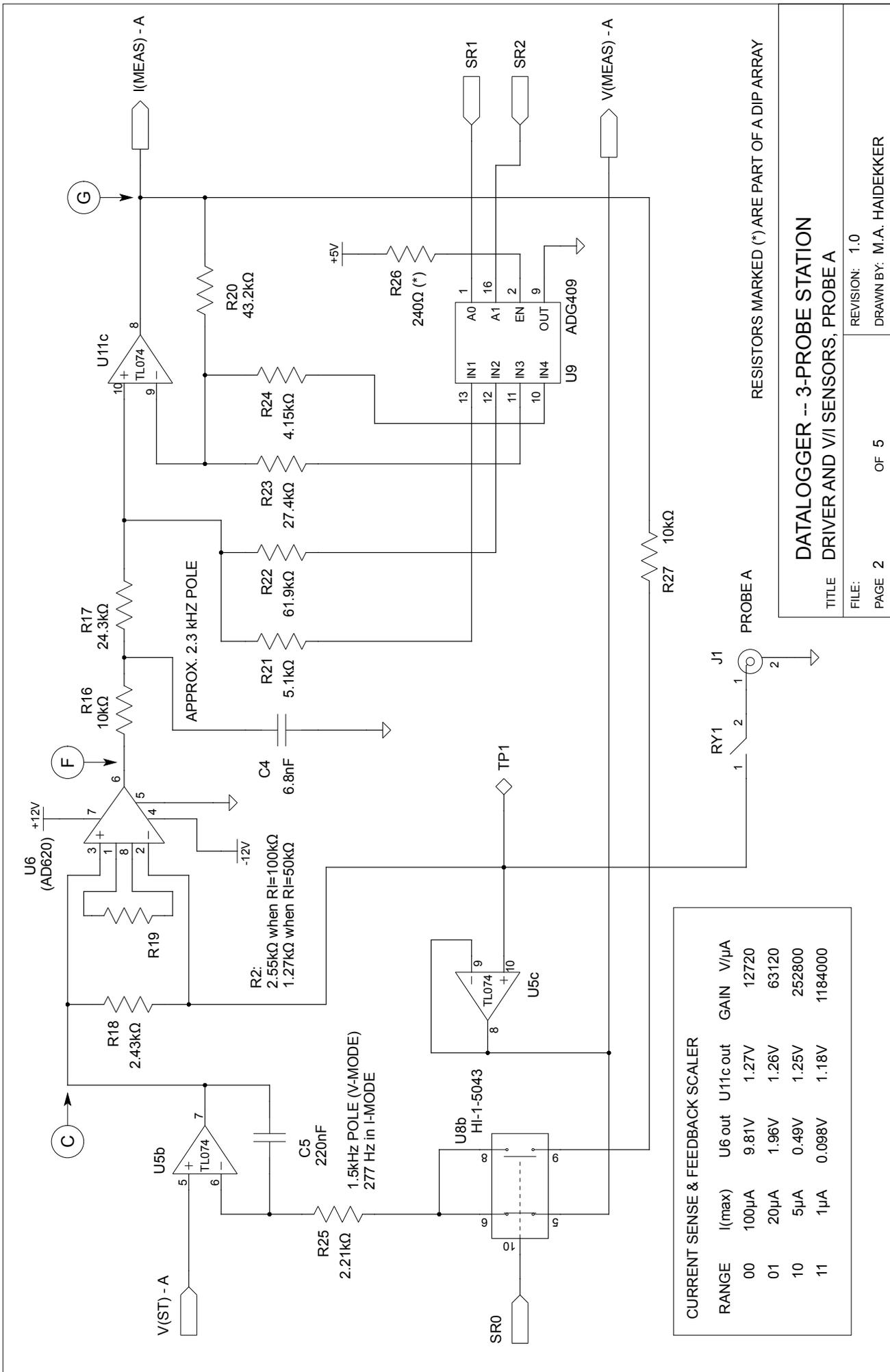


**DATALOGGER -- 3-PROBE STATION
INPUT AMPLIFIERS AND RANGE SELECT**

