



Model: All Top Drives w/ BEI Encoders	Jan. 21, 2015
Serial #: See Affected Units	
Product Bulletin # TDS-145	

Notification of New Top Drive Encoder

Affected Units

All AC top drives with BEI encoders manufactured prior to June 2013.

New Encoder Model

Canrig has an improved 2048-pulse encoder rated for hazardous areas ATEX Zone 2 and UL Class I Div II. The new encoders use dual line drivers to send signals to the VFD, eliminating internal heating issues caused by high-capacitance cable and/or long cable runs. The input voltage range for the new encoders is 5–15V.

Effective immediately, Canrig will only supply the new encoder (P/N N10843); the previous encoder (P/N N10260) had an input voltage range of 5–24V and will no longer be available. All top drives supplied with a Canrig TDSU and Canrig-supplied VFD are compatible with the new encoder. Qualified personnel should verify that 15VDC is supplied to the encoder.



Caution!

Working on the control interface panel (CIP) presents significant electrical hazards. Only qualified personnel should work on the CIP, and all necessary precautions should be taken to minimize risk.

Third-Party VFD Units

Top drives operating with VFD units not supplied by Canrig may be supplying 24V to the encoder. If so, a 24V-to-15V power supply will be required (see Figure 1 below and Figure 2 on page 3).

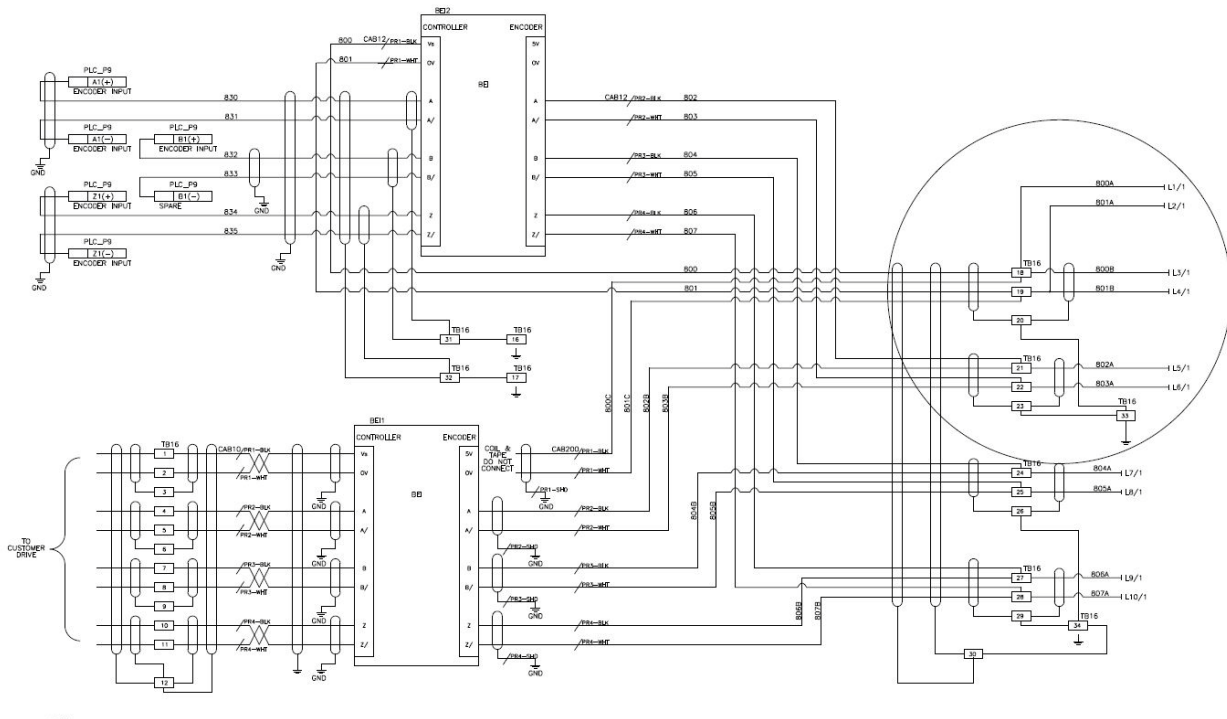


Figure 1: Example of CIP supplying 24V to encoder.

