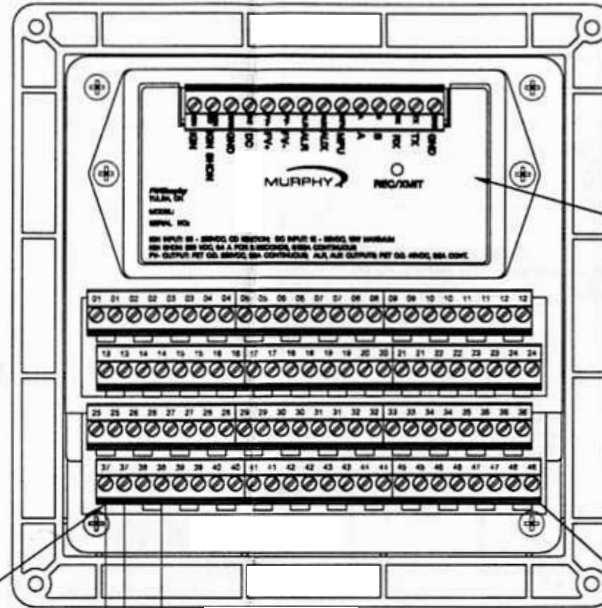


**NOTES:**

1. FIELD WIRING CONNECTIONS TO BE INSTALLED IN ACCORDANCE WITH THE NEC FOR CLASS I, DIV 2 GRPS. B, C, AND D; T4 (MAXIMUM AMBIENT TEMPERATURE 85 °C) HAZARDOUS LOCATIONS.
2. INSTALL A 1A, 600V PIV DIODE IN PARALLEL WITH ALR AND AUX RELAYS, AND DC SOLENOID FUEL VALVE. (1N4005 - FWM P/N 36-16-1002).
3. USE TWO CONDUCTOR CABLE WITH FOIL SHIELD AND DRAIN WIRE FOR MPU INPUT.
4. USE EIA RS485 SHIELDED, TWISTED PAIR, 120 OHMS CHARACTERISTIC IMPEDANCE CABLE FOR RS-485 INTERFACE. INSTALL 120 OHMS TERMINATING RESISTOR ON FIRST AND LAST NODE ON RS-485 NETWORK. ALL RS-485 DEVICES MUST SHARE DC COMMON GROUND. TO MAKE NETWORK RUGGED, A PULL-UP/PULL-DOWN MAY BE HELPFUL (FWM P/N 10-00-7607).
5. IGNITION SHUTDOWN IS FET OPEN DRAIN WITH 10 OHM SERIES RESISTOR TO GROUND. CONNECT IGN AND IGN SHDN TERMINALS TOGETHER, USING A SHORT WIRE JUMPER, TO GROUND IGNITION FOR SHUTDOWN.
6. ALR AND AUX RELAYS MUST BE HERMETICALLY SEALED RELAYS, CSA OR UL APPROVED FOR USE IN CL. I, DIV. 2, GRPS. B, C, & D HAZARDOUS LOCATIONS.
7. NON-INCENDIVE FIELD WIRING CHARACTERISTICS:  
 VOC = 3.6 VDC  
 ISC = 200 uA  
 Cmax = .019 uF  
 Lmax = 10mH

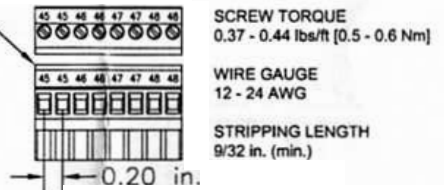
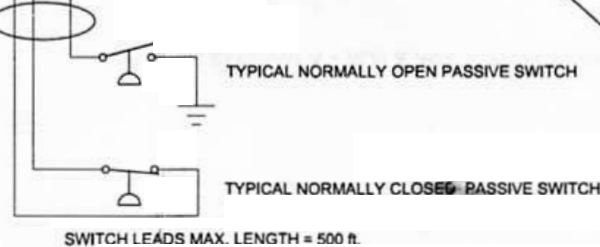
WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS.  
 AVERTISSEMENT - RISQUE D'EXPLOSION - AVANT DE DECONNECTER L'EQUIPEMENT, COUPER LE COURANT OU S'ASSURER QUE L'EMPLACEMENT EST DESIGNÉ NON DANGEREUX.