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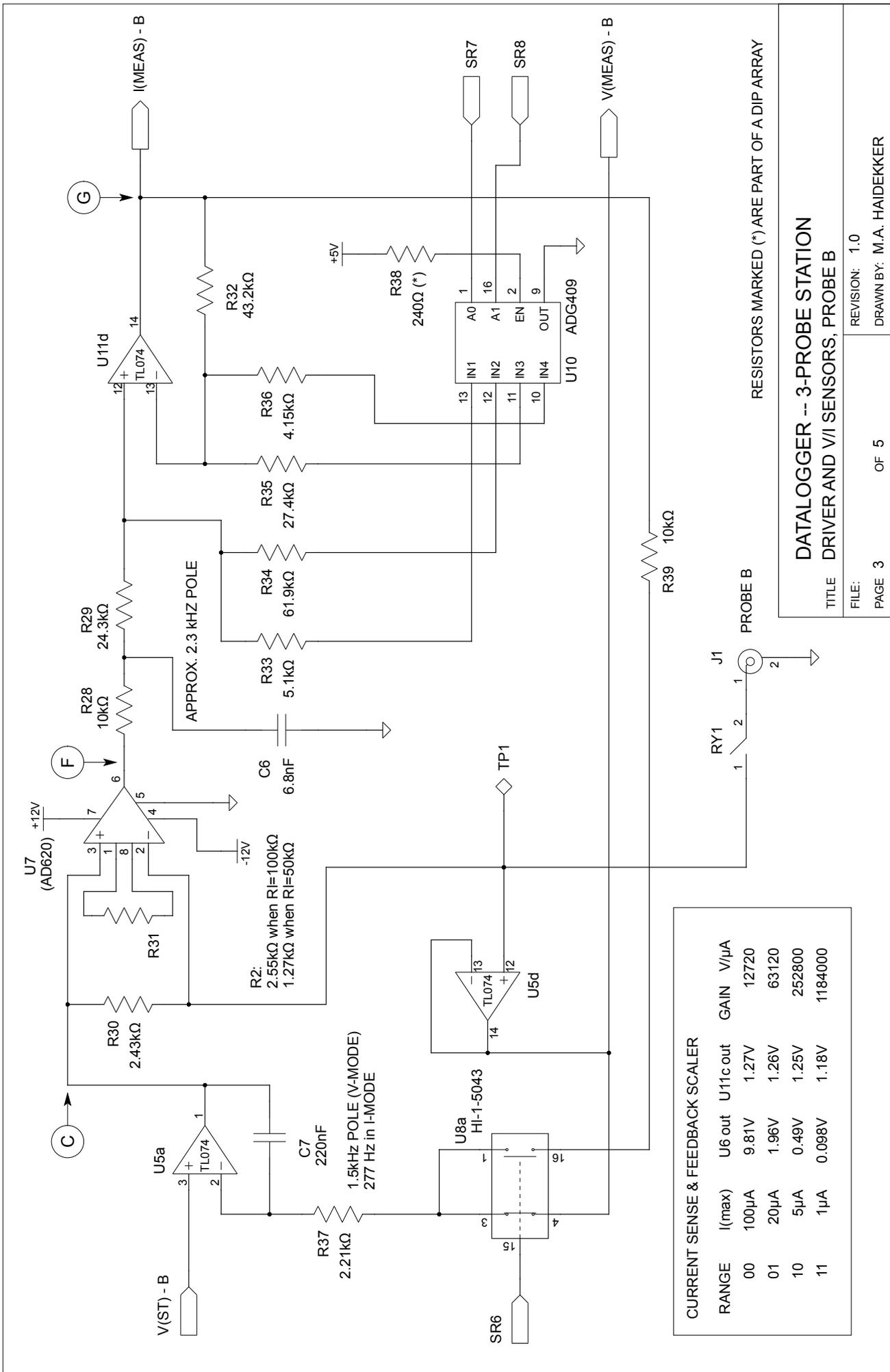
CURRENT SENSE & FEEDBACK SCALER

