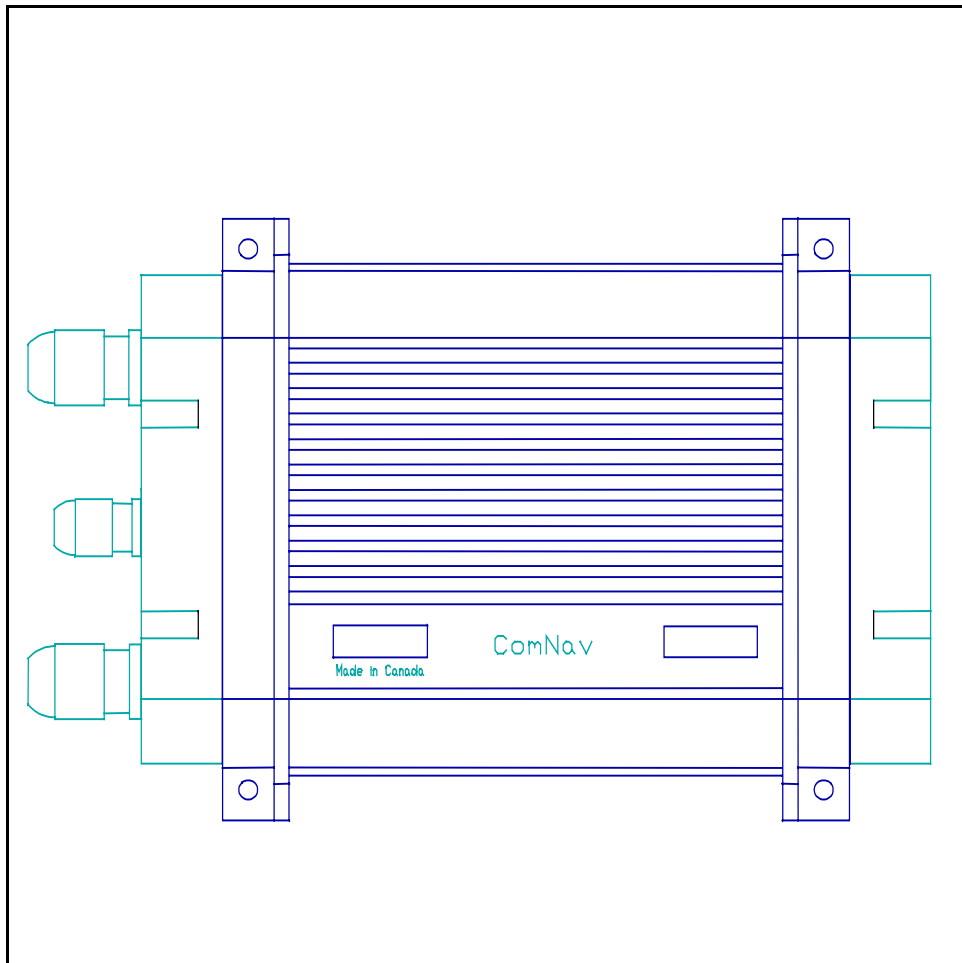




ComNav Marine Ltd.
#15 - 13511 Crestwood Place
Richmond, BC
Canada V6V 2G1

Phone: 1-604-207-1600
Fax: 1-604-207-8008
E-mail: sales@comnav.com
Web: www.comnavmarine.com

TYPE CT4 CONTROL BOX
(Part # 20350003)
(For 115/220VAC Solenoid Valves)
Installation Instructions (Revision 3)
Revised July 08, 1997 (serial #800096 and up)
(MANUAL #29010026)



COMNAV TYPE 4 CONTROL BOX (REVISION 3)

PART NO. CT4

(For 115/220 VAC Solenoid Valves)

The Type 4 Control Box is used to connect ComNav Marine Autopilots to a steering system that uses 115 or 220 VAC Solenoid Valves. Refer to enclosed hook-up diagram for details on exact interconnections. A four (4) conductor cable connects from the autopilot distribution box to the **small** 6 position plug. A three (3) conductor cable from the 115/220 VAC solenoid should be brought into the control box through the lower gland, and connected to the **large** 6 position plug labelled 4, 5 and 6. A second three (3) conductor cable from a 115/220 VAC power source should be brought in through the upper gland and connected to the 1, 2 and 3 positions of the **large** plug.

