


		ENERPRO	
		TYPICAL: ENERPRO LOCOMOTIVE POWER ELECTRONICS CONTROLLER SUBASSEMBLY (ELPEC)	
Page		ASSEMBLY PART NUMBER: PCA3DCE1735	
		E2344	

NOTES

1. Enable command input is a floating, current-limited photodiode. This input is filtered to provide enhanced electrical noise immunity. The enable command to the ELPEC is asserted when the photodiode is forward biased in the indicated polarity.
2. The enable status output transistor is on when the unit is enabled. Enable status output is a floating phototransistor. Customer must current-limit this output to no more than 250 mA at 74 VDC. Do not exceed a load voltage & current product of 25 V-A.
3. The hard fault transistor is on when the unit senses either a phase loss or a high DC output. Note that both of these fault conditions will self-inhibit the ELPEC as a safety measure. The hard fault output is a floating phototransistor; customer must current limit this output to no more than 250 mA at 74 VDC. Do not exceed a load voltage & current product of 25 V-A.
4. The soft fault transistor is on when the unit senses either low ac input, low DC output, or an overtemperature condition. Note that the available output current from the ELPEC may be diminished under these conditions and battery charging may be adversely effected. The soft fault output is a floating phototransistor; customer must current limit this output to no more than 250 mA at 74 VDC. Do not exceed a load voltage & current product of 25 V-A.
5. ELPEC bus bar terminal connections are captive 3/8-16 UNC PEM nuts. Do not exceed 25 foot-pounds torque on any connection.
6. Choke specification: 500 uH, 300A continuous RMS current typical. See Enerpro specification S256.
7. Isolation transformer required in applications where a dedicated CA winding is not available. The step-down ratio is determined by the CA voltage at the lowest frequency to achieve 65-70 Vac on the secondary. The capacity should be adequate to supply the full DC load current at the lowest power factor, typically at the highest CA voltage and frequency. See Enerpro specification S258.
8. Capacitor filter assembly provides 102,000 uF of bus capacitance at 200 VDC working/250 VDC surge. Shunt bleeder resistance is 590 ohms. See Enerpro drawing E1771.
9. Shunt leads must be a twisted, shielded pair with the shield terminated to carbody ground on one or both ends to minimize EMI-related noise. The internal connection to the shunt is made with a twisted, shielded pair bonded to the heat sink.

			
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