RANGE	I(max)	U6 out	U11c out	GAIN	V/μA
00	100μA	9.81V	1.27V	12720	
01	20μA	1.96V	1.26V	63120	
10	5μA	0.49V	1.25V	252800	
11	1μA	0.098V	1.18V	1184000	

RESISTORS MARKED (*) ARE PART OF A DIP ARRAY

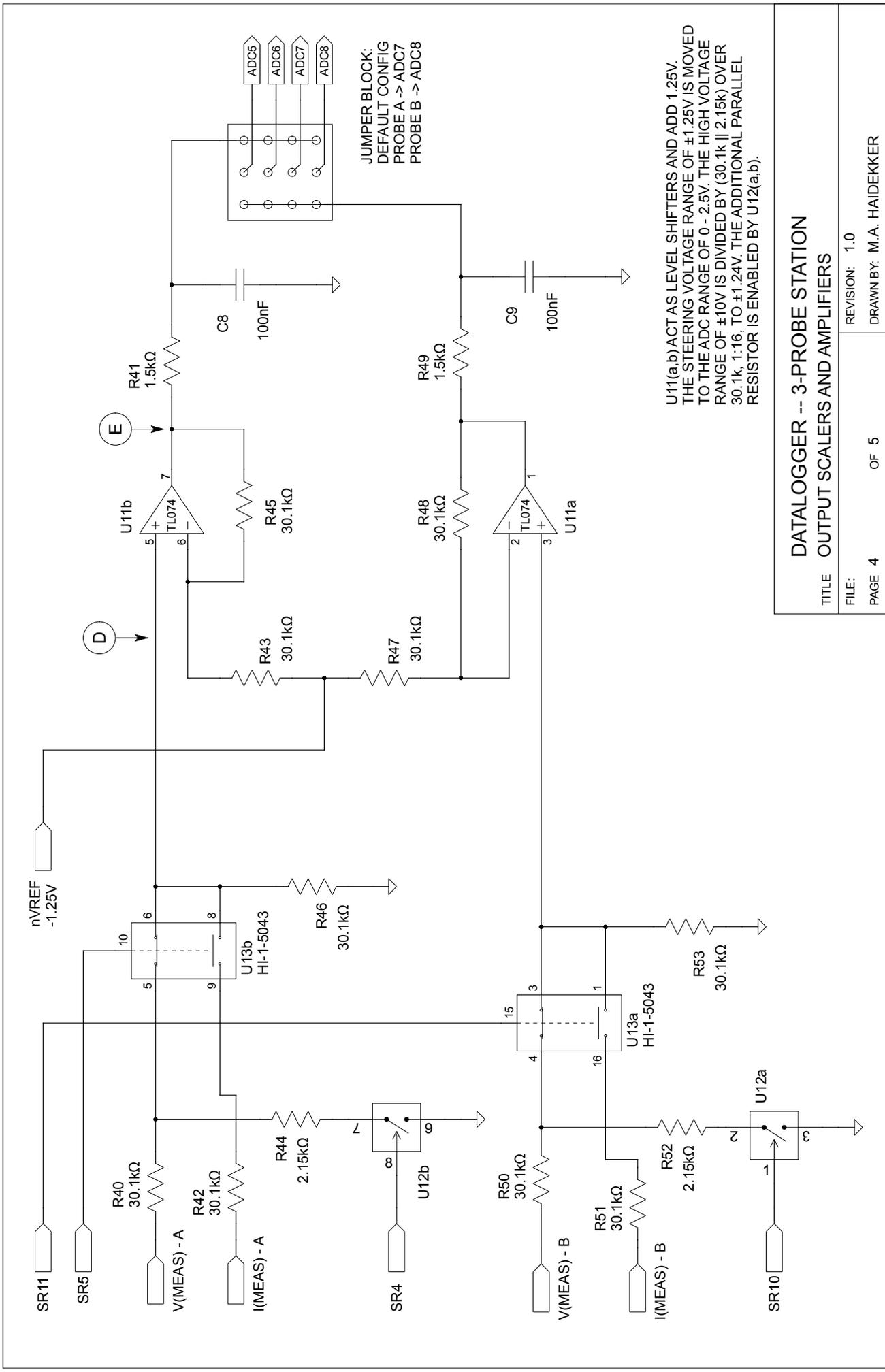
**DATALOGGER -- 3-PROBE STATION
DRIVER AND VI SENSORS, PROBE A**

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RESISTORS MARKED (*) ARE PART OF A DIP ARRAY