SETUP:

On 1001 and 2001 Autopilots, put the autopilot master switch in the **POWER STEER** mode. Press the **PORT** arrow key. If the rudder turns to starboard, reverse the wires going to the CT4 drive box marked **PORT IN** and **STARBOARD IN**. On ComNav Processor type autopilots, this procedure is not necessary as the Processor software automatically changes reversals.

To measure the maximum hard-over to hard-over time of the drive system, place the autopilot master select switch in the **POWER STEER** position and hold either the red or green **ARROW** key or the PORT and STBD pushbuttons(2200 Autopilot) to make the rudder move fully from Port to Starboard or vice versa.

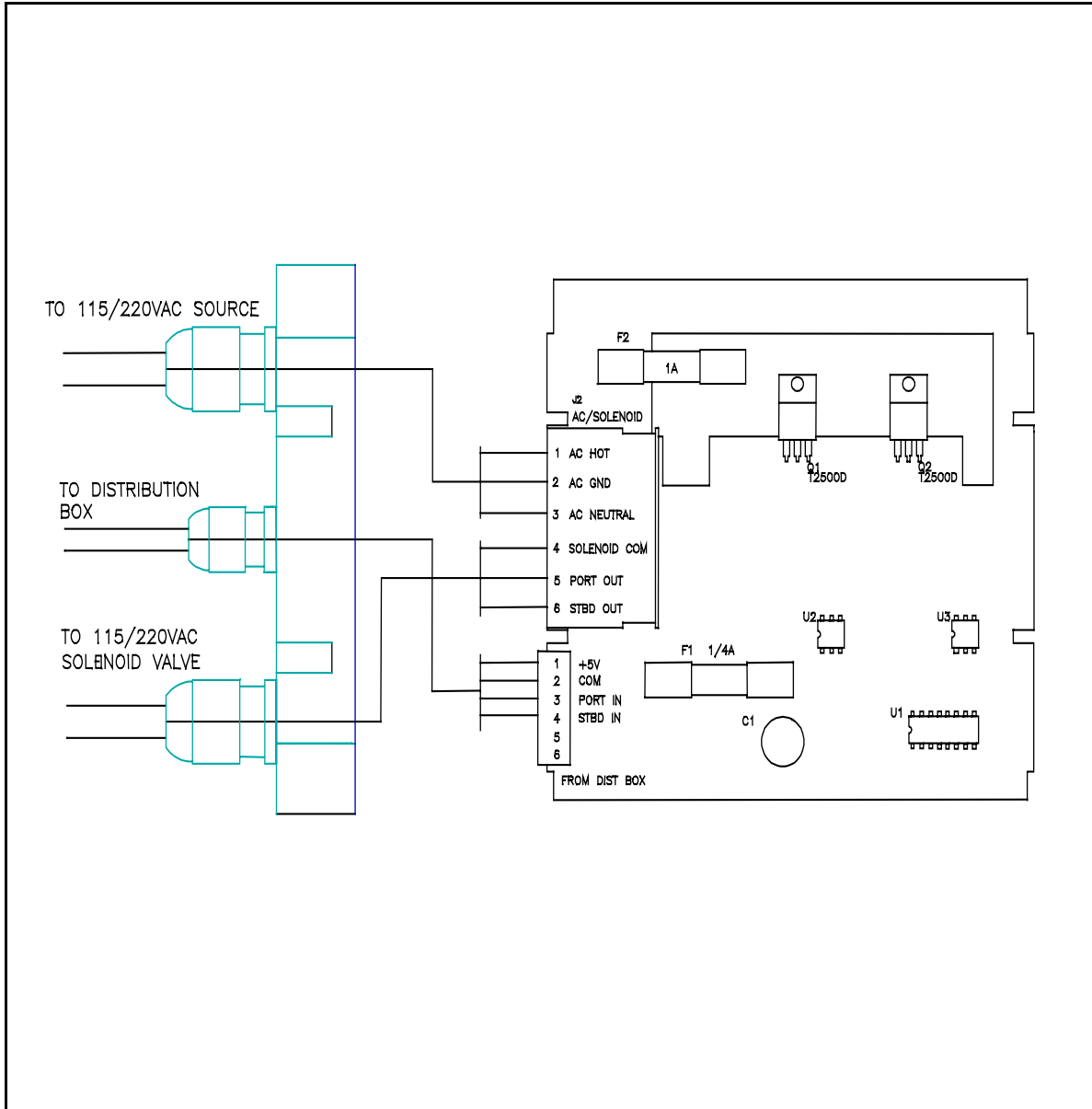
If the hard-over to hard-over time is less than 8 seconds, the rudder must be slowed down by decreasing the pumpset displacement, changing to a smaller pumpset or a slower acting drive unit.

