

10 BREWER REFERENCE DOCUMENTATION

Section 10.1 Overall Assembly and External Cables

Figure

- Configuration Control Diagram	10.1-1.1
- BREWER System Drawing BS-C1000	10.1-2.1
- BREWER Assembly BA-C231	10.1-3.1
	10.1-3.2
- Azimuth Tracker Option Kit BA-C91	10.1-4.1
BA-C91	10.1-4.2
BA-C113	10.1-4.3
- UVB Installation Kit BA-C114 / BA-C84	10.1-5.1
- Power Cable (External) BA-W12	10.1-6
- Data Cable (External) BA-W68	10.1-7
- Electronics Spares Kit List BA-C222	10.1-4.7
- Brewer Standard Spares Kit List BA-C112/B	10.1-4.8
- Tracker Stand Tie-Down Kit Installation	10.1-8

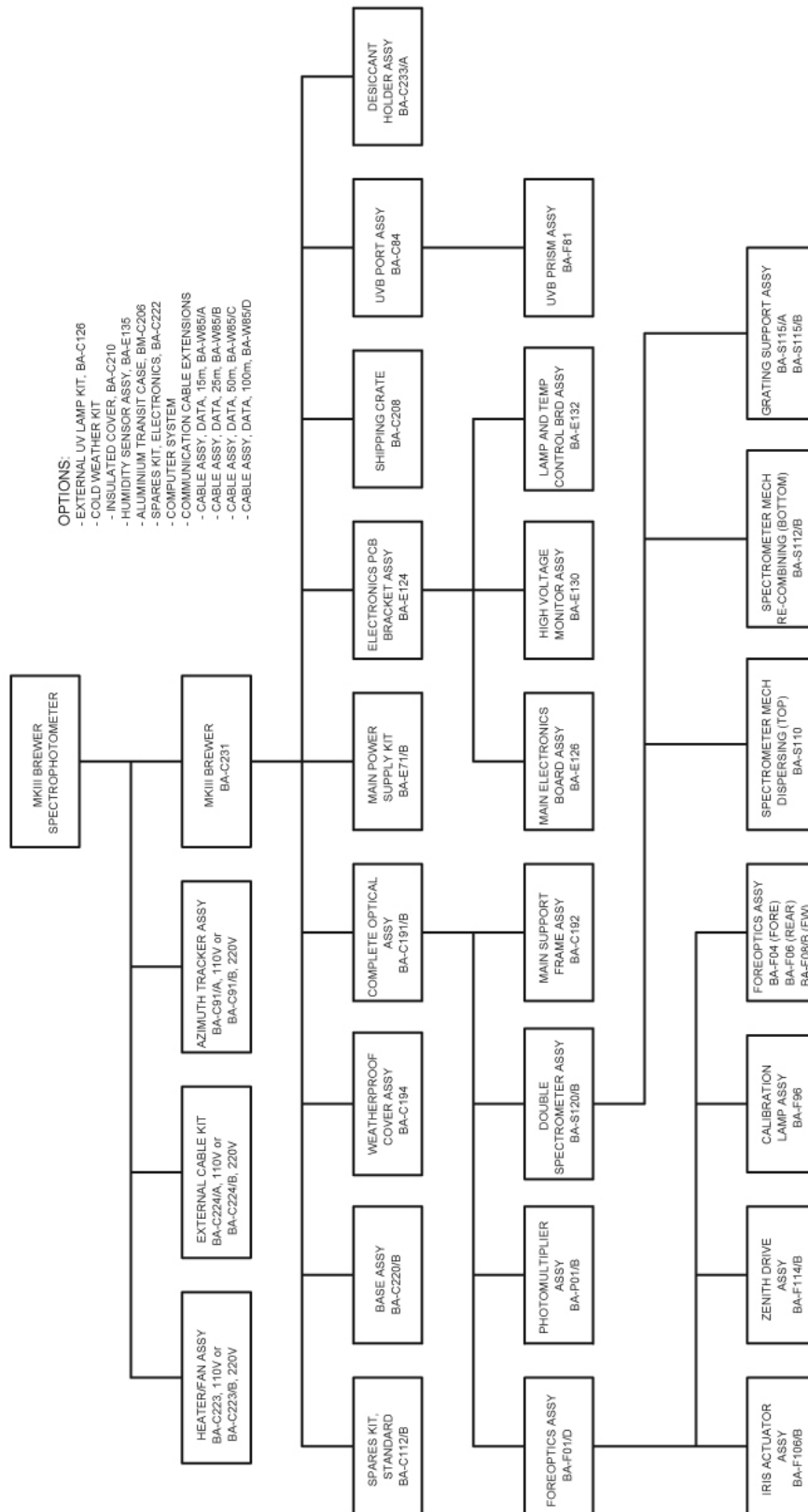
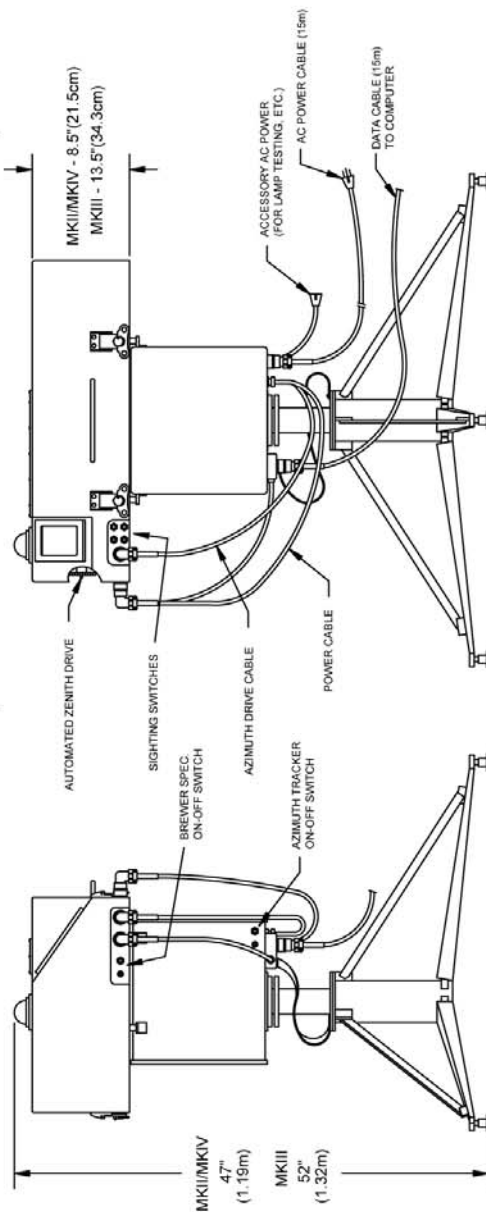
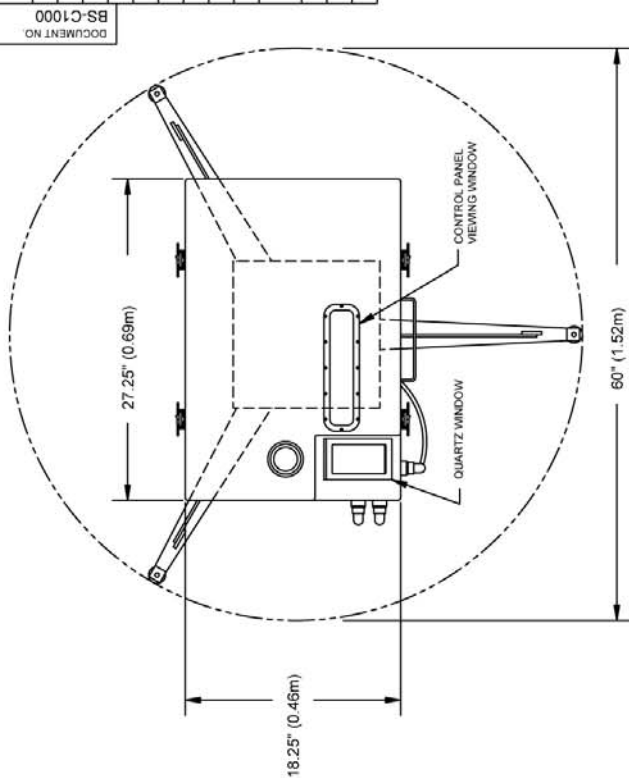