**DATALOGGER -- 3-PROBE STATION
DRIVER AND VI SENSORS, PROBE B**

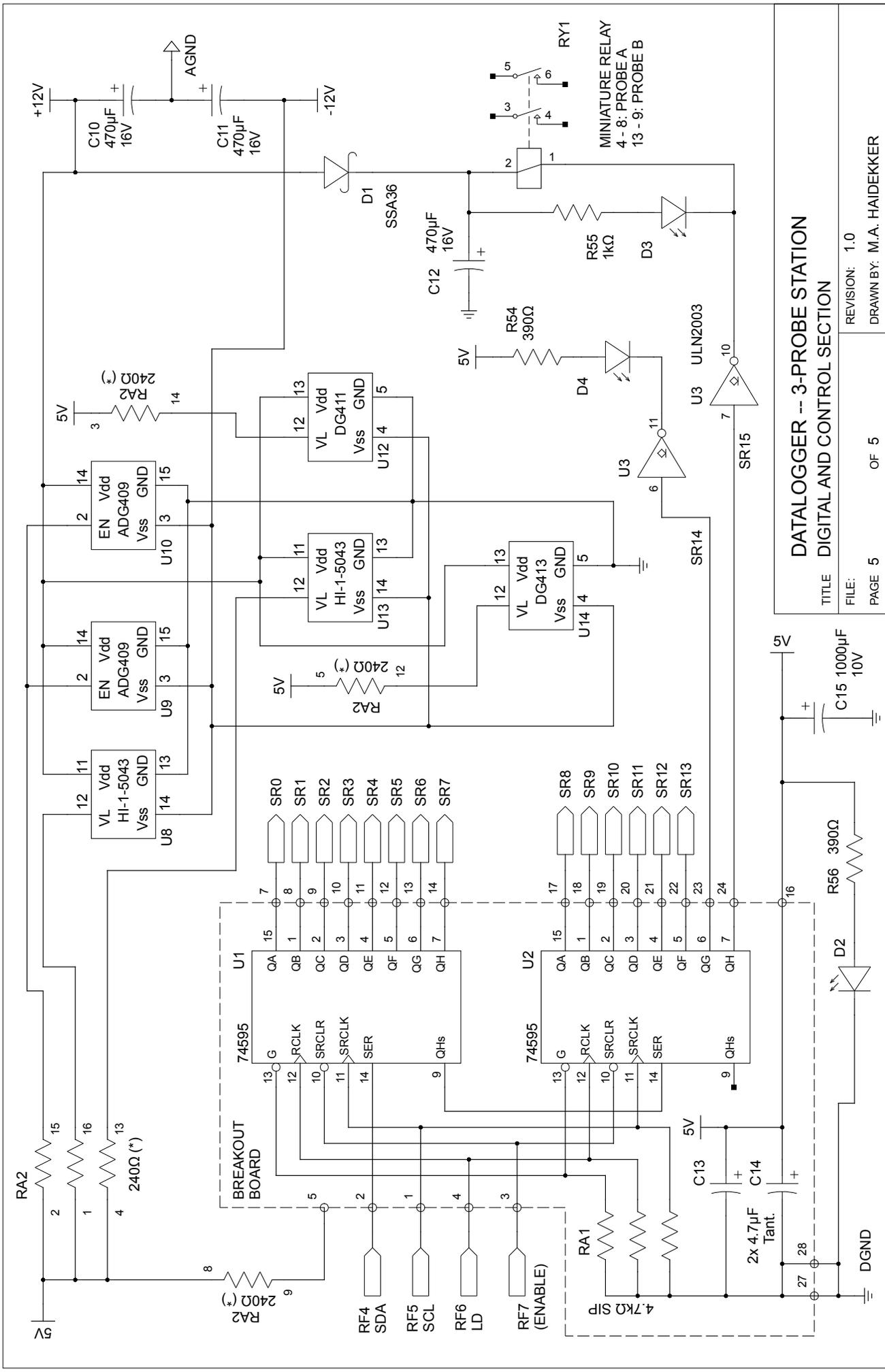


JUMPER BLOCK:
 DEFAULT CONFIG
 PROBE A -> ADC7
 PROBE B -> ADC8

U11(a,b) ACT AS LEVEL SHIFTERS AND ADD 1.25V.
 THE STEERING VOLTAGE RANGE OF ±1.25V IS MOVED
 TO THE ADC RANGE OF 0 - 2.5V. THE HIGH VOLTAGE
 RANGE OF ±10V IS DIVIDED BY (30.1k || 2.15k) OVER
 30.1k, 1:16, TO ±1.24V. THE ADDITIONAL PARALLEL