If the hard-over to hard-over time is more than 16 seconds, the rudder must be speeded by increasing the pumpset displacement, changing to larger pumpset or a faster acting drive unit.

When the hard-over time is between 8 - 16 seconds, testing of the CT4 AC Interface Box is complete.

CAUTION:

EXTREME CARE SHOULD BE TAKEN WHILE HANDLING HIGH VOLTAGES. ANY CONNECTIONS FROM A HIGH VOLTAGE SOURCE SHOULD BE MADE THROUGH AN APPROPRIATE FUSE OR BREAKER, AND DISCONNECTED DURING HANDLING. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.



CT4 WIRING DIAGRAM

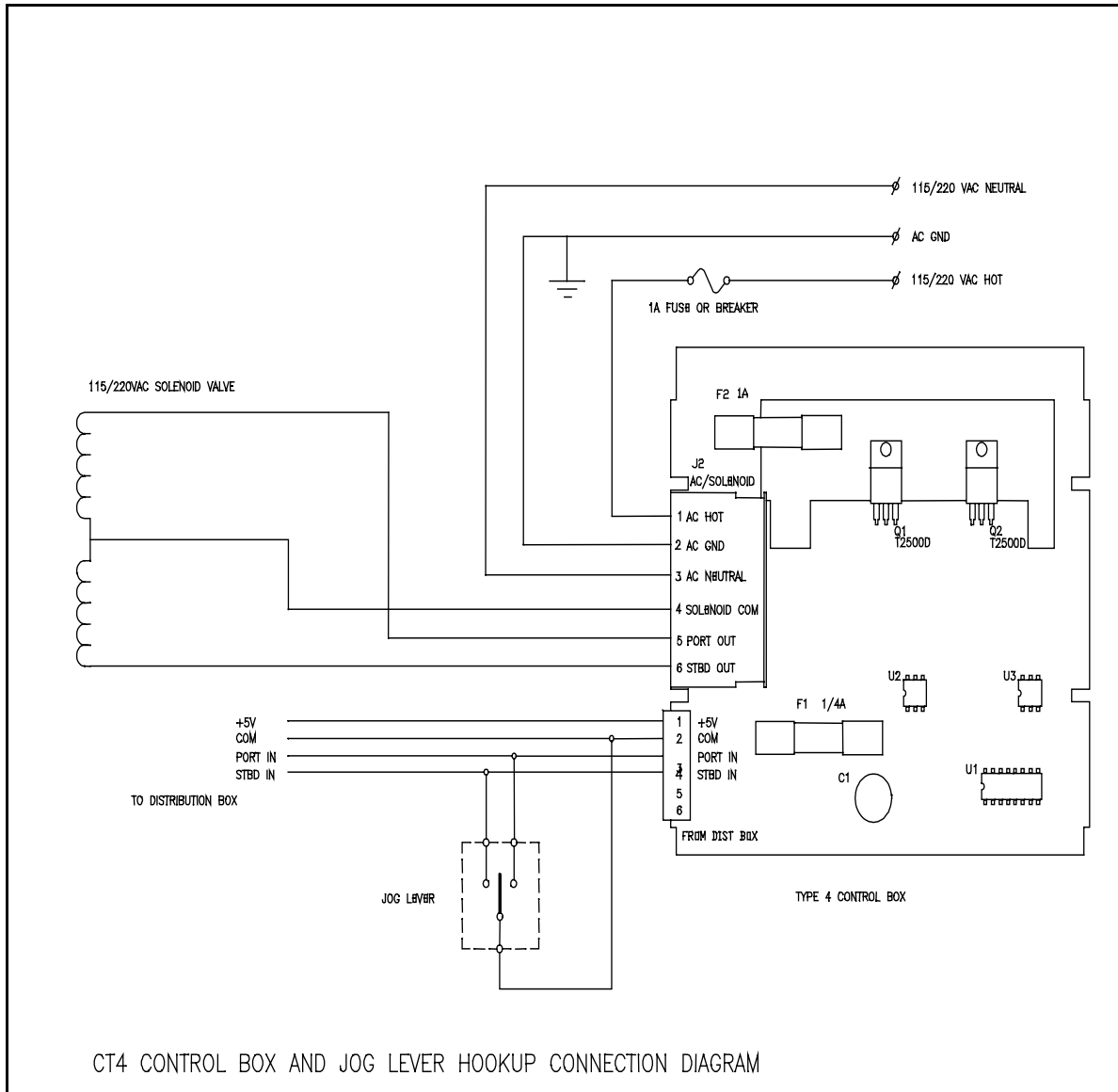
WIRING:

