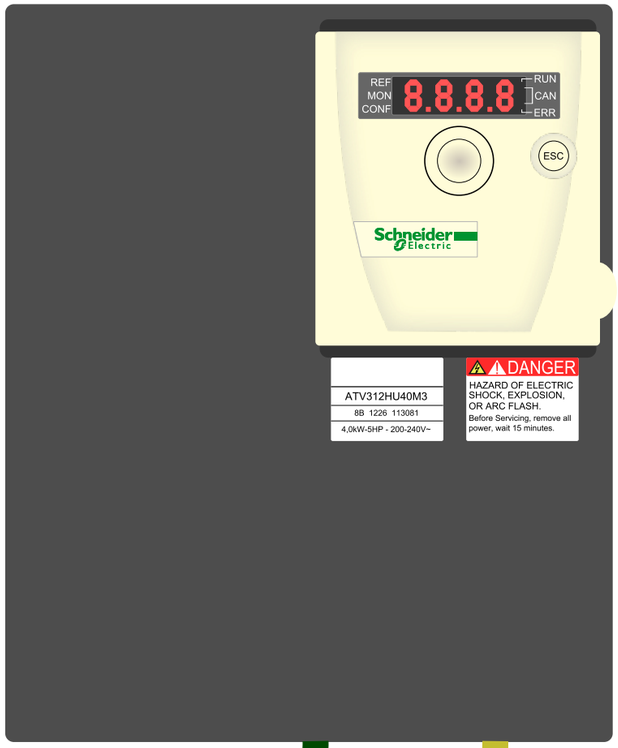
WARNING!!! - READ FIRST!!!

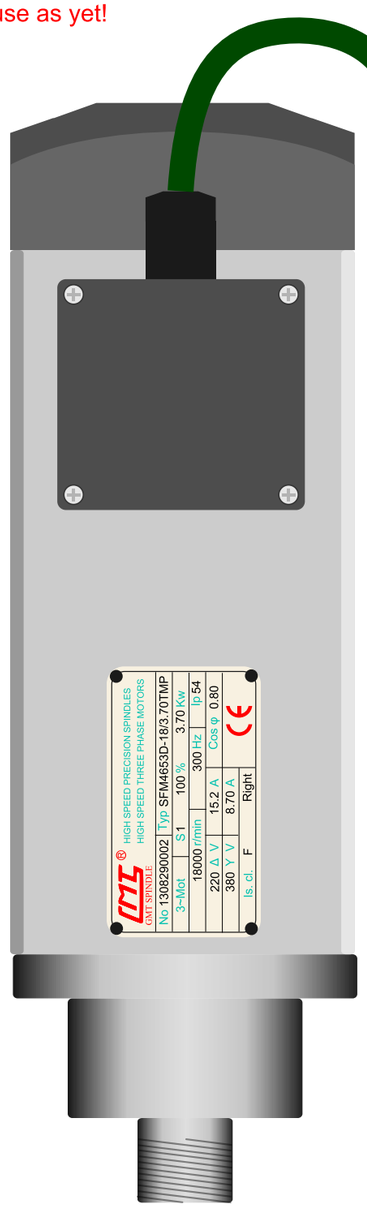
This example uses 220VAC mains voltage and HIGH CURRENT! Attempting to wire this project is done entirely AT YOU OWN RISK!

If you are not familiar with the risks involved when using mains electricity DO NOT even attempt to copy this work!

AET do not accept any liability whatsoever for any injury to persons or damage to equipment!

This work is offered as an informational reference only and is NOT intended for industrial/commercial use as yet!

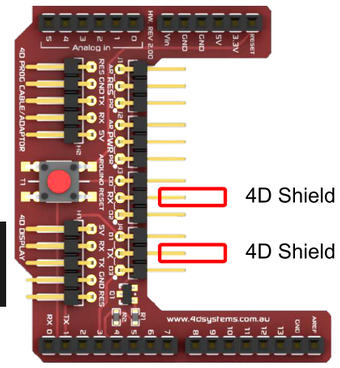


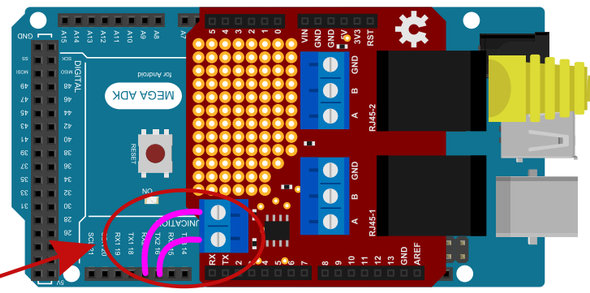


3.7kW GMT Three Phase Spindle

4-Core Cable for 3phase U,V,W, GND Connections to VSD. (NOTE: 220VAC)

CAT5 Ethernet Cable to VSD. (This is an RS485 connection, NOT an ETHERNET link!)





Rx and Tx from AET RS485 Shield to Rx2 and Tx2 of ATMEGA

Stack the 4D Systems Shield on top of the RS485 Shield...

The AET RS485 Arduino shield uses the SimpleModbusMaster library which implements Modbus RTU protocol. (NOT Modbus ASCII...which is VERY different)

NOTE 1: RS485 Shield connected to Serial2 of ATMEGA 2560

NOTE 2: 4D Systems Shield connected to Serial1 of ATMEGA 2560

Software Required for this system setup:

1. WORKSHOP4 by 4D Systems for screen design, programming and communication setup.

2. Arduino IDE with the AET SimpleModbusMater library loaded. (see https://github.com/aetcnc/4D_Arduino_VSD)

3. Sample program from the above GITHUB repository which grabs key press information from the HMI buttons and turns them into a "BUTTONSTATE" variable so the user can tell which button has been pressed.

4. The above sample program also sends the required ENABLE, RUN, FWD, REV and E-STOP commands to the VSD.

Schneider VSD
4D Systems uLCD-43PT
Prepared By: GHJ Date: 08/01/2014

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Schneider VSD + uLCD-43PT - Sheet 1/3 - Connection Diagram