

PRESSURE GAUGE
SSI TECHNOLOGY INC
DIGITAL MEDIA GAUGE

MODEL: MG-300-A-MD-R
300PSI/LCD/ANNUNCIATOR/4-20MA
12VDC SUPPLY

4-20mA CURRENT LOOP (TO GROUND)
SUPPLY = 12V - CURRENT RESISTOR = 220R
FS = 300PSI = 12 @ 0.020A = 600 - 220R
FS = 300PSI = 300R = 20mA @ 4.4V
ZS = 0PSI = 12 @ 0.004A = 3000 - 220R
ZS = 0PSI = 2780R = 4mA @ 0.88V
ZS (4mA) = 0.88V OFFSET
4.4V - 0.88V = 3.52
3.52 / 300 (FS) = 0.011733 per PSI
0.011733 (PSI) * 0.88V (OFFSET) = 1 PSI or 0.891731V

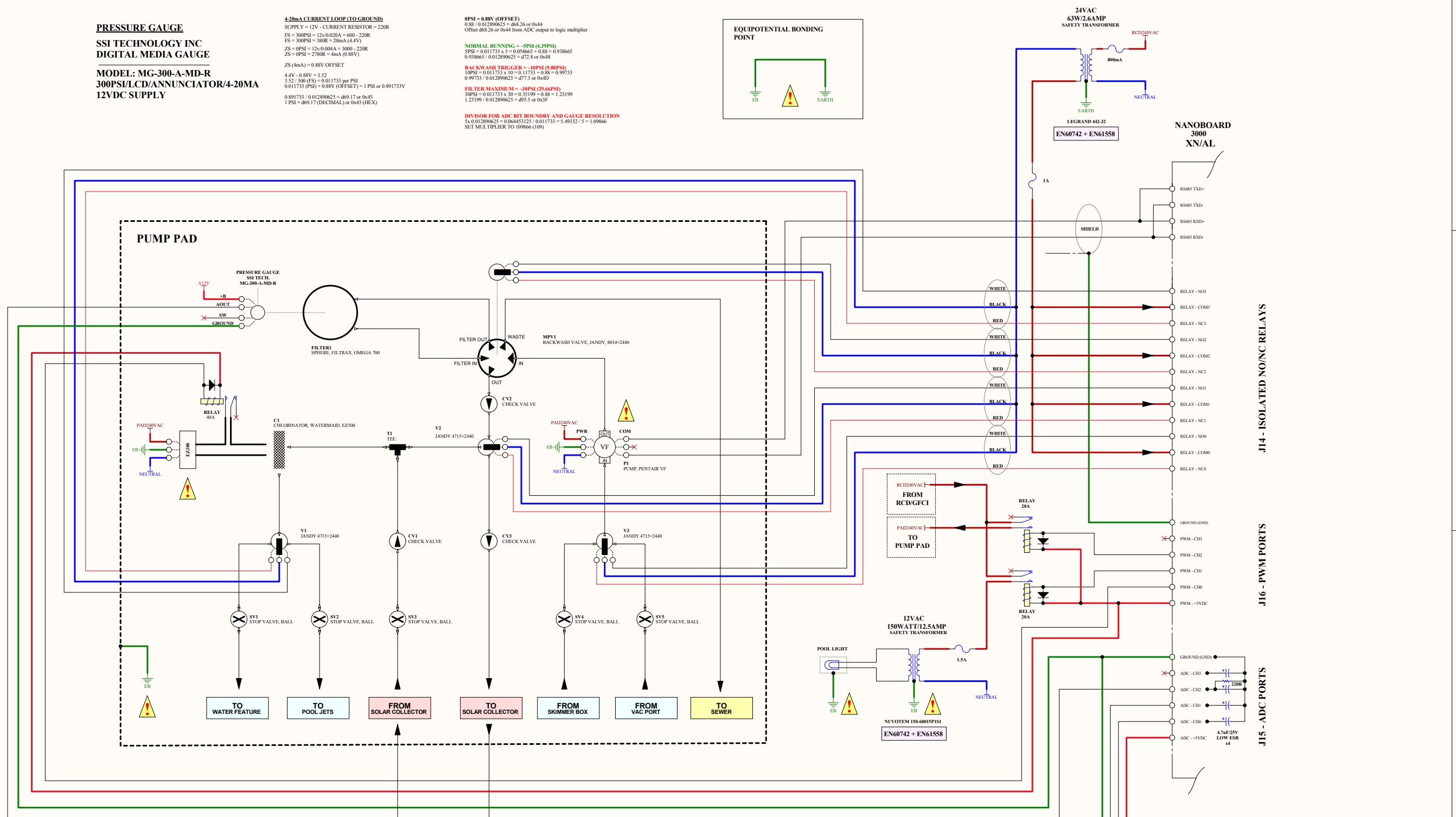
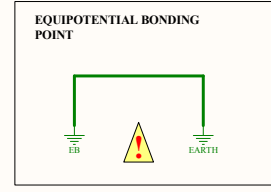
0PSI = 0.88V (OFFSET)
0.88 / 0.012890625 = d68.26 or 0x44
Offset d68.26 or 0x44 from ADC output to logic multiplier

