



21 POSITION CONNECTOR  
 DEUTSCH: HDP24-24-21PE  
 FW MURPHY: 00-00-7681

EMS PRO LITE  
 CONNECTORS  
 PANEL SIDE

21 POSITION CONNECTOR  
 DEUTSCH: HDP26-24-21SE  
 FW MURPHY: 00-00-8788

9 POSITION CONNECTOR  
 DEUTSCH: HD10-9-96P-B009  
 FW MURPHY: 87-03-0012

9 POSITION CONNECTOR  
 DEUTSCH: HD14-9-96P  
 FW MURPHY: 87-04-0025

- ENGINE ECU REFER TO ENGINE MANUFACTURER DOCUMENTATION
- [VI] CAN HI
  - [U] CAN LO
  - [F] CAN SHIELD
  - [S] DO 5 (THROTTLE INC)
  - [R] DO 4 (THROTTLE DEC)
  - [E] BATT (-) 14 GA.
  - [B] BATT (+) 14 GA.
  - [D] DO 10 (CRANK) 16 GA.
  - [G] DO 1 (FUEL/ECU) 16 GA.
  - [J] DO 3 (ALT EXCITE)
  - [Y] FREQ INPUT
  - [W] AI 1 HI TEMP (SENDER)
  - [X] AI 2 OIL PRESSURE (SENDER)

- [J] AI 5 FUEL LEVEL (SENDER)
- [H] AI 9 SYSTEM LEVEL (4-20MA)
- [A] AI 6 DISCHARGE PRESSURE (4-20MA)
- [D] SENDER RETURN TRANSDUCER (+)
- [C] STOP CONTACT RETURN (-)
- [B] DI 4 STOP CONTACT (SWITCH)
- [G] DI 3 START CONTACT (SWITCH)
- [F] START CONTACT RETURN (-)
- [E] DO 8 PRESTART

- NOTES:
1. ALL WIRE 18 GA WHITE UNLESS OTHERWISE NOTED.
  2. TWISTED WIRES OR SHIELDED, TWISTED WIRES. APPROXIMATELY ONE TWIST PER INCH.
  3. A PILOT RELAY MUST BE USED TO ENGAGE STARTER. RELAY COIL MUST DRAW LESS THAN 5 AMPS.
  4. INSTALL FLYBACK DIODES AS SHOWN TO REDUCE THE POTENTIAL OF VOLTAGE SPIKES DAMAGING SOLID STATE COMPONENTS.
  6. ALTERNATIVELY, FOR DIGITAL INPUTS 3 & 4, (DI3 & 4) THE GROUND (-) CONTACT ON THE N.O. SWITCH CAN BE REPLACED WITH BATTERY POSITIVE.

- NOTES (CONT):
- 1. NUMBERS & LETTERS IN [ ] REFER TO CONNECTOR POSITION.
  - 2. RECOMMENDED FW MURPHY TRANSDUCERS.
  - 3. CUSTOMER SUPPLIED 4-20MA LEVEL TRANSDUCER.
  - 4. IF ALTERNATOR DRAWS LESS THAN 1 AMP, USE DIODE RATED AT MINIMUM 1 AMP. IF ALTERNATOR DRAWS MORE THAN 1 AMP, A RELAY MUST BE USED.
  - 11. DO NOT RUN AC AND DC WIRES TOGETHER IN SAME BUNDLE.
  - 12. N.O. = "NORMALLY OPEN".
  - 13. N.C. = "NORMALLY CLOSED".

REV.	CHANGES MADE		
<b>MURPHY</b>			
DRAWN BY:	MR	E.R.NO.	IPD
DATE:	10/4/11	CHKD. BY:	JRN APPD. BY: AU
MODEL:	APPLICATION DRAWING EMS PRO LITE		
DRAWING NO.	00-02-0814	SIZE	REV.
		C	A