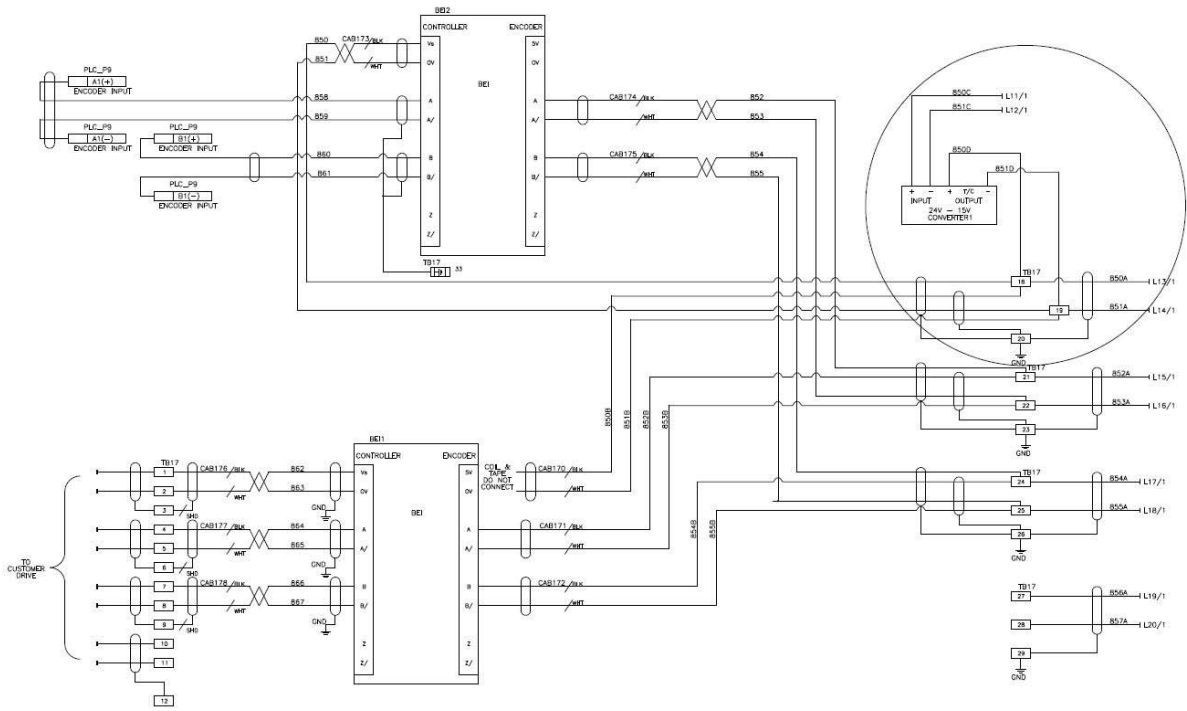


Figure 2: Example of CIP with 24V-to-15V power supply.

Qualified personnel should verify the voltage and, if necessary, install the 24V-to-15V power supply (P/N E18152) (see Figure 3) in the Carrig CIP (see Figure 4 on page 5).

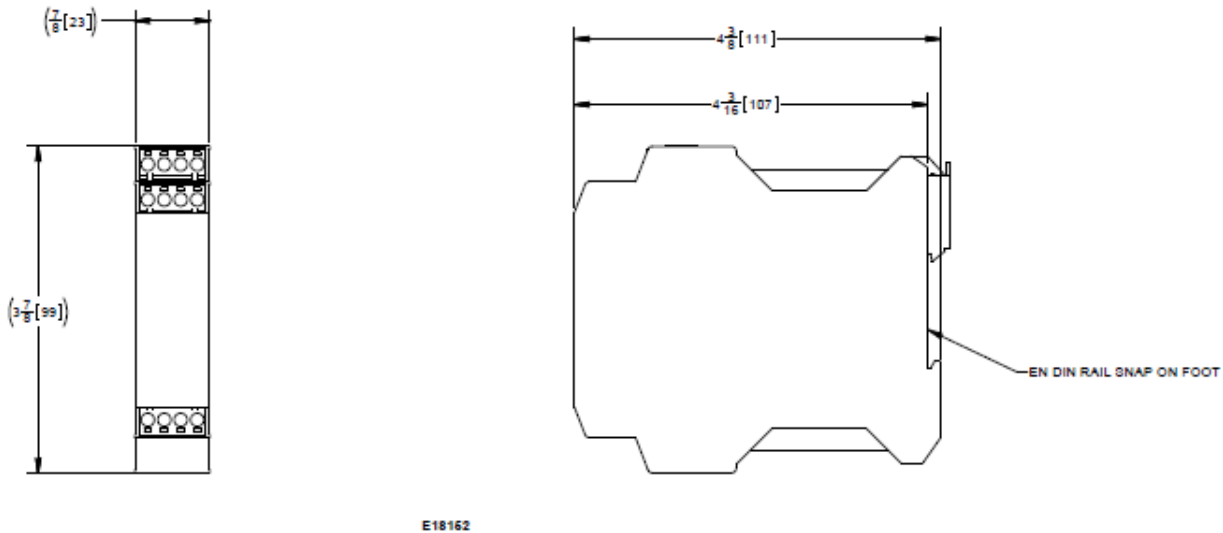
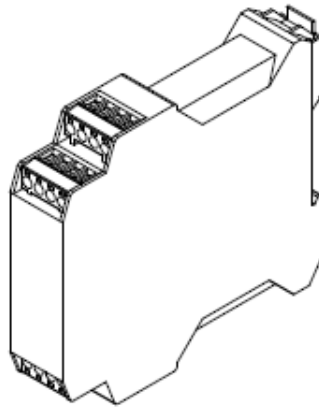