Figure 10.1-1.1

Figure 10.1-2.1



REV	DESCRIPTION	DCH NUMBER	DATE	DWN	CHKD
1	FIRST ISSUE		88 09 20	CW	AM
2	ADD UVB EXT LAMP SHIPPING CRATES	481	90 07 03	FV	KL
3	SEE DCR	487	90 09 12	FV	KL
4	CHG OPTION D, UPDATE SHIT 2	530	91 03 19	FV	KL
5	CHG OPTION B FR BA-C83 TO BA-C91	562	92 03 17	FV	KL
6	CHG OPTION H TO ONE STANDARD KIT	581	92 09 03	FV	KL
7	MAKE UVB KIT PART OF OPTION A	618	92 12 03	FV	KL
8	ADD LIDS KIT (BA-C204)	655	92 06 23	FV	KL
9	MAKE STD SPARES KIT PART OF OPTION A	662	94 01 10	FV	KL
10	ADD MKII FW OPTION, MKIII INFO (TRANSIT CASE, MANUALS KIT, OUTSIDE DIMS)	677	94 04 12	DM	DS
11	REMOVE AZ TRACKER SHIPPING CRATES	712	94 03 01	FV	DS
12	ADD 220V VERSION OF LIDS (BA-C204E)	749	95 05 11	FV	DJS
13	REMOVE ALL OPTIONS REF	888	99 08 09	MSB	TKLL

SCALE	NEXT ASSY:	DATE	88 08 05	DWN	CW	CHKD	RNF	APPD	FINISH
	DIMENSIONS IN IF DUAL DIMS:								
	Tolerances								
	INCHES								
	MM								
	XX ± .005								
	XX ± .01								
	ANGLES ± 1°								
	FRACTIONS ± 1/32								

NOTES:

1. DIMENSIONS SHOWN FOR REFERENCE PURPOSES ONLY
2. ALL NECESSARY DOCUMENTATION, SOFTWARE AND MANUALS INCLUDED WITH BREWER SPECTROPHOTOMETER.

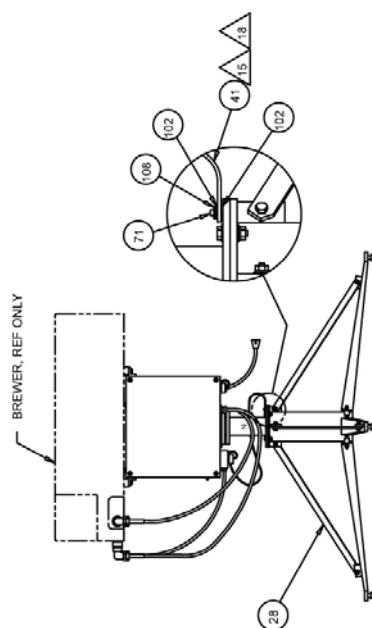
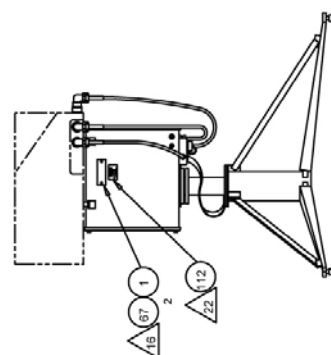
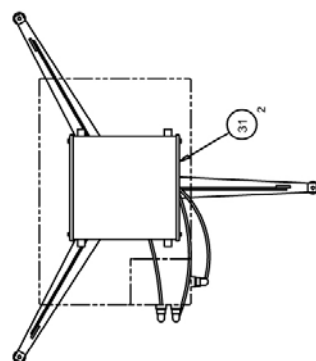
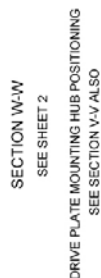
COMPUTER GENERATED DRAWING
FILENAME: BS-C1000.DWG

