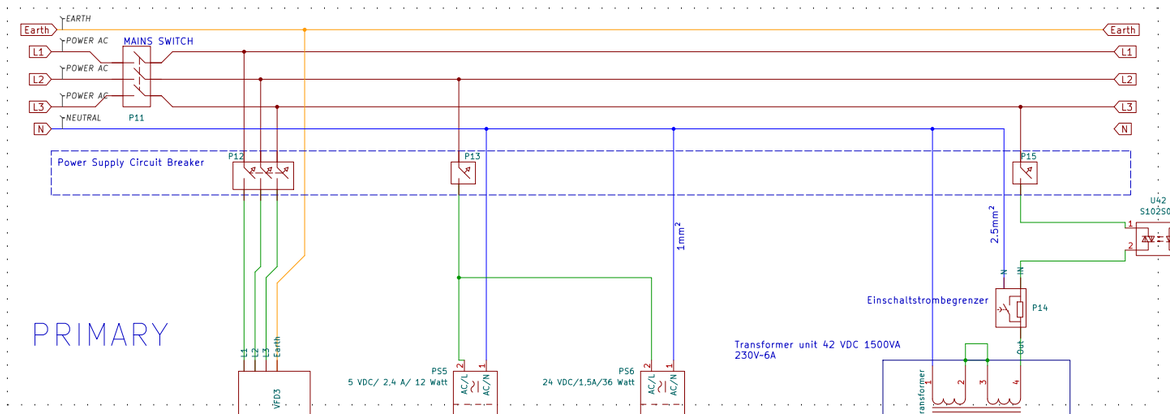
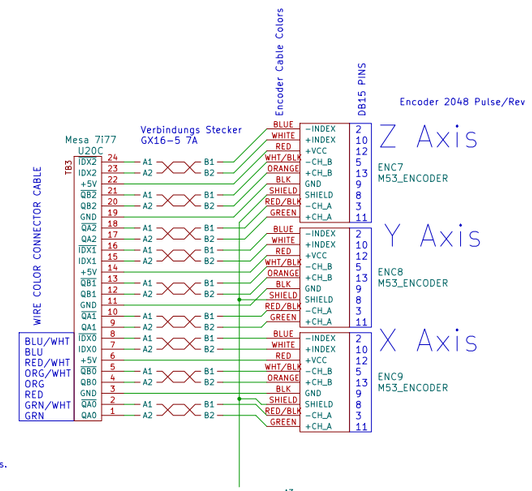
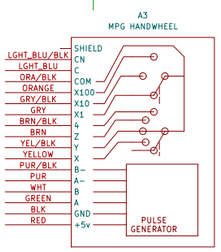


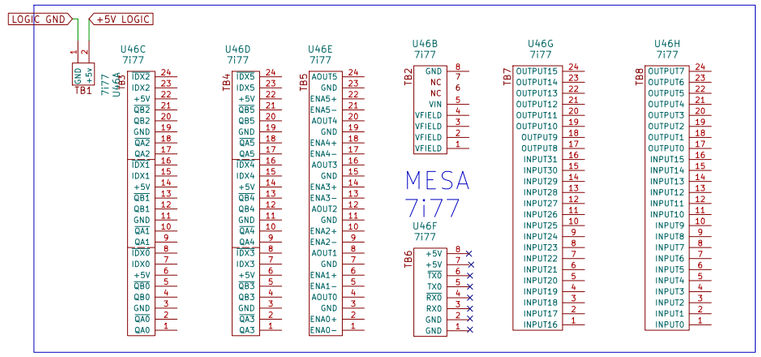
7177 FIELD BUS
GX16-5 7A

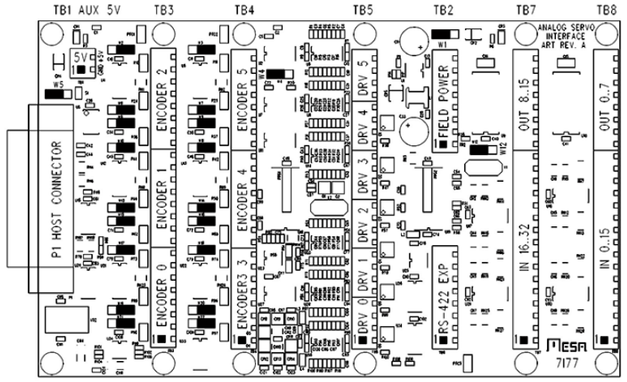
The 7177/7177D are daughtercard/breakout boarda for use with MESA's 25 pin I/O FPGA cards like the 5i25 and 7i92. The 7177 is designed for interfacing up to 6 Axis of analog servo motor drives and also provides 48 isolated I/O points for general purpose field I/O use.
Six +−10V analog outputs and six encoder inputs (all with index) are provided for servo interfacing. Six floating drive enable outputs allow control of active high or active low drive enables. Encoder inputs can be individually set for differential or single ended mode. 48 points of isolated field I/O are provided for general control use including limit switch, control panel inputs, coolant enable and tool changer control outputs. Isolated I/O includes 32 sinking inputs and 16 sourcing (7177) or sinking (7177D) outputs. Inputs can sense 5V to 32V signals and the outputs can switch 5V through 28V signals. Maximum output load is 300 mA. Outputs are short circuit protected. Field I/O is powered by an isolated 10−32V field power source.



Single Phase (Brush Type)
1. It is recommended to reduce the drive output current to avoid motor over heating during the setup procedure. Make sure the current has been set appropriately within the system and motor limits based on the procedure outlined in "Current Limiting Procedure" on page 46.
2.Check the power and connect it to the drive. Do not connect the motor lead wires.
3.Make sure the drive is in an enabled state via all inhibit/enable inputs. See drive datasheet for details.
4.Check that the status LED indicates normal operation (GREEN).
5.Set mode according to the drive datasheet for Voltage Mode.
6.Set the Test/Offset switch to Test mode. Measure the voltage across the motor output with a DC voltmeter. Slowly turn the Test/Offset potentiometer; the voltage should vary between ± bus voltage. Set the output voltage with the Test/Offset potentiometer to a low value.
7.Verify that the load circuit meets the minimum inductance requirements and that the power supply voltage does not exceed the drive rated voltage or 150% of the nominal motor voltage.
8.Turn the power off. Connect the motor. Turn the power back on. Gradually turn the Test/Offset potentiometer to change motor speed in both directions. Set the Test/Offset switch to Offset.
9.Ground both reference inputs and then using the Test/Offset potentiometer, set the motor for zero speed.
10.Set the control mode suitable for the application.







LED COLOR LOCATION FUNCTION
CR1 Yellow Upper left 5V monitor
CR3 Yellow Upper right Field voltage monitor
CR6 Yellow Lower middle +16V monitor
CR7 Yellow Lower middle −12V monitor
CR15 Green Lower right Field I/O activity
CR16 Red Lower right Field I/O fault
In normal operation CR1 through CR7 must always be on. At power−up, CR15 should be off and CR16 on. The red LED CR16 indicates a watchdog fault, which is expected before host communications are established. Once running, CR15 should blink at about 1 Hz for a 1 KHz update rate, and CR16 should be off. Note: CR15 and CR16 are only present in revision B or greater 7177 cards.

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