KSGER STM32 T12 Controller Ver. 2.1S

Vacuum Desoldering Control Option

24VDC Pump Power
VCC
GND

Pump Solenoid
D4 RS1M
Q4 Si4800

Pump Motor
D3 RS1M
Q3 Si4800

PUMP_SOL R20 470R
R19 4k7

PUMP_MOT R14 470R
R15 4k7

OLED_SCL
OLED_SDA
+3.3V
SDA SCL GND VCC
128x64 1.3" OLED
Rear view

U1 STM32F103CBU6 UFQFPN48

+3.3V
C6
D7 SD103AWS
D6 SD103AWS
CR2032
R10 10k
Remove R10 to stop excess battery drain

ENCODER
ENC_PB
ENC_A
ENC_B
R16 4k7 R13 4k7 R17 4k7
N/C
SH
C10 1nF C11 1nF
Front Panel
Recommend wiring DC GND to encoder tabs for ESD grounding

VCC
+24VDC
DC Power
R8 10k
R9 1k
C7 0.1uF
VIN_MON

U2 JW5026
C1a 0.1uF
BST
VIN SW
EN FB
GND
L1 4.7uH
R1a 100k
C4 100uF 35V
C2a C3a
R3a 7k5
R2a 2k4
C2
+3.3V

+3.3V
C5 0.1uF
R6 4k7 R2 4k7
U4
A0 VCC
A1 WP
A2 SCL
VSS SDA
AT24C08N
EE_SCL
EE_SDA

BE
+3.3V
NTC
SHAKE
TIP_TEMP
EE_SDA
EE_SCL

Y1 32.768kHz 6pF

+3.3V
PGM
SWD_CLK
SWDIO
C D G V

R3 2k
R4 1k
Q2 AO3022
HEATER_ON
Q1 TPC8107
C8
* Add for transient protection RS1A

U3 OPA336NA SGM8551XN
+3.3V
TIP_TEMP
2.250V=450°C about 5mV/°C
D1 GRN
R5 249k
R7 1k
R12D 4k7
R11 0R out for JBC
Cut Trace for JBC on boards with no R11

T12+
G
E
N
S
GX12-5M
Male pins facing you

+3.3V
R1 4k7 1%
R12C 4k7
NTC R12A 4k7
SHAKE R12B 4k7
this trace wrong on some boards

T12+
G
E
N
S
JBC

WAND
Socket
T12+ T12-
GX12-5F
RED
BLK
GRN
WHT
BLU
+
G
E
N
S
MF58 10k B3950 1%
Female pins facing you
Silver UP Gold
Shake
SW-200D

T12
Heater 8 ohms
Thermocouple
+
-
T12+ T12- E
RED BLK GRN

Hirose RPC1-12P-6S
GRN C1 COM
RED C2 HTR+
BLU C3 TC+
Socket
ID

JBC C245
Thermocouple
+
-
Heater
TC+ HTR+ COM

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Sch Rev. 2