SCI-TEC
INSTRUMENTS INC.
SC-TEC Instruments Inc.

TITLE:
BREWER SYSTEMS

SIZE	SHEET	DOCUMENT NUMBER	REV.
C	1 of 1	BS-C1000	13

BA-C231		BREWER MKIII DBL SPECTR	
Item no.	Part No.	Description	Qty.
1	AM-BA-C05	BREWER FINAL TEST RECORD	--
3	IT-BA-C231	BREWER MKIII INITIAL TEST	--
4	MM-BA-C231	SPECTROPH MAINT MAN, MKIII	1.00
5	OM-BA-C231	SPECTROPH OPER MAN, MKIII	1.00
6	BA-C84	OPTION C KIT, UVB	1.00
7	BA-C112/B	SPARES KIT, STD, NEW ELECT	1.00
8	BA-C191/B	COMPL OPT ASSY, MKIII, DOUBLE	1.00
9	BA-C194	WEATHERPROOF COVER ASSY	1.00
10	BA-C208	MKIII SHIPPING CRATE	1.00
11	BA-C220/B	BASE ASSY, MKIII	1.00
15	BA-E71/B	MAIN POWER SUPPLY KIT,W/O DESIC	1.00
16	BA-E116	BREWER OPERATING S/W	1.00
17	BA-E118	BREWER UTILITIES S/W	1.00
18	BA-E124	ELECTRONIC PCB BRKT ASSY	1.00
22	BA-U07	F/W MAIN BRD, DOWNLOADABLE	1.00
24	BA-W76/A	CABLE ASSY,MAIN TO MTR, 29	5.00
25	BA-W76/B	CABLE ASSY,MAIN TO MTR, 27	4.00
26	BA-W77/A	CABLE ASSY,MAIN TO LMP, 11	1.00
27	BA-W77/B	CABLE ASSY,MAIN TO HV, 16	1.00
28	BA-W78	CABLE ASSY,HV BRD TO PMT	1.00
29	BA-W79	CABLE ASSY,THERM TEMP PROBE	1.00
30	BA-W82	CABLE ASSY, DC, MAIN/LAMP	1.00
31	BA-W83	CABLE ASSY, LAMP	1.00
34	BM-C82	CONTROL PANEL	1.00
35	BM-C105	NAMEPLATE,ALTERED	1.00
36	BM-C202	SHIPPING FOAM,CNTRL PANEL	1.00
37	BM-C218	MODF'D SCREW,EXT TMP SNSR	1.00
38	BM-C162	FOAM, HIGH DENSITY, 27X19X4	2.00
39	BM-C211	FOAM HIGH DENSITY, 27X25X4	4.00
42	12103081	DECAL, SCI-TEC LOGO	1.00
46	12501365-2	DESICCANT HOLDER ASSY	1.00
48	81-90-620	LOCK, CONN SLIDE POST	2.00
49	81-90-630	LOCK, CONN SL RET (15)	1.00
52	83-30-450	BUMPER RUBBR 1/8 HOLE, 3/	4.00
55	83-40-485	NUT 4-40 SL RG HX THIN SS	2.00
59	83-51-752	SCREW 2-56 X 1/4 BUTTON HD	2.00
60	83-51-762	SCREW 4-40 X 5/16 BUTTON H	2.00
61	83-51-804	SCREW,8-32 X 1/2 BUTTON H	3.00
62	83-79-048	SCREW 4-40X5/16 SKT HD	2.00
63	83-79-049	SCREW 4-40 X 3/8 HSC SS	5.00
64	83-79-152	SCREW 1/4-28 X 1/2 HSC SS	3.00
70	83-95-008	WASHER #4 FLAT NYLON	1.00
71	83-95-609	WASHER, 1/4 LOCK INT TH S	3.00
72	83-95-748	WASHER #4, SPLIT LOCKS	2.00
73	83-95-786	WASHER, #8 SCREW 3/8 OD X	3.00
74	83-95-604	WASHER #4 LOCK INT TH SS	2.00
80	85-10-145	ADHESIVE, SEALANT LOCTITE	0.50
81	85-10-150	ADHESIVE, SEALANT RTV	0.50
85	85-80-440	CABLE-TIE MOUNT, 3/4"SQ	3.00
86	85-80-450	CABLE-TIE 4-1/8X.1 NYL 18	6.00