NORMAL RUNNING = -5PSI (4.39PSI)
SPSI = 0.011733 * 5 = 0.058665 + 0.88 = 0.938665
0.938665 / 0.012890625 = d72.8 or 0x48

BACKWASH TRIGGER = -10PSI (9.8PSI)
10PSI = 0.011733 * 10 = 0.11733 + 0.88 = 0.99733
0.99733 / 0.012890625 = d77.3 or 0x4D

FILTER MAXIMUM = -30PSI (29.66PSI)
30PSI = 0.011733 * 30 = 0.35199 + 0.88 = 1.23199
1.23199 / 0.012890625 = d95.5 or 0x5F

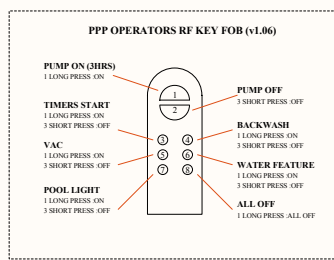
DIVISOR FOR ADC BIT BOUNDARY AND GAUGE RESOLUTION
5x 0.012890625 = 0.064453125 / 0.011733 = 5.49332 / 5 = 1.09866
SET MULTIPLIER TO 109866 (109)



J14 - ISOLATED NO/NC RELAYS

J16 - PWM PORTS

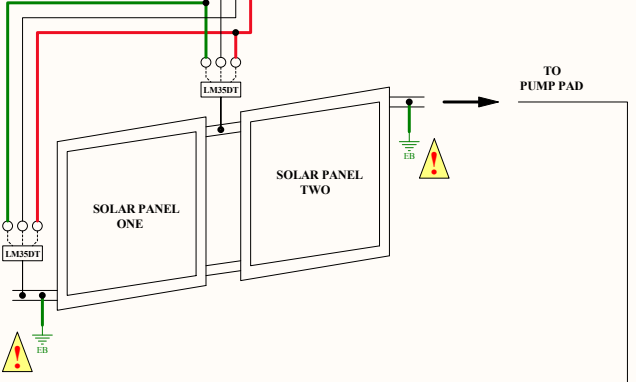
J15 - ADC PORTS



SOLAR TRIGGER = 30° Celsius
1° Celsius = 10 mV (NanSem LM50DT)
ADC RESOLUTION = 0.012890625 = 1 LSB BIT @ 3.3V FS REF
0.012890625 = 1 LSB BIT
30° Celsius = 300mV @ 30V
0.30 / 0.012890625 = 23.27 or d23 or 0x17