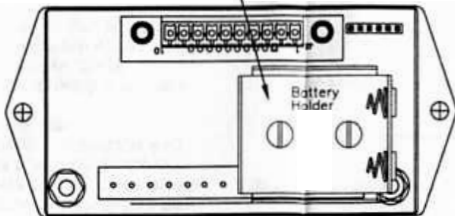
DO NOT CONNECT/DISCONNECT POWER SUPPLY TERMINAL BLOCK WIRING OR REMOVE/INSTALL POWER SUPPLY UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS.

REMOVE JUMPER FOR NORMALLY CLOSED SENSOR

NON-INCENDIVE FIELD WIRING CONNECTIONS TO GENERAL PURPOSE ENCLOSURE PASSIVE MECHANICAL SWITCHES OR MURPHY SOLID STATE SWITCH DEVICES APPROVED FOR USE IN CL. I DIV. 2 GRPS. B, C, AND D HAZARDOUS LOCATIONS. ROUTE SWITCH LEADS SEPARATE FROM ALL OTHER WIRING.



**BACKUP BATTERY REPLACEMENT**  
 6VDC, 1300mAh, DURACELL® DL223A OR SANYO® CR-P2 LITHIUM BATTERY (FWM P/N 00-00-5125).



BATTERY IS ACCESSIBLE FROM UNDERSIDE OF POWER SUPPLY MODULE. POWER SUPPLY MUST BE REMOVED TO ACCESS BATTERY FOR REPLACEMENT.

E	REVISE FUEL VALVE CONNECTIONS (12-8-04 JAD 3545) AR
D	REVISE NOTE 7 WIRING BUS SENSOR, SWITCH LEADS... BUS SENSOR LEADS... 24 ADD PASSIVE SWITCH & REMOVE TOR USE IN CL. I
	DNV. 2 GRPS. B, C, AND D HAZARDOUS LOCATIONS(10-20-04 JAD 3428) AR
C	UPDATE DWG TO CURRENT CONFIGURATION, ADD SHEET 2
	9-2-04 JAD 3229 AR
B	REVISE NOTE 1 T4 WAS T5, UPDATE LABEL DEPICTION
	(8-19-04 JAD 3112) AR
REV	CHANGES MADE



DRAWN BY:	JAD	E.R.NO.	2068
DATE:	2-16-04	CHKD. BY:	AR
		APPD. BY:	PL
MODEL:	INSTALLATION DIAGRAM, TTD-2		
DRAWING NO.	SHEET 1 OF 2	SIZE	REV.
	50-08-0718	C	E

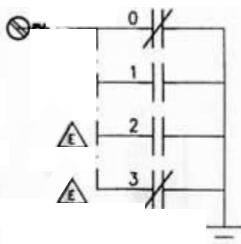
**DIAGRAM B - FV TYPICAL CONNECTIONS**

SETUP A = OUTPUT MODE

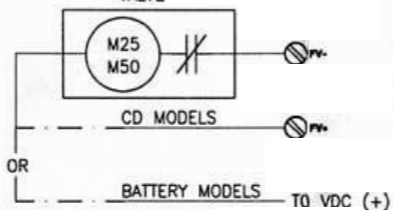
SETTINGS DETERMINE THE STATE OF THE OUTPUTS 'FV-' AND 'IGN SHDN' DURING NORMAL OPERATION AND SHUTDOWN.

DIAGRAM SHOWS 'FV-' IN A SHUTDOWN STATE. DURING NORMAL OPERATION, CONTACTS ARE REVERSED.