CT4 MOTOR CONTROLLER TO 1001 AND 2001 AUTOPILOTS

- CT4 terminal marked **+5** connects to the 1001/2001 Distribution Box terminal marked **+5**.
- CT4 terminal marked **COM** connects to the 1001/2001 Distribution Box terminal marked **COM**.
- CT4 terminal marked **PORT** connects to the 1001/2001 Distribution Box terminal Marked **PORT**.
- CT4 terminal marked **STBD** connects to the 1001/2001 Distribution Box terminal marked **STBD**.

CT4 MOTOR CONTROLLER TO COMNAV PROCESSOR TYPE AUTOPILOTS

- CT4 terminal marked **+5** connects to the Processor Rudder Follower terminal marked **#3**.
- CT4 terminal marked **COM** connects to the Processor Rudder Follower terminal marked **#1**.
- CT4 terminal marked **PORT** connects to the Processor Pump Motor terminal marked **M1**.
- CT4 terminal marked **STBD** connects to the Processor Pump Motor terminal marked **M2**.



CT4 WITH JOG SWITCH WIRING DIAGRAM

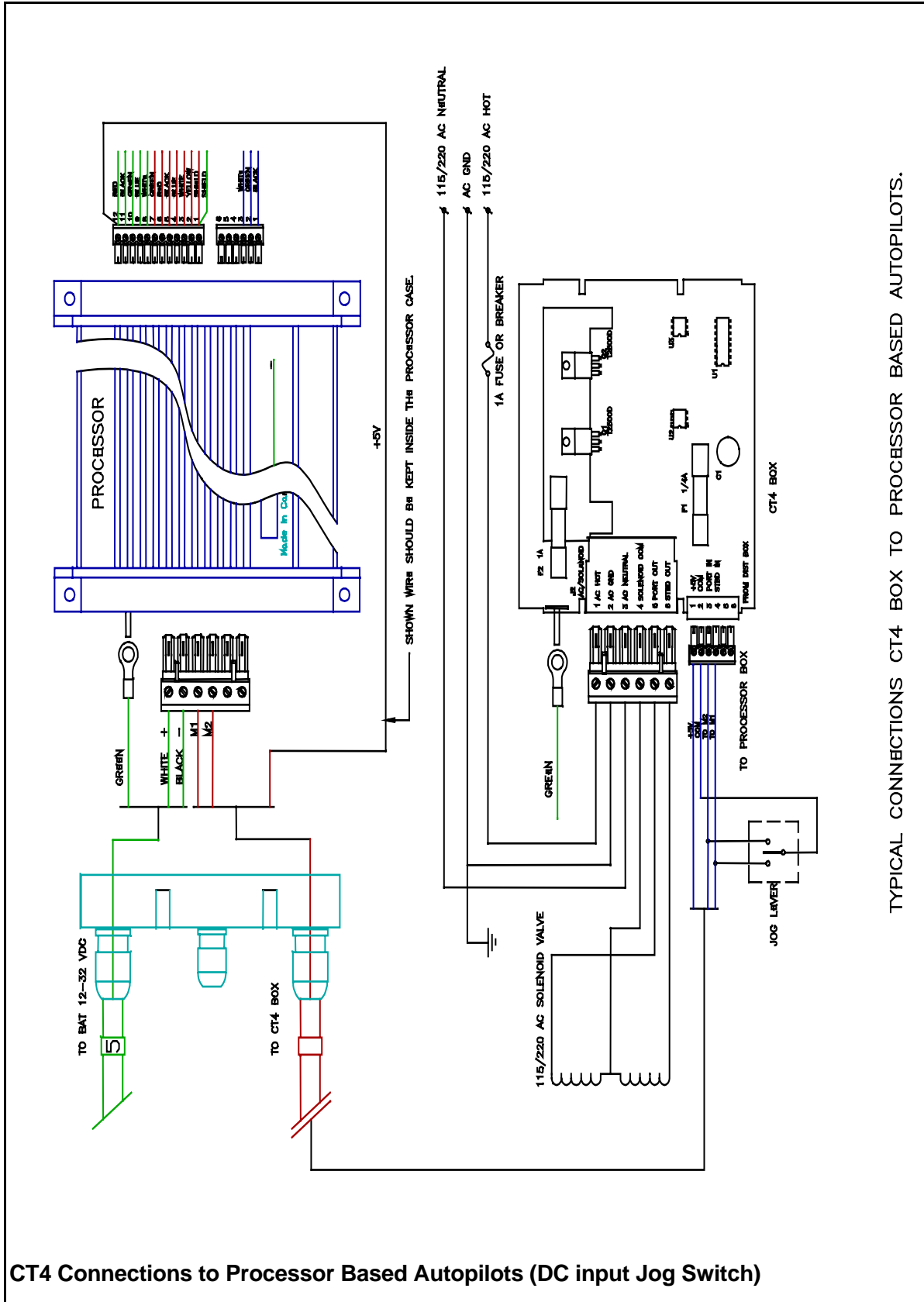
WIRING:

