



FROM <JB-05> (D), W/L WIRE, +12VDC POWER
 OUT FROM 30A POWER WINDOW FUSE,
 REF. MAZDA FSM, PAGE Z-94

Notes:

1. This drawing documents the electrical schematic and wiring installation modifications made to the power window (PW) circuits in my 1993 Mazda RX7.
2. This drawing references the 1993 Mazda RX7 Factory Shop Manual (FSM), Section Z, Electrical Schematics and is intended to supplement the Mazda FSM, page Z-94.
3. All electrical schematic symbology conventions and wire color codes referenced in the Mazda FSM shall be utilized herein, unless otherwise noted.
4. The purpose of this wiring modification is to reduce the current flowing through the OEM PW switches, thereby extending their service life and improving PW operation. It accomplishes this by adding a DEI 451m unit to each door, which provides an alternate path for full PW motor current; each 451m unit contains a pair of DPDT 20A rated relays, in a pre-wired, small sealed package.
5. Wire color markers with the "(451m)" suffix denote the 451m unit's wire pigtail colors. New connector labeled <DEI_K1-02> is installed in the Driver's side door with its respective 451m unit. Similarly, <DEI_K1-04> denotes a new connector installed in the passenger side door. These connectors are identical mates to the respective OEM <K1-02> and <K1-04> connectors.
6. The <BS> symbols represent closed barrel uninsulated butt splices, which are sealed and insulated by Raychem DR25 heat shrink tubing.
7. Ground Symbols marked with <DR1> and <DR2> denote grounding lugs screwed into the driver's side and passenger side door, respectively, for grounding that door's 451m unit wires as indicated.
8. Each 451m unit includes an inline 15A fuse as shown. In the event that only one of the car's 2x power windows fail to operate, check the 451m inline fuse first in the failed door.
9. For troubleshooting purposes, the 451m units can be completely isolated, and the PW circuit can be reverted back to OEM configuration as follows:
 - a. Unplug the <K1-02>(R) from <DEI_K1-02>(P), and <K1-02>(P) from <DEI_K1-02>(R) connectors in the driver's door. Plug the OEM connectors <K1-02>(R) and <K1-02>(P) back together. Do the same procedure in the passenger door with <K1-04> and <DEI_K1-04>.
 - b. Remove the 15A inline fuse from the 451m unit's power input (V/B wire) from each door.

Title Power Window Modification Schematic, 1993 Mazda RX7		
Author Peter W. Morel Subtitle: DEI 451m Installation Wiring Diagram		
File C:\User ... FD Power Window Mod Schematic.dsn	Document FD3S-002	
Revision 1.0	Date 10 November 2024	Sheets 1 of 1