



## B-2048 Resistor Assembly Application

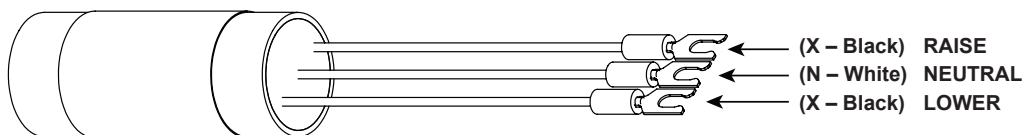
### Interposing Motor Drive Relay, Buzz, Chatter, and Lock-Up

Some installations of the M-2001 series Tapchanger Control may experience interposing relay buzzing, chatter (severe buzzing), or in extreme cases, lock-up and runaway tap changer operation.

With sensitive coil configurations, even though the pull-in current is usually in excess of 10mA, the "maintain" or "holding" current can be as low as 1-2mA. At that level, the leakage current from protective components in the M-2001 series control, can cause the relay armature to buzz or lock-up the interposing relay.

Adding shunt resistance to each of the output relay circuits will minimize the interposing relay's sensitivity to small leakage currents, thereby eliminating the relay buzz, chatter, and lock-up.

For this reason, the **B-2048 Resistor Assembly** is provided with this Adapter Panel or Terminal Block assembly. When required, install the B-2048 on the Terminal Block as shown in the Table below.



Adapter Panel Base Model No.	Application	Terminal Block Installation Location
M-2050	Surface Mount Adapter	Install wire <b>(N)</b> to TB1-3 and wires <b>(X)</b> to TB1-7 & TB1-9
M-2051	Flush-Mount Harness	Install wire <b>(N)</b> to TB1-3 and wires <b>(X)</b> to TB1-7 & TB1-9
M-2052	Flush-Mount Harness	Install wire <b>(N)</b> to TB1-3 and wires <b>(X)</b> to TB1-7 & TB1-9
M-2053	Flush-Mount Adapter Plate	Install wire <b>(N)</b> to TB1-3 and wires <b>(X)</b> to TB1-7 & TB1-9
M-2054	Surface Mount Harness	Install wire <b>(N)</b> to TB1-3 and wires <b>(X)</b> to TB1-7 & TB1-9
M-2067B	OEM, Westinghouse or M-0067E Adapter Panel	Install wire <b>(N)</b> to TB1-3 and wires <b>(X)</b> to TB1-7 & TB1-9
M-2220	M.R. MK-20 Replacement	Install wire <b>(N)</b> to TB1-2 and wires <b>(X)</b> to TB1-15 & TB1-18 (remove wire lugs)
M-2230	M.R. MK-30 Replacement	Install wire <b>(N)</b> to TB1-2 and wires <b>(X)</b> to TB1-15 & TB1-18 (remove wire lugs)
M-2270B	OEM, Generic replacements	Install wire <b>(N)</b> to TB1-8 and wires <b>(X)</b> to TB1-5 & TB1-6
M-2280B	GE LTC only / LRT-72, LRT-200, etc.	Install wire <b>(N)</b> to TB3-5 and wires <b>(X)</b> to TB3-6 & TB1-7

▲ **CAUTION:** The B-2048 Resistor Assembly is not rated for continuous application of motor voltage. Overheating and damage occur to the Resistor Assembly, if motor voltage is applied for greater than 5 minutes.

■ **NOTE:** Please refer to the applicable M-2001C/D Instruction Book (Installation Chapter) or the LTC Transformer Control System, Comprehensive System Manual (Appendix A) for more information.