

STM32 Blackpill  
CoffeeHat PCB v3  
View: Top

Legend:

- 3 Solenoid (3 Way Valve) QC 0.25
- P Pump QC 0.25
- L AC Line QC 0.25
- N AC Neutral QC 0.25

Power Cord  
NEMA 5-15P to C13  
View: Ground facing up

Power Socket  
IEC Socket C14 15A  
View: Ground facing up  
Conn: QC 0.25

BRASS 57 SOLENOID  
(3-Way Valve)  
V2 230V 50HZ  
View: Connector Side  
Conn: QC 0.25

Ulka Pump  
View: Connector Side  
Conn: QC 0.25

Thermal Fuse 110C

Safety Thermostat 165c

K Type Thermocouple  
Ungrounded M4  
View: Side

Thermal Paste

Hand Tight

use old thermostat screw hole for thermocouple?  
what thread size and pitch?

Use ferrule ends

Pressure Transducer  
0 - 1.2 MPa, 5V, G1/4  
View: Side

Solid State Relay  
220Vac to 3-32Vdc 40A  
View: Top  
Conn: Screw Terminal

Use spade connectors on all 4 SSR terminals

VDC Control

VAC Load

Pressure Transducer  
JST 2mm

IO JST 2mm

Serial / HW JST 2mm

Boot Reset

Gnd

TX

RX

3v3

5V

Gnd

Clk

Data2

Data1

PB15

Thermocouple  
Screw Terminal

SSR  
Center: Boiler  
Bottom: Unused  
JST 2mm

Touch Screen  
JST 2mm

Switches  
Center: Steam  
Bottom: Brew  
JST 2mm

Pressure Transducer  
JST 2mm

5V

Gnd

IN

Clk

Data

3v3

Gnd

Nextion Display  
Part #: NX3224F024  
View: Back

SD Card Slot

JST 2.54mm

5V

RX

TX

Gnd

Steam Switch  
DPST  
View: Back  
Conn: QC 0.25

Hot Water Switch  
DPST  
View: Back  
Conn: QC 0.25

Brew Switch  
DPST  
View: Back  
Conn: QC 0.25

Indicator Lamp  
shows when boiler is heating  
View: Back  
Conn: QC 0.25

Power Switch  
DPST  
View: Back  
Conn: QC 0.25

Boiler  
View: Top  
Connectors: QC 0.25