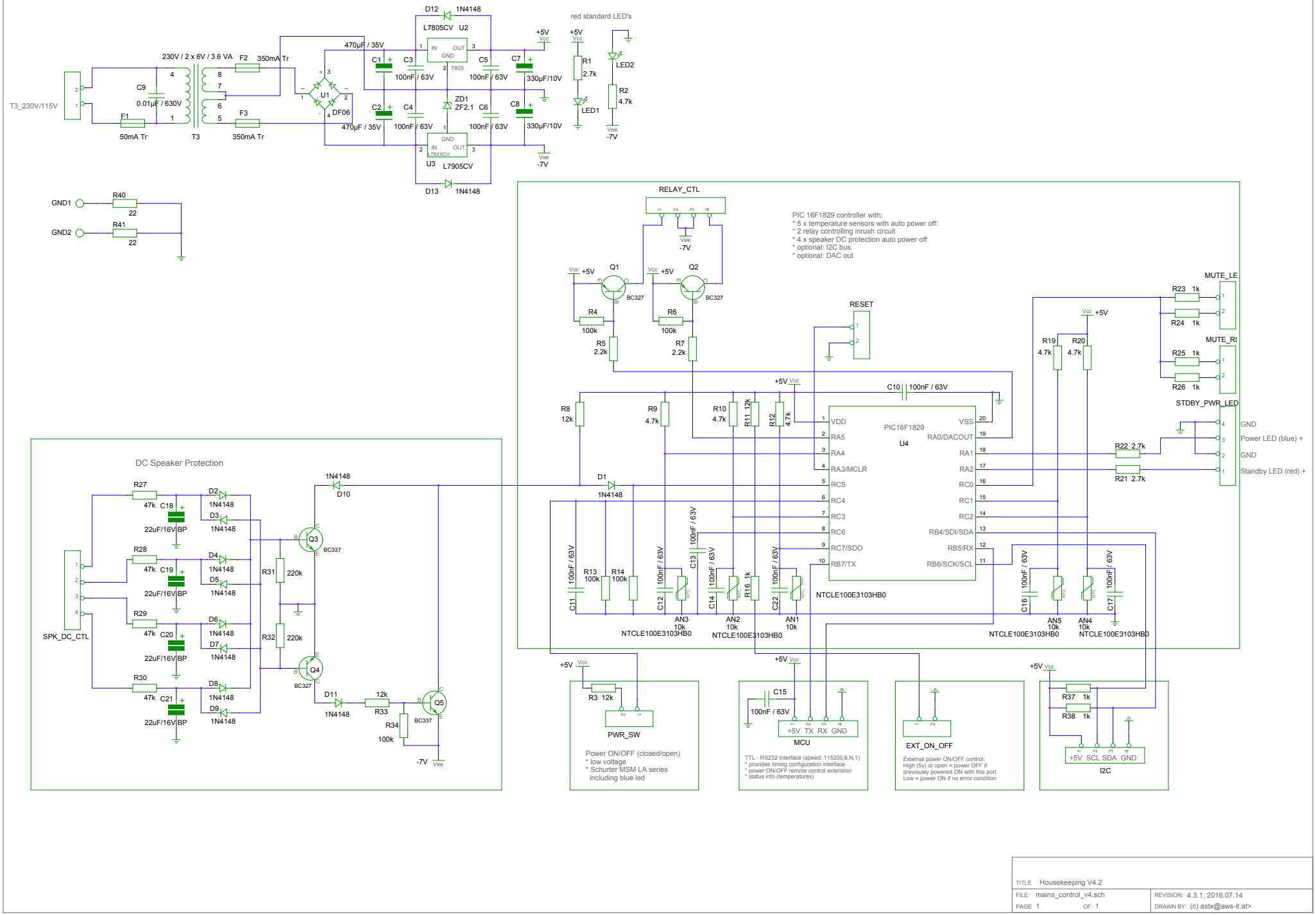
T3_230V/115V
230V / 2 x 6V / 3.6 VA
F1
50mA Tr
T3
F2
350mA Tr
F3
350mA Tr
C9
0.01µF / 630V
U1
DF06
D12
1N4148
L7805CV U2
7805
470µF / 35V
C1
C3
100nF / 63V
C5
100nF / 63V
C7
330µF/10V
+5V
C2
C4
100nF / 63V
C6
100nF / 63V
C8
330µF/10V
ZD1
ZF2.1
470µF / 35V
L79XXCV
U3
L7905CV
D13
1N4148
-7V
red standard LED's
R1
2.7k
LED1
LED2
R2
4.7k
GND1
GND2
R40
R41
22
RELAY_CTL
Vee
-7V
PIC 16F1829 controller with:
* 5 x temperature sensors with auto power off:
* 2 relay controlling inrush circuit
* 4 x speaker DC protection auto power off
* optional: I2C bus
* optional: DAC out
Q1
Q2
BC327
R4
100k
R5
2.2k
R6
100k
R7
2.2k
RESET
C10
100nF / 63V
R8
12k
R9
4.7k
R10
4.7k
R11
12k
R12
4.7k
PIC16F1829
U4
VDD
RA5
RA4
RA3/MCLR
RC5
RC4
RC3
RC6
RC7/SDO
RB7/TX
VSS
RA0/DACOUT
RA1
RA2
RC0
RC1
RC2
RB4/SDI/SDA
RB5/RX
RB6/SCK/SCL
R19
4.7k
R20
4.7k
MUTE_LE
MUTE_RI
R23
1k
R24
1k
R25
1k
R26
1k
STDBY_PWR_LED
GND
Power LED (blue) +
GND
Standby LED (red) +
R22
2.7k
R21
2.7k
D1
1N4148
C11
100nF / 63V
R13
100k
R14
100k
C12
C13
C14
R16
1k
C22
C16
C17
NTCLE100E3103HB0
AN3
10k
AN2
10k
AN1
10k
AN5
10k
AN4
10k
DC Speaker Protection
SPK_DC_CTL
R27
47k
C18
22uF/16V
BP
R28
47k
C19
22uF/16V
BP
R29
47k
C20
22uF/16V
BP
R30
47k
C21
22uF/16V
BP
D2
D3
D4
D5
D6
D7
D8
D9
1N4148
D10
1N4148
Q3
BC337
R31
220k
R32
220k
Q4
BC327
D11
1N4148
12k
R33
R34
100k
Q5
BC337
-7V
Vee
R3
12k
PWR_SW
Power ON/OFF (closed/open)
* low voltage
* Schurter MSM LA series
including blue led
C15
100nF / 63V
+5V TX RX GND
MCU
TTL - RS232 Interface (speed: 115200,8,N,1)
* provides timing configuration interface
* power ON/OFF remote control extension
* status info (temperatures)
EXT_ON_OFF
External power ON/OFF control:
High (5v) or open = power OFF if
previously powered ON with this port
Low = power ON if no error condition
R37
1k
R38
1k
+5V SCL SDA GND
I2C
TITLE Housekeeping V4.2
FILE: mains_control_v4.sch
PAGE 1 OF 1
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