CT4 MOTOR CONTROLLER TO 1001 AND 2001 AUTOPILOTS

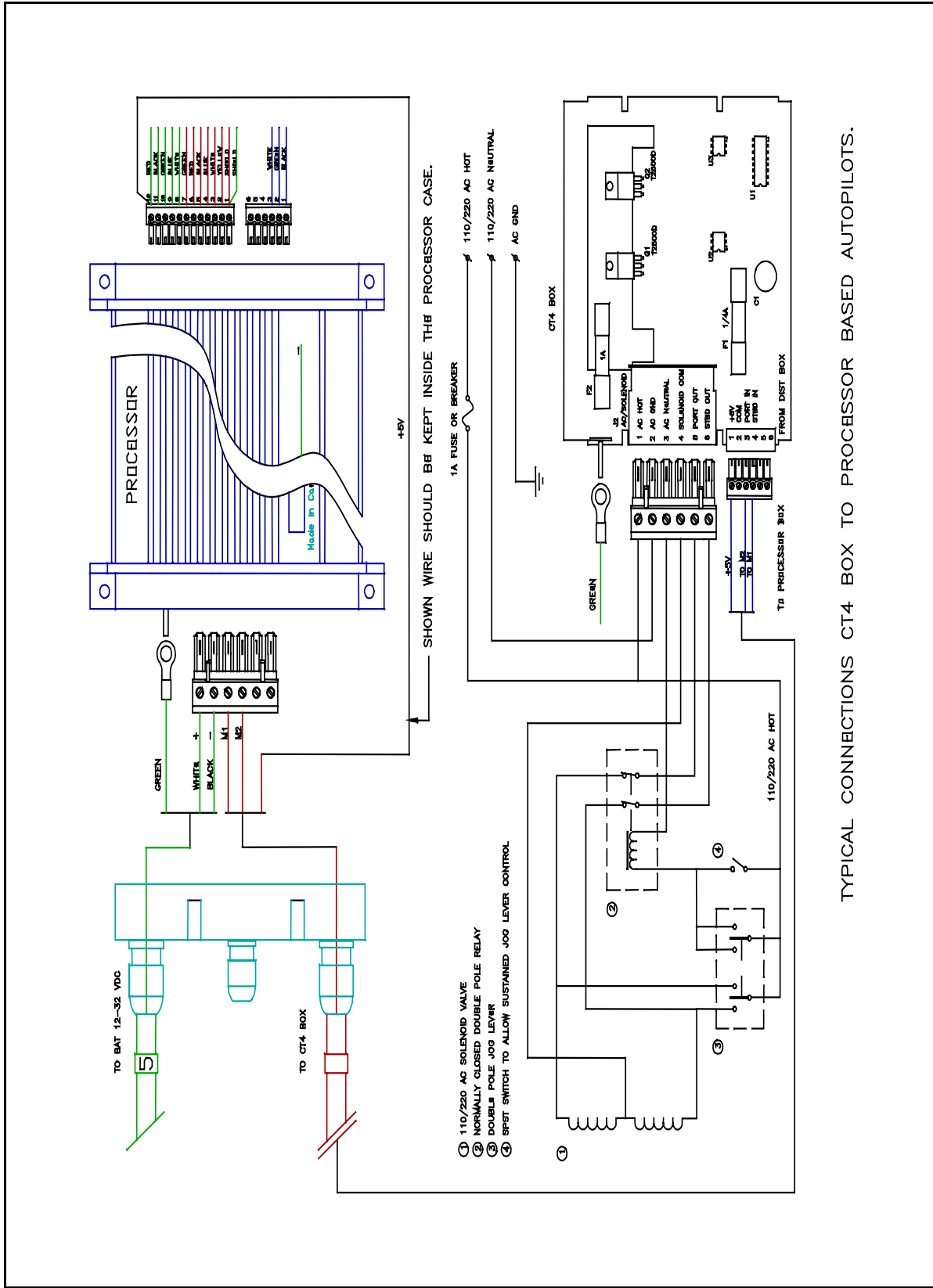
CT4 terminal marked **+5** connects to the 1001/2001 Distribution Box terminal marked **+5**.
 CT4 terminal marked **COM** connects to the 1001/2001 Distribution Box terminal marked **COM**.
 CT4 terminal marked **PORT** connects to the 1001/2001 Distribution Box terminal marked **PORT**.
 CT4 terminal marked **STBD** connects to the 1001/2001 Distribution Box terminal marked **STBD**.

CT4 MOTOR CONTROLLER TO COMNAV PROCESSOR TYPE AUTOPILOTS

CT4 terminal marked **+5** connects to the Processor Rudder Follower terminal marked **#3**.
 CT4 terminal marked **COM** connects to the Processor Rudder Follower terminal marked **#1**.
 CT4 terminal marked **PORT** connects to the Processor Pump Motor terminal marked **M1**.
