TRAULSEN TECHNICAL BULLETIN

PRODUCT SERVICE DEPARTMENT **FORT WORTH, TX 76106**

TROUBLESHOOTING TRAULSEN INTELA-TRAUL™ MIT2 RELAY MODULE

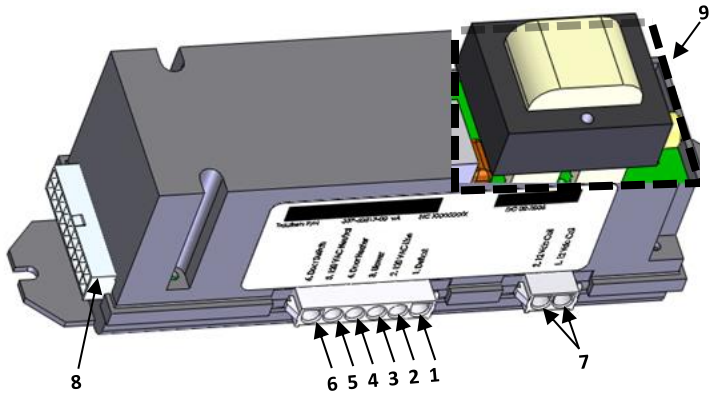
Introduction:

To inform the field of proper troubleshooting techniques and procedures for the Traulsen Intela-Traul™ Relay Module.

Relay Module Function:

The Traulsen Relay Module is a long black rectangular box approximately 2 x 2 x 7 inches located behind the controller (front panel display) that contains several switching relays. The relays inside the module are used to send line voltage to the compressor (or heaters if a Hot Food box) fan motor(s), or defrost heaters or defrost solenoids, as needed. The actuation of these relays is controlled by low voltage DC signals sent from the Intela-Traul™ Control.

Relay Module Architecture:



Item #	Color	Function
1	Purple	115vac Output to Defrost Heater
2	Black	115vac Input Line Voltage Power
3	Gray	115vac Output to Evaporator Fan/Blower(s)
4	Orange	115vac Output to Door Frame Heater(s)
5	White	115vac Line Voltage Neutral
6	Yellow	115vac Input from Door Switch(s)
7	Pink	12VDC Output Compressor Relay Control Voltage
8	18pin connector	1-5VDC Control Voltage from Intela-Traul™ Controller
9	Transformer	Line Voltage to 12VDC Transformer

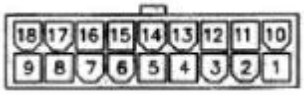
Note: Items 1, 3, & 4 are equipped with snubber circuits to reduce arcing and increase relay life. As result Line Voltage will always be measured at the relay output regardless of relay state, open/closed.

Relay Module Control Voltage:

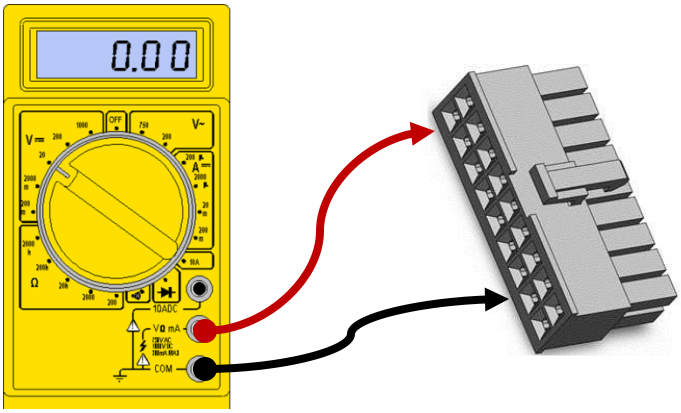
⚠WARNING Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times and follow Arc Flash procedures. If test points are not easily accessible, disconnect and follow lockout/tagout procedures, attach test equipment and reapply power to test.

Relay control voltage is checked at the 18pin connector which delivers a range of 1-5VDC to the relay module when the control is calling for a relay to be energized. **When checking for relay control voltage the 18pin connector MUST remain connected.**

Relay Control Voltage (Cont):



Pin No.	Color	Signal
1	Gray	Blower
2	Orange	Door Heater
3	Green	Alarm From Controller
4	Black	Return to Horn
5		Unused
6		Unused
7	White/Purple	-RS485
8	Black	Ground
9	White	12vac
10	Blue	Compressor
11	Purple	Defrost
12	Yellow	Door Open Signal
13	Red	Power to Horn
14		Unused
15		Unused
16	Pink	+RS485
17	Red	12 VDC Controller Power
18	Black	12vac



Check control voltage by inserting meter leads into the back of the 18pin connector at the appropriate points. **18pin connector must be connected to the relay module**.

Relay Module Output Voltage:

⚠WARNING Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times and follow Arc Flash procedures. If test points are not easily accessible, disconnect and follow lockout/tagout procedures, attach test equipment and reapply power to test.

If the 1-5VDC control voltage from the Intela-Traul™ has been confirmed but the corresponding component is not energized output voltage from the relay module needs to be confirmed. The simplest way to confirm whether or not the relay inside the relay module has failed is to jump out the relay contacts. To due this unplug the six pin connector and jump pin 2 (Black, 115vac input) to the corresponding output pin. If the component energizes then the relay module likely needs to be replaced. If the component still does not energize then further troubleshooting of the component is needed.

Contact Traulsen Technical Service:

If further assistance is needed feel free to contact Traulsen Technical Service at 800-825-8220 between the hours of 7:30am – 11:30am CST & 12:30pm – 4:30pm CST.