Figure 3: Power Supply (P/N E18152)

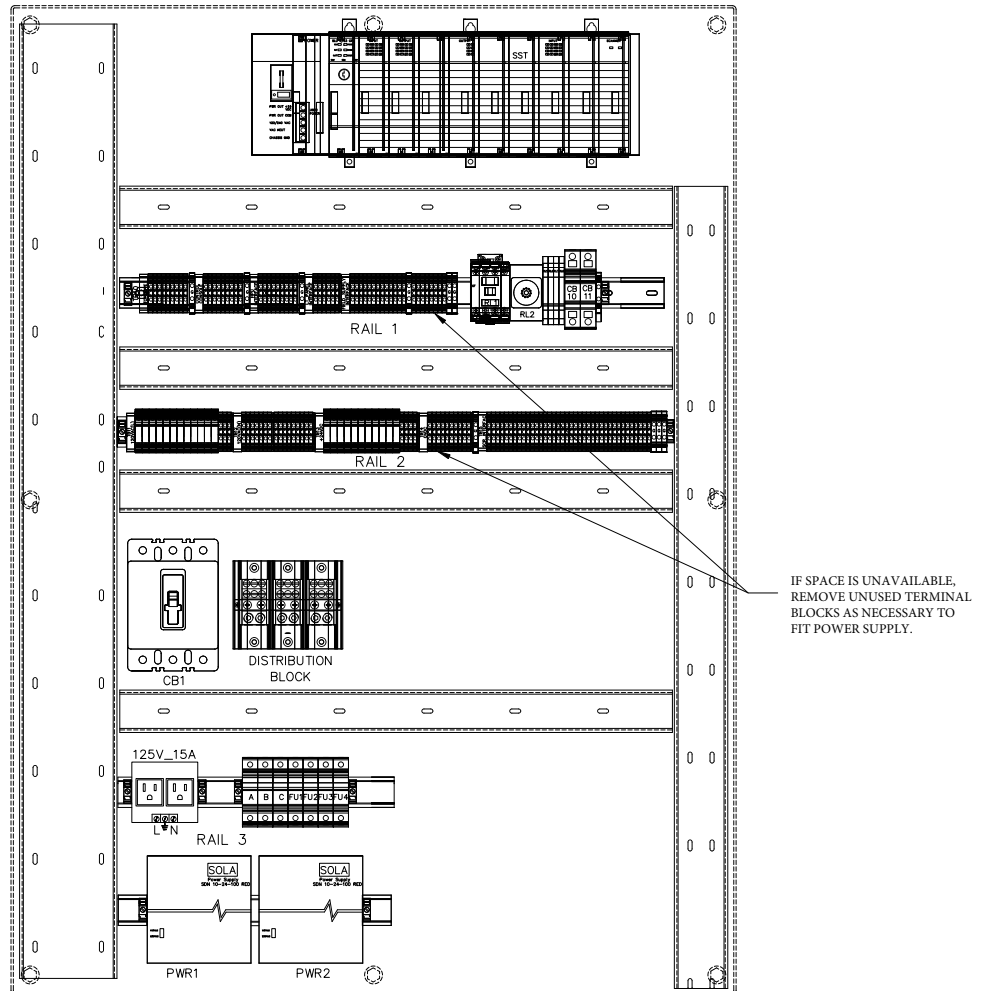


Figure 4: Generic CIP without 24V-to-15V power supply.



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A kit (P/N AY21794) is available with the necessary components to complete the installation. Qualified personnel should verify that the power supply is set to 15V output before returning the unit to service. The kit components are shown below.

P/N	Description	Note
E18152	Power Supply, 12–24VDC Input, 5–15VDC Output	
E16-1047-010	Rail, TS 35, Steel, Slotted	For mounting power supply
E03-1036-010	Cable, 1 C #18 AWG, Gray, Exane, 600V	For wiring power supply
E11365	Ferrule, #18 AWG, 14mm, Insulated, White	For wiring power supply
E10964	Standoff, 2, Steel, #1/4–20	For mounting power supply
RH-P-10-32-0050-SS	10–32X1/2 in. Phillips R Machine Screw, SS	For mounting power supply
SE10000	Schematics, Wiring, 24V–15V, Power Converter	

For top drive encoder system troubleshooting, refer to product bulletin #TD-132.