 CT4 terminal marked **STBD** connects to the Processor Pump Motor terminal marked **M2**.



TYPICAL CONNECTIONS CT4 BOX TO PROCESSOR BASED AUTOPILOTS.



TYPICAL CONNECTIONS CT4 BOX TO PROCESSOR BASED AUTOPILOTS.

CT4 Connections to Processor Based Autopilots (AC input Jog Switch)

MANUAL CHANGES

DECEMBER 31, 1996

PAGE 2 - WARNING ADDED ABOUT ATTAINING A 10 TO 15 SECOND H.O. TIME.

JANUARY 30, 1997

PAGE 5 AND 6 - ADDED CT4 TO PROCESSOR BASED AUTOPILOT WIRING

MAY 27, 1997

PAGE 1 - CHANGED 115VAC SOLENOID VALVES TO 115/220VAC SOLENOID VALVE(MANUAL # 71611)

MANUAL CHANGES

DECEMBER 31, 1996

PAGE 2 - WARNING ADDED ABOUT ATTAINING A 10 TO 15 SECOND H.O. TIME.

JANUARY 29, 1997

PAGE 4 - ADDED CT5 WIRING TO PROCESSOR BASED AUTOPILOTS

November 17, 1998

Converted document to Word

September 6, 2000

Changed address on letterhead