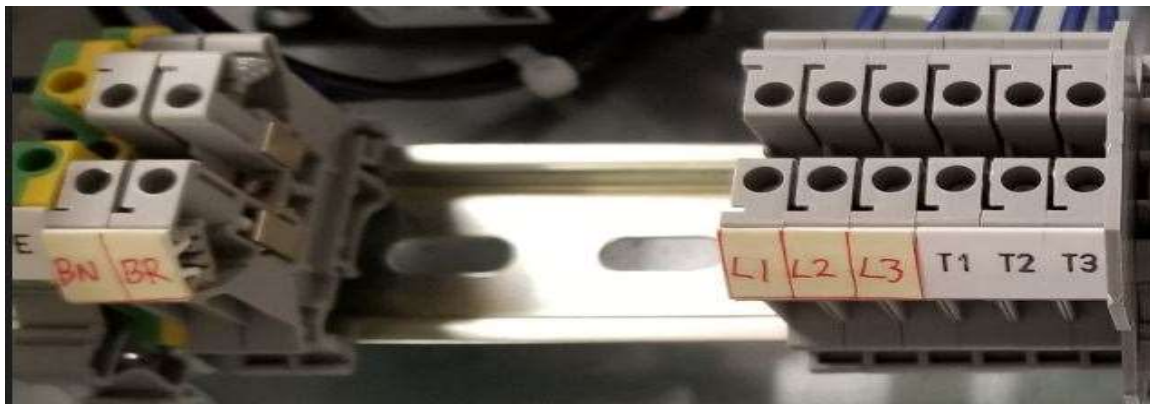
A- receiver and transmitter T223

14. Rear PE wiring

B+ from receiver and transmitter to T230

LS2 receiver signal to T232

B- receiver and transmitter to T234

15. Now to wire the brake and motor. See below for high voltage wire connections.

16. Land the brake on terminals BN and BR.

17. Land T1, T2 and T3 for the motor. U is T1, V is T2 and W is T3.

18. Land the incoming power wires. L1, L2 and L3.

19. Verify the incoming voltage matches the control transformer for the brake located in the enclosure. The brake transformer has been wired to match the original incoming voltage. Make changes if necessary.

- 20. Check over all of your wiring terminations. Make sure to double check there are no loose wires, no whiskers that are sticking out of terminals. Once this is confirmed, power the controller and check the display.**
- 21. The screen should display “self-check” and then “set limits” if all is correct.
*if an error message appears, please contact Technical Support for assistance.**
- 22. Use the up and down arrows to verify the door moves the proper direction.**
- 23. If rotation is backwards, leave the controller on and the rotation can be reversed by changing parameter P.130=1**

For activation terminals, the most commonly used terminals have been provided for convenience. The MCPS used terminals A1-A1 for A/A action, push or pull to open and close, use T210-T211. For activation that requires timer to close, terminals E2-E2 can be landed in T210-T212. Terminal T213 is 24vdc- or ground. For any other activation, consult the activation packet included with the controller.

There is also location for a 3-button station. Open/close/stop. This is located at T200-203 and you will wire this directly to the control board.

T200- 24vdc +

T201- Open

T202- Close

T203- Stop N.C. this can be reprogrammed for N.O.

Ground loop connections previously connected on the MCPS used an internal loop detector. The System 4 does not have this function. If an external loop detector is not utilized, a loop detector card will need to be installed. Loop wires would be landed in terminals S1-S1 and/or S2-S2.

Optional inputs – If you have wires landed in terminals E4-E4/E5-E5, these can be wired to open terminals 290-292 and programmed accordingly.

If you have any questions please contact Rytec Customer Support at 1-800-628-1909.