CONTACTS ARE SOLID STATE OPEN DRAIN. SINK TO GROUND

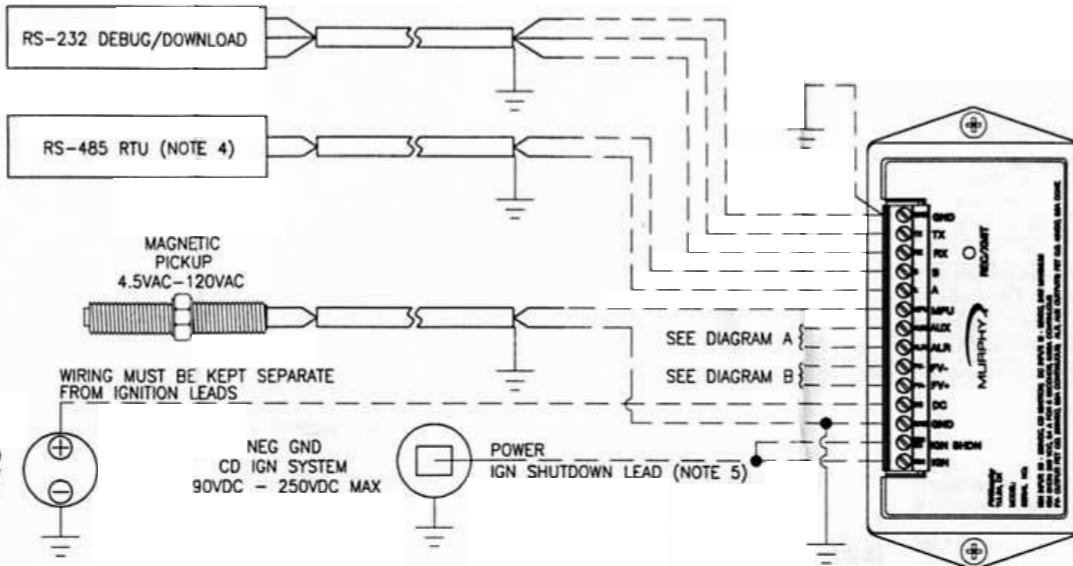
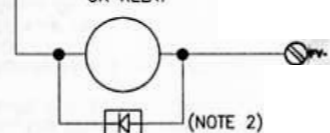


FUEL SHUTOFF VALVE



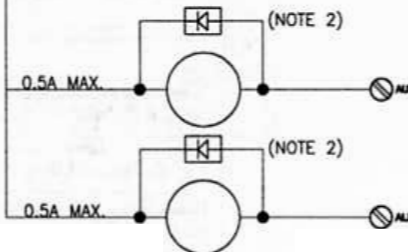
TO VDC (+)

DC SOL FV M5081FS OR RELAY

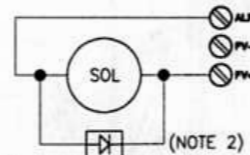


**DIAGRAM A - ALR & AUX TYPICAL CONNECTIONS**

TO VDC (+)

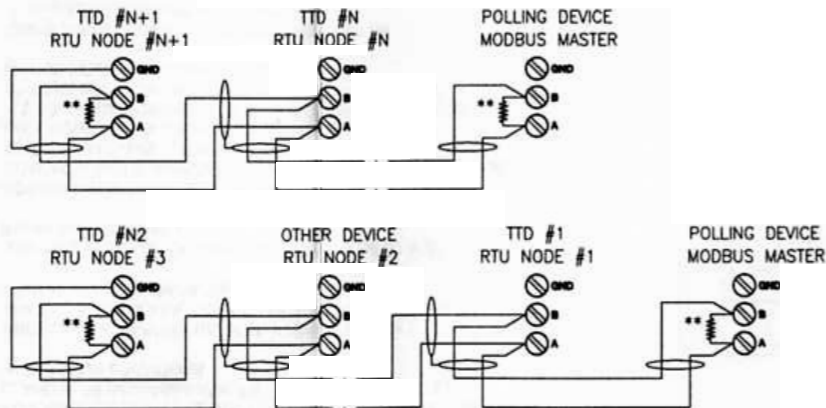


ALTERNATE HOOK-UP FOR USING LATCHING 48VDC COIL SOLENOID FOR ALARM AIR HORN.



NOTE: FV- TERMINAL CANNOT BE USED WITH THIS HOOK-UP FOR A CD FUEL VALVE. IGN TERMINAL MUST BE CONNECTED WITH AT LEAST 90VDC TO CHARGE FV+.

**DIAGRAM C - RS-485 TYPICAL CONNECTIONS**



\*\* SEE NOTE 4

CALL MURCAL TO PLACE YOUR ORDER



P:(661)272-4700 F:(661)947-7570  
www.murcal.com e-mail:sales@murcal.com