DIRECT SETUP

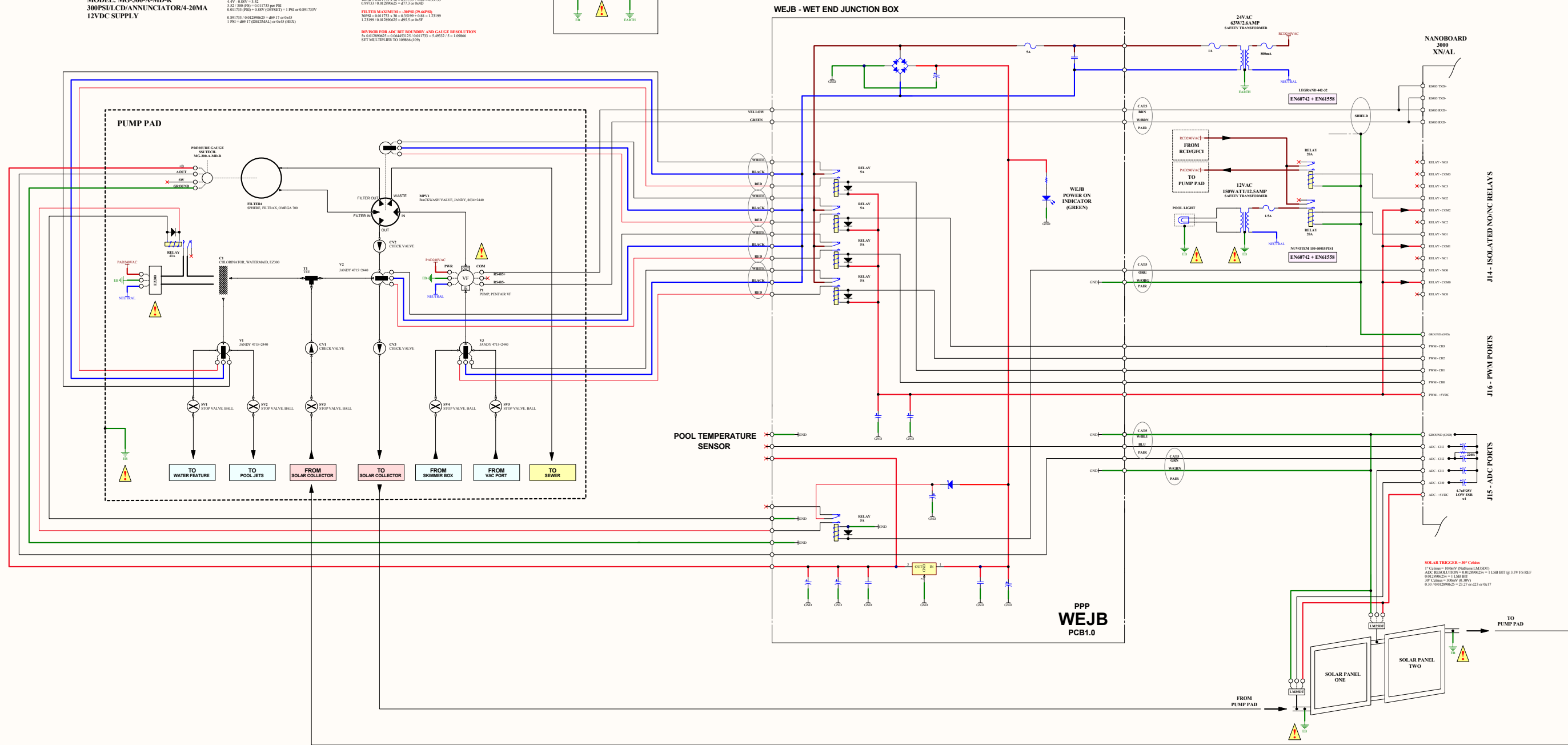
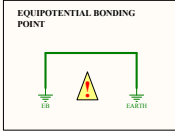
POOL PAD PARTNER
PUMP PAD INTERFACE FOR DIRECT CONNECTION AND PLUMBING LAYOUT DIAGRAM



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12VDC SUPPLY

4-20mA CURRENT LOOP (TO GROUND)
SUPPLY = 12V - CURRENT RESISTOR = 250R
PS = 300PSI = 12V/300PSI = 0.04V/PSI
PS = 300PSI = 300R = 20mA (4-20)
PS = 300PSI = 12V/300PSI = 0.04V/PSI
PS = 300PSI = 300R = 20mA (4-20)
PS = 300PSI = 12V/300PSI = 0.04V/PSI
PS = 300PSI = 300R = 20mA (4-20)

PSI = 88V (OFFSET)
0.001 (0.000000) = 0.001 (0.001)
0.001 (0.001) = 0.001 (0.001)
0.001 (0.001) = 0.001 (0.001)
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WEJB SETUP

POOL PAD PARTNER
PUMP PAD INTERFACE FOR CONNECTION
WITH WEJB AND PLUMBING LAYOUT
DIAGRAM