 RESISTOR IS ENABLED BY U12(a,b).

DATALOGGER -- 3-PROBE STATION
OUTPUT SCALERS AND AMPLIFIERS

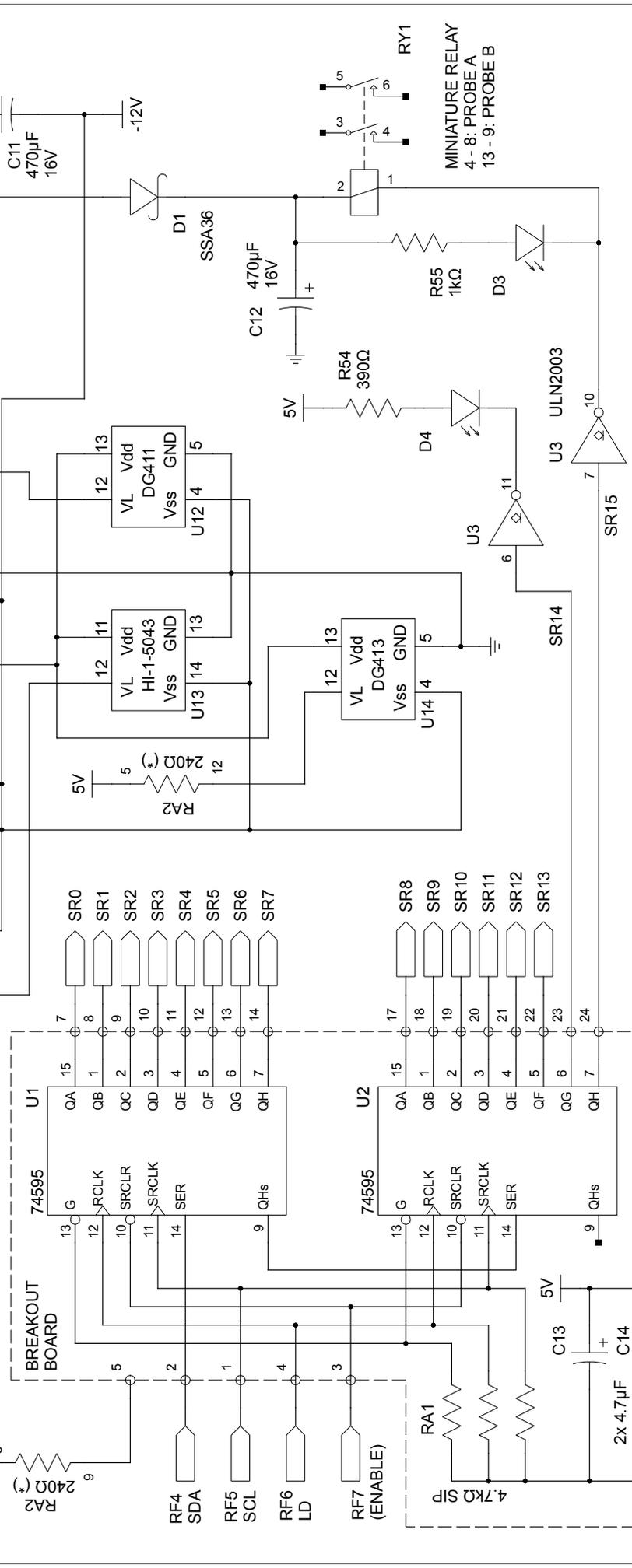
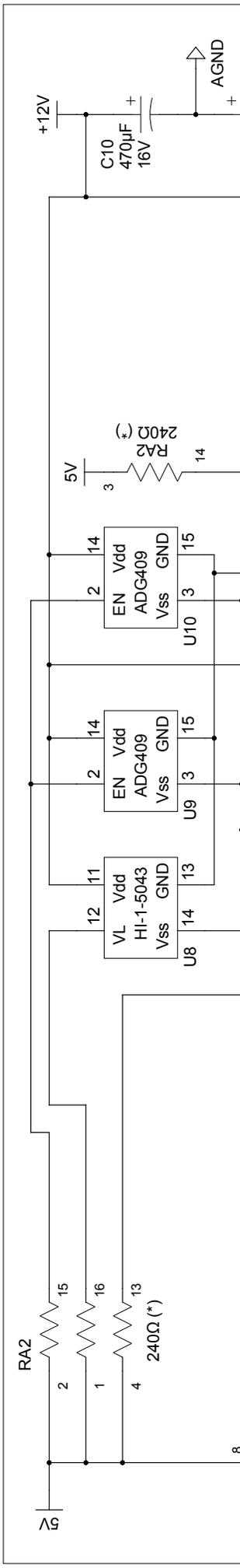
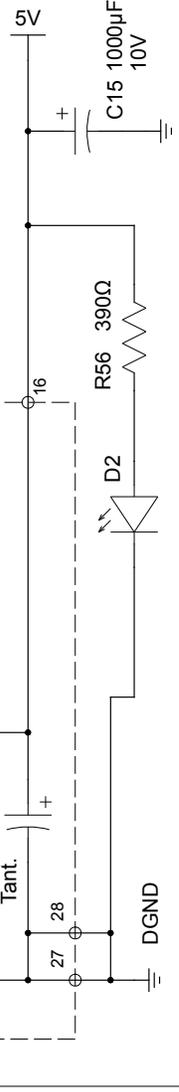
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PAGE 4	OF 5	1.0
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DATALOGGER -- 3-PROBE STATION
DIGITAL AND CONTROL SECTION

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RA2 240Ω (*)

BREAKOUT BOARD

RF4 SDA
 RF5 SCL
 RF6 LD
 RF7 (ENABLE)

RA1 4.7kΩ SPD
 C13 2x 4.7µF Tant.
 C14

DGND

+12V
 C10 470µF 16V
 AGND
 C11 470µF 16V
 -12V

5V
 R54 390Ω
 D4
 U3
 U3 ULN2003
 SR15

U12 4 5
 VL Vdd DG411
 Vss GND
 U13 14 13
 VL Vdd HI-1-5043
 Vss GND
 U14 4 5
 VL Vdd DG413
 Vss GND

SR8 SR9 SR10 SR11 SR12 SR13
 SR14
 SR0 SR1 SR2 SR3 SR4 SR5 SR6 SR7

U9 2 14 15
 EN Vdd ADG409
 Vss GND
 U10 2 14 15
 EN Vdd ADG409
 Vss GND
 U11 12 11 13
 VL Vdd HI-1-5043
 Vss GND

RA2 240Ω (*)

U1 74595
 13 G 15 OA
 12 RCLK 1 OB
 10 SRCLR 2 OC
 11 SRCLK 3 OD
 14 SER 4 OE
 9 QHs 7 OH
 U2 74595
 13 G 15 OA
 12 RCLK 1 OB
 10 SRCLR 2 OC
 11 SRCLK 3 OD
 14 SER 4 OE
 9 QHs 7 OH

D1 SSA36
 C12 470µF 16V
 R55 1kΩ
 D3
 R56 390Ω
 D2

RY1
 MINIATURE RELAY
 4 - 8: PROBE A
 13 - 9: PROBE B

C15 1000µF 10V
 R56 390Ω
 D2

5V
 C15 1000µF 10V