REF	DESCRIPTION	DOCNUMBER	DATE	OWA	CHGO
1	REWORKING VIDEO	8032-02N-255	86.03.01	DP	BA
6	EWING CONNECTIONS	8194-02N-153	87.05.03	DP	BA
7	PIL UPDATE	DOCN73	88.04.08	CN	BA
8	PIL UPDATE	DOCN89	88.07.23	PV	TR
9	ADD NEWPORT B-2 TO MTO HW	DOCN488-158	89.05.03	PV	TR
10	ADD ELI C-1 CARRY-ON TEMP MANTO	DOCN21	89.05.03	PV	TR
11	ADD ELI C-1 CARRY-ON TEMP MANTO	DOCN21	89.05.03	PV	TR
12	CHGO LINE 17 OF 18 TO 20, 2A	DOCN22	89.05.03	PV	BA
13	ADD ITEM 18 FROM 18 TO 20, 2A	DOCN22	89.05.03	PV	BA
14	ADD TORQUE SPEC TO NOTE 5	DOCN22	89.05.21	PV	TR
15	ADD ITEMS 15, 16, 18, NOTE 17	DOCN69	89.05.30	PV	TR
16	ADD ITEM 17, 18, NOTE 17	DOCN69	89.05.30	PV	TR
17	ADD ITEM 17, 18, NOTE 17	DOCN68	89.05.31	PV	TR
18	ADD ITEM 17, 18, NOTE 17	DOCN148	89.05.31	PV	TR
19	ADD ITEM 17, 18, NOTE 17	DOCN148	89.05.31	PV	TR
20	ADD ITEM 17, 18, NOTE 20 & 21	DOCN148	89.05.31	MP	TRALL
25	CHGO OF ITEM 7	828	89.05.31	MP	TRALL
26	ADD SHIPPING CHARGE AND FOAM	828	89.05.31	MP	TRALL
27	ADD PART SPEC	879	89.07.13	MP	TRALL
28	NOTE 22 FROM 20	884	89.07.13	MP	TRALL

NOTES:

- [illegible]

ITEM	DESCRIPTION	REMARKS	ITEM
1	SCALE 1:2	SCALE 1:2	1
2	CONTOUR	CONTOUR	2
3	CHWD	CHWD	3
4	APPC	APPC	4
5	FINISH	FINISH	5
6	UNIT	UNIT	6
7	UNIT	UNIT	7
8	UNIT	UNIT	8
9	UNIT	UNIT	9
10	UNIT	UNIT	10
11	UNIT	UNIT	11
12	UNIT	UNIT	12
13	UNIT	UNIT	13
14	UNIT	UNIT	14
15	UNIT	UNIT	15
16	UNIT	UNIT	16
17	UNIT	UNIT	17
18	UNIT	UNIT	18
19	UNIT	UNIT	19
20	UNIT	UNIT	20
21	UNIT	UNIT	21
22	UNIT	UNIT	22
23	UNIT	UNIT	23
24	UNIT	UNIT	24
25	UNIT	UNIT	25
26	UNIT	UNIT	26
27	UNIT	UNIT	27
28	UNIT	UNIT	28
29	UNIT	UNIT	29
30	UNIT	UNIT	30
31	UNIT	UNIT	31
32	UNIT	UNIT	32
33	UNIT	UNIT	33
34	UNIT	UNIT	34
35	UNIT	UNIT	35
36	UNIT	UNIT	36
37	UNIT	UNIT	37
38	UNIT	UNIT	38
39	UNIT	UNIT	39
40	UNIT	UNIT	40
41	UNIT	UNIT	41
42	UNIT	UNIT	42
43	UNIT	UNIT	43
44	UNIT	UNIT	44
45	UNIT	UNIT	45
46	UNIT	UNIT	46
47	UNIT	UNIT	47
48	UNIT	UNIT	48
49	UNIT	UNIT	49
50	UNIT	UNIT	50
51	UNIT	UNIT	51
52	UNIT	UNIT	52
53	UNIT	UNIT	53
54	UNIT	UNIT	54
55	UNIT	UNIT	55
56	UNIT	UNIT	56
57	UNIT	UNIT	57
58	UNIT	UNIT	58
59	UNIT	UNIT	59
60	UNIT	UNIT	60
61	UNIT	UNIT	61
62	UNIT	UNIT	62
63	UNIT	UNIT	63
64	UNIT	UNIT	64
65	UNIT	UNIT	65
66	UNIT	UNIT	66
67	UNIT	UNIT	67
68	UNIT	UNIT	68
69	UNIT	UNIT	69
70	UNIT	UNIT	70
71	UNIT	UNIT	71
72	UNIT	UNIT	72
73	UNIT	UNIT	73
74	UNIT	UNIT	74
75	UNIT	UNIT	75
76	UNIT	UNIT	76
77	UNIT	UNIT	77
78	UNIT	UNIT	78
79	UNIT	UNIT	79
80	UNIT	UNIT	80
81	UNIT	UNIT	81
82	UNIT	UNIT	82
83	UNIT	UNIT	83
84	UNIT	UNIT	84
85	UNIT	UNIT	85
86	UNIT	UNIT	86
87	UNIT	UNIT	87
88	UNIT	UNIT	88
89	UNIT	UNIT	89
90	UNIT	UNIT	90
91	UNIT	UNIT	91
92	UNIT	UNIT	92
93	UNIT	UNIT	93
94	UNIT	UNIT	94
95	UNIT	UNIT	95
96	UNIT	UNIT	96
97	UNIT	UNIT	97
98	UNIT	UNIT	98
99	UNIT	UNIT	99
100	UNIT	UNIT	100

DOCUMENT NO. BA-C91	REV	DESCRIPTION	DCN NUMBER	DATE	DWN	CHKD
	5	REDRAWN/REVISED	8507-DCN-256	85.07.01	DF	RA
	6	DWG CORRECTIONS	8705-DCN-335	87.05.01	DF	RA
	7	P/L UPDATE	DCN373	88.04.08	CW	RA
	8	P/L UPDATE	DCN459	89.07.21	FV	TKL
	9	ADD NEW POW SUP & MTG H/W	DCN489, 509	90.09.05	FV	RP
	10	ADD SURGE SUPP, TERM BLK & H/W	DCN521	91.02.27	FV	RP
	11	ADD ITEM 39	DCN533	91.03.27	FV	KL
	12	CHG FUSE (IT 40) FR 1A TO 2A	DCN535	91.08.30	FV	KL
	13	ADD GND STRAP/REDRAWN	DCN562	92.03.19	FV	KL
	14	ADD TORQUE SPEC TO NOTE 5	DCN592	92.05.21	FV	RP
	15	ADD ITEMS 51, 70 & 99; NOTE 17	DCN609	92.08.06	FV	RP
	16	ADD IT. 61; CLARIFY GND STRAP MNTG	DCN648	93.05.04	FV	RP
	17	ADD SHIPPING CRATE (ITEM 44)	DCN712	94.09.01	FV	DS
	18	CHG NOTE 1, ADD NOTE 19	DCN738, 739	95.08.01	FV	DJS
	19	ADD ITEMS 110& 111; NOTES 20 & 21	DCN804	97.01.15	MF	TKLL
	20	CHG OF ITEM 7	822	99.04.06	MSB	TKLL
	21	ADD SHIPPING CRATE AND FOAM	858	99.06.16	MSB	TKLL
	22	ADD PAINT SPEC	879	99.10.13	RKF	TKLL
	23	NOTE 23 ADDED	884	99.11.01	RKF	

NOTES:

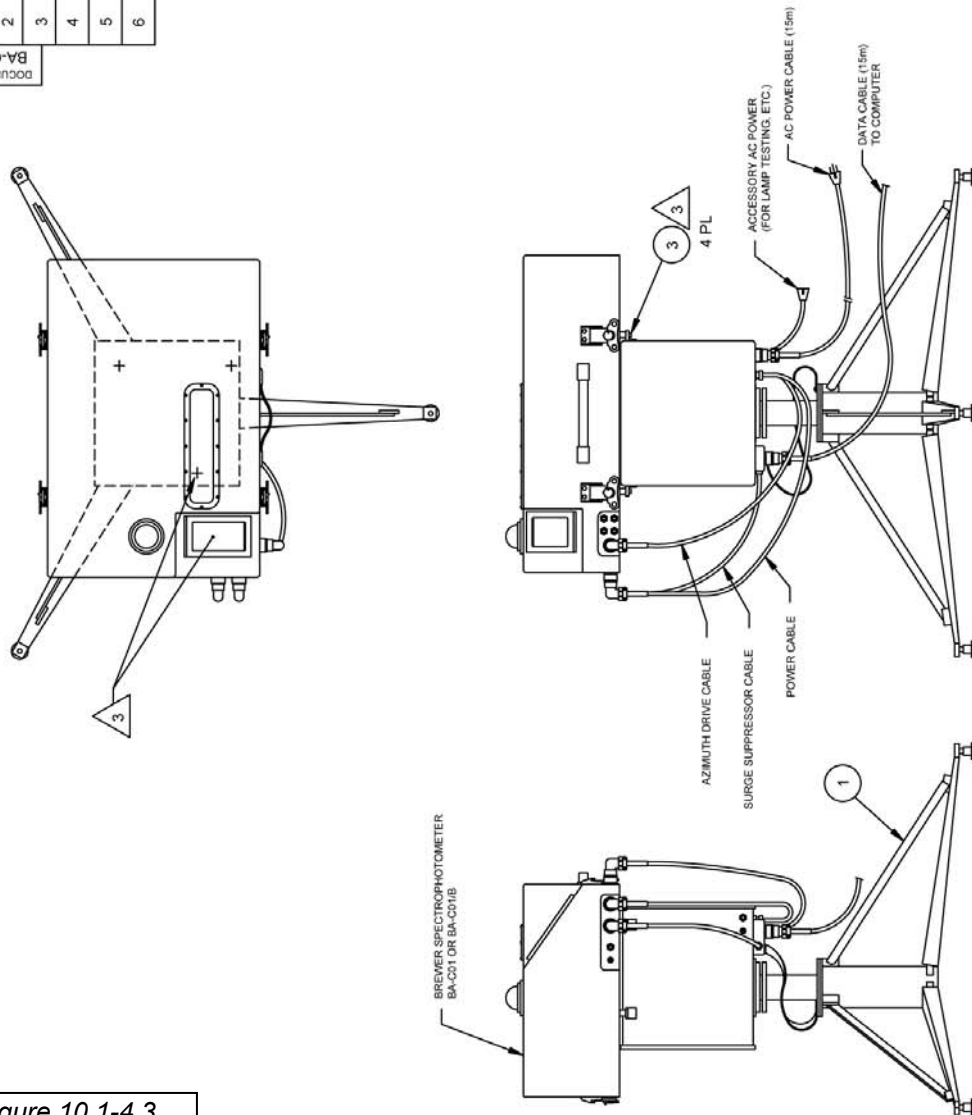
1. INSERT CONTROL CABLE (ITEM 12) THRU BUSHING AND TAPPED HOLE. COAT BUSHING THREADS WITH ITEM 60 AND TIGHTEN.
2. INSERT POWER CABLE (ITEM 17 OR 35) THRU BUSHING (ITEM 55) PRIOR TO CONNECTING TO TERMINAL BLOCK. COAT BUSHING THREADS WITH ITEM 60 AND TIGHTEN IN THREADED HOLE.
3. DO NOT CLAMP SAFETY SWITCH CABLE (PART OF ITEM 13). TO BE DONE AT SYSTEM TEST LEVEL.
4. SECURE ALL UNLOCKED HARDWARE WITH LOCTITE 242 (ITEM 58).
5. WITH MOUNTING HUB (ITEM 21) FIXED TO DRIVE PLATE (ITEM 22), AND LED SENSORS BLOCKED WITH COUNTER BRACKET (ITEM 6), ORIENTATE BOX SO THE SIDES ARE PERPENDICULAR TO THE 2 MOUNTING HOLES ON THE TRACKER BASE AS SHOWN (SEE NOTE 18 ALSO). SECURE MOUNTING HUB (ITEM 21) TO SPINDLE (ITEM 18) BY ADDING ITEM 58 TO SCREWS (ITEM 77) AND TIGHTENING TO 80 INLB'S. ENSURE DRIVE PLATE IS FLUSH AGAINST SPACER (ITEM 23) PRIOR TO TIGHTENING SCREWS. INDICATE 'N' NORTH POSITION ON DRIVE PLATE AS SHOWN, 90° FROM COUNTER BRACKET. MARK A SIMILAR 'N' ON THE SPINDLE AND TRACKER BASE AFTER PAINTING.
6. ADHERE 'ON' LABEL UNDER POWER INDICATOR ASSY (ITEM 15).
7. WIRE ASSY AS PER SCHEMATIC DIAGRAM BS-C91, (ITEM 2).
8. INSTALL ITEMS 88 AND 90 BEFORE INSTALLING SPINDLE (ITEM 18). COAT THREADS AND UNDERSIDE OF NUT WITH ITEM 57 PRIOR TO ASSY. ENSURE SEALANT DOES NOT ADHERE TO OUTSIDE SURFACE OF BOX.
9. PREPARE FINISHED ASSY FOR PAINTING BY USING MASKING TAPE TO COVER CONNECTORS, ETC. COVER OPENINGS WITH SPECIAL MASKING BOARDS, REFER TO ASSEMBLY PROCEDURE AP-BA-C91. IF ITEM 5 (4 ANGLE BRACKETS) ARE NOT PAINTED THEY MUST BE INCLUDED WITH FINISHED ASSY FOR PAINTING. PAINT ALL SURFACES GLOSS WHITE AS PER DOCUMENT 11840008-3.
10. PLACE FUSE (ITEM 40) AND 10-32 x 5/8 CAP SCREWS, QTY 4 (ITEM 80) INTO CLEAN PLASTIC BAGS, LABEL WITH PART NO. AND ATTACH TO INSIDE WALL OF BOX WITH TAPE.
11. INSTALL GND TERMINAL FROM BA-W19 (ITEM 12) ONTO BOTTOM BAR (ITEM 26) USING ITEMS 72 AND 100.
12. ADHERE 'DC' & 'AC' LABELS AS SHOWN ON TERMINAL BLOCK COVER (ITEM 32).
13. ADJUST LEVELLING SCREWS TO POSITION 4 RUBBER BUMPERS ON BREWER BASE TO CLEAR ANGLE BRACKETS (ITEM 5) BY 1/8 IN. MAX AND TIGHTEN JAMB NUTS. IF PROPER TRACKER/BREWER ALIGNMENT IS NOT ACHIEVED, RE-CHECK PRISM ALIGNMENTS IN FOREOPTICS ASSY.
14. INSERT ACCESSORY POWER CABLE (ITEM 34) THRU BUSHING (ITEM 55) PRIOR TO CONNECTING TO TERMINAL BLOCK. COAT BUSHING THREADS WITH ITEM 60 AND TIGHTEN IN TAPPED HOLE.
15. WITH TRACKER IN 'NORTH' POSITION (0 STEPS), ENSURE THE GND STRAP (ITEM 41) PASSES BEHIND SPINDLE PRIOR TO ATTACHING TO TRACKER BASE.
16. ENSURE DOUBLE-SIDED TAPE IS UNDER NAMEPLATE. APPLY RTV (ITEM 56) TO SCREW HEADS.
17. REMOVE AND DISCARD EXISTING SCREW FROM TERMINAL "V2". MOUNT SHIELD (ITEM 43) WITH ITEMS 70 AND 99 IN OPEN TERMINAL.
18. ENSURE THAT THE GROUND STRAP MOUNTING HOLE IN THE BASE IS 1/4 OF A TURN CCW FROM NORTH.
19. SEAL MOUNTING SURFACE OF LED ASSY (ITEM 15) WITH RTV (ITEM 56).
20. TEST FINAL ASSY AS PER PROCEDURE TP-BA-C91, (ITEM 114).
21. INSTALL FERRITE CORE (ITEM 111) AT THE ENTRANCE OF THE TRACKER DRIVE CABLE JUST INSIDE THE BOX. MAKE SURE THE FERRITE IS A SNUG 90° AGAINST THE SIDE OF THE TRACKER BOX.
22. CLEAN METAL SURFACE THOROUGHLY WITH ALCOHOL PRIOR TO ADHERING LABEL AS PER THE FOLLOWING:
 - PEEL CE LABEL OFF SHEET AND ADHERE IN APPROX POS'N
 - PEEL CLEAR OVERLAMINATE OFF SHEET AND ADHERE OVER TOP OF LABEL
 - ENSURE LABEL IS COMPLETELY COVERED WITH OVERLAMINATE
23. USE CABLE TIES (ITEM 117) AS REQUIRED.
24. USE SHIPPING CRATE (ITEM 44) AND PACKING FOAM (ITEMS 120-122) FOR CRATING AZIMUTH TRACKER. PLACE FOAM, PART NO. BM-C161/C IN BOTTOM OF CRATE.

DOCUMENT NO. BA-C91	REV	DESCRIPTION	DCN NUMBER	DATE	DWN.	CHKD.
	5	REDRAWN/REVISED	8507-DCN-256	85.07.01	DF	RA
	6	DWG CORRECTIONS	8705-DCN-335	87.05.01	DF	RA
	7	P/L UPDATE	DCN373	88.04.08	CW	RA
	8	P/L UPDATE	DCN459	89.07.21	FV	TKL
	9	ADD NEW POW SUP & MTG H/W	DCN489, 509	90.09.05	FV	RP
	10	ADD SURGE SUPP, TERM BLK & H/W	DCN521	91.02.27	FV	RP
	11	ADD ITEM 39	DCN533	91.03.27	FV	KL
	12	CHG FUSE (IT 40) FR 1A TO 2A	DCN535	91.08.30	FV	KL
	13	ADD GND STRAP/REDRAWN	DCN562	92.03.19	FV	KL
	14	ADD TORQUE SPEC TO NOTE 5	DCN592	92.05.21	FV	RP
	15	ADD ITEMS 51, 70 & 99; NOTE 17	DCN609	92.08.06	FV	RP
	16	ADD IT. 61; CLARIFY GND STRAP MNTG	DCN648	93.05.04	FV	RP
	17	ADD SHIPPING CRATE (ITEM 44)	DCN712	94.09.01	FV	DS
	18	CHG NOTE 1, ADD NOTE 19	DCN738, 739	95.08.01	FV	DS
	19	ADD ITEMS 110 & 111; NOTES 20 & 21	DCN804	97.01.15	MF	TKLL
	20	CHG OF ITEM 7	822	99.04.06	MSB	TKLL
	21	ADD SHIPPING CRATE AND FOAM	858	99.06.16	MSB	TKLL
	22	ADD PAINT SPEC	879	99.10.13	RKF	TKLL
	23	NOTE 23 ADDED	884	99.11.01	RKF	

BA-C91				
Item No.	Part Number	Description	120V Qty	230V Qty
1	BM-C100	Nameplate, Altered, Azimuth Tracker	1.00	1.00
2	BS-C91	Azimuth Tracker Unit Schematic	--	--
3	BM-C92	Azimuth Tracker Box	1.00	1.00
4	BM-C93	Adjusting Screw	3.00	3.00
5	BM-C94	Angle Bracket	4.00	4.00
6	BM-C95	Counter Bracket	1.00	1.00
7	BA-W67	Surge Supp Enc Assy, RS422	1.00	1.00
8	BA-C97	Drive Shaft Assy Az/Cosmos Tracker	1.00	1.00
9	BA-C98	Drive Motor Assy	1.00	1.00
10	BA-C99	Azimuth Tracker Brd Assy	1.00	1.00
11	BA-W18	Power Connector Assy	1.00	1.00
12	BA-W19	Control Cable Assy	1.00	1.00
13	BA-W21	Safety Switch Assy	1.00	1.00
14	BA-W22	Power Switch Assy	1.00	1.00
15	BA-W23	Power Indicator Assy	1.00	1.00
16	BA-W24	Fuse Holder Assy	1.00	1.00
17	BA-W30/A	Power Cable, Azimuth Tracker, 110V	1.00	--
18	D2-1030-002	Azimuth Spindle	1.00	1.00
19	C2-1030-005	Bearing Housing, External	1.00	1.00
20	C2-1030-006	Bearing Housing, Internal	1.00	1.00
21	B2-1030-007/A	Plate Mounting Hub	1.00	1.00
22	C2-1030-008	Drive Plate	1.00	1.00
23	B2-1030-015	Spacer Ring, Short	1.00	1.00
24	BM-C88/B	AC Power Shield, 2.25 Long	1.00	1.00
25	A2-1030-019	Drive Bearing Stop	1.00	1.00
26	B2-1030-028	Bottom Bar, PCB	1.00	1.00
27	B2-1030-029	Top Bar, PCB	1.00	1.00
28	D1-1030-045	Tracker Stand Assy	1.00	1.00
29	C1-1030-080/A	Short Tension Arm Assy, Azimuth Drive	1.00	1.00
30	C1-1030-081/A	Long Tension Arm Assy, Azimuth Drive	1.00	1.00
31	C1-1030-084	Cover Assy	2.00	2.00
32	BM-C88	AC Power Shield, 5.25 Long	1.00	1.00
33	83-09-220	Spacer, Hex, 6-32 x 3/4" Lg	4.00	4.00
34	BA-W58	Accessory Power Cable Assy	1.00	1.00
35	BA-W30/B	Power Cable, Azimuth Tracker, 220V	--	1.00
36	B2-1030-101	Bearing, Altered	2.00	2.00
37	BM-C225	Foam Disc Insert	1.00	1.00
38	BA-C166	AZ Tracker MOV Assy, 110V	1.00	--
39	BA-C166/B	AZ Tracker MOV Assy, 220V	--	1.00
40	91-15-257	Fuse, 2A, 250V, Slow-Blow	1.00	1.00
41	BM-C174	Azimuth Tracker Ground Strap	1.00	1.00
42	BA-C113	Option 'B' Kit Installation	--	--
43	BM-C188	Terminal Shield, Azimuth Tracker P/S	1.00	1.00
44	BA-C150	Azimuth Tracker Shipping Crate	1.00	1.00
45	85-80-440	Mount, Cable-Tie, Adhesive Back	3.00	3.00
46	82-20-383	Clamp, 'P', 1/2" x 1/2" x #10	1.00	1.00
47	88-99-780	Retaining Ring, Internal, Spiral Snap	2.00	2.00
48	76-99-445	Hose Clamp, 2-1/2" OD	1.00	1.00
49	83-10-651	O-Ring, 3/8"ID x 9/16"OD x 3/32"Thk	3.00	3.00
50	82-10-470	Terminal Strip, 4 Contact	1.00	1.00
51	87-50-088	Power Supply, Switching, 5VDC, 10A	1.00	1.00
52	82-10-450	Terminal Strip, 12 Contact	1.00	1.00
53	83-09-413	Spacer, 1/4"OD x 1/8"ID x 1/8"LG, AL	4.00	4.00
54	82-20-356	Clamp, 'P', 1/4" x 1/2" x 13/32"	2.00	2.00
55	83-08-100	Bushing, Strain Relief, Liq-Tite	3.00	3.00
56	85-10-150	Adhesive, Sealant (RTV 3145)	1.00	1.00
57	85-10-148	Adhesive, Sealant Silicone, BLK	2.00	2.00

Item No.	Part Number	Description	120V Qty	230V Qty
58	85-10-145	Adhesive, Sealant (Loctite 242)	2.00	2.00
59	81-15-154	Cap & Chain, For #18 Receptacle	1.00	1.00
60	85-10-147	Adhesive Sealant, Pipe Thread	1.00	1.00
61	82-10-484	Jumper, Terminal Block	5.00	5.00
62	83-25-890	Term, Ring Tongue, #18-22AWG, #6, Insul	16.00	16.00
63	99-31-483	Wire, Hookup, #18AWG, IRR PVC, Red	1.00	1.00
64	99-31-482	Wire, Hookup, #18AWG, IRR PVC, Black	3.40	3.40
65	99-31-484	Wire, Hookup, #18AWG, IRR PVC, Green	2.00	2.00
66	99-31-481	Wire, Hookup, #18AWG, IRR PVC, White	2.25	2.25
67	83-51-752	Screw, 2-56 x 1/4"Lg, Btn Hd, Hex, SS	2.00	2.00
68	83-51-763	Screw, 4-40 x 3/8"Lg, Btn Hd, Hex, SS	4.00	4.00
69	83-51-762	Screw, 4-40 x 5/16"Lg, Btn Hd, Hex, SS	2.00	2.00
70	83-51-765	Screw, 4-40 x 1/2"Lg, Btn Hd, Hex, SS	1.00	1.00
71	83-79-152	Screw, 1/4-28 x 1/2"Lg, Skt Hd, Cap, SS	1.00	1.00
72	83-79-051	Screw, 4-40 x 1/2"Lg, Skt Hd, Cap, SS	5.00	5.00
73	83-79-068	Screw, 6-32 x 3/8"Lg, Skt Hd, Cap, SS	5.00	5.00
74	83-79-075	Screw, 6-32 x 1"Lg, Skt Hd, Cap, SS	1.00	1.00
75	83-79-073	Screw, 6-32 x 3/4"Lg, Skt Hd, Cap, SS	2.00	2.00
76	83-79-082	Screw, 8-32 x 3/8"Lg, Skt Hd, Cap, SS	3.00	3.00
77	83-79-114	Screw, 10-32 x 1/2"Lg, Skt Hd, Cap, SS	12.00	12.00
78	83-79-077	Screw, 6-32 x 1-1/4"Lg, Skt Hd, Cap, SS	4.00	4.00
80	83-79-116	Screw, 10-32 x 5/8"Lg, Skt Hd, Cap, SS	7.00	7.00
81	83-87-194	Screw, 8-32x1/2"Lg, Flt Hd, Hex, SS	2.00	2.00
82	83-87-165	Screw, 4-40 x 1/2"Lg, Flt Hd, Hex, SS	2.00	2.00
83	83-87-181	Screw, 6-32 x 5/8"Lg, Flt Hd, Hex, SS	4.00	4.00
84	83-87-182	Screw, 6-32 x 3/4"Lg, Flt Hd, Hex, SS	2.00	2.00
85	83-87-209	Screw, 10-32 x 1/2"Lg, Flt Hd, Hex, SS	4.00	4.00
86	83-87-211	Screw, 10-32 x 5/8"Lg, Flt Hd, Hex, SS	3.00	3.00
87	83-87-214	Screw, 10-32 x 1"Lg, Flt Hd, Hex, SS	3.00	3.00
88	83-87-233	Screw, 1/4-28 x 5/8"Lg, Flt Hd, Hex, SS	2.00	2.00
89	83-40-261	Nut, 6-32 x 5/16, Hex, Steel Plated	1.00	1.00
90	83-40-326	Nut, 1/4-28 x 7/16, Hex, Steel Plated	1.00	1.00
92	83-40-278	Nut, 8-32 x 1/4 x 3/32 Thk, Hex, SS	4.00	4.00
93	83-40-486	Nut, 6-32, Self Locking, Hex, SS	1.00	1.00
94	83-40-283	Nut, 8-32 Std. Hex Pattern, SS	2.00	2.00
96	BM-C121	Jamb Nut, Altered	3.00	3.00
98	83-95-606	Washer, #8, Internal Tooth Lock, SS	2.00	2.00
99	83-95-626	Washer, #4, External Tooth Lock, SS	1.00	1.00
100	83-95-604	Washer, #4, Internal Tooth Lock, SS	9.00	9.00
101	83-95-605	Washer, #6, Internal Tooth Lock, SS	2.00	2.00
102	83-95-631	Washer, 1/4, External Tooth Lock	2.00	2.00
103	83-95-749	Washer, #6, Split Lock, SS	5.00	5.00
104	83-95-752	Washer, #10, Split Lock, SS	10.00	10.00
105	83-95-750	Washer, #8, Split Lock, SS	4.00	4.00
106	83-95-013	Washer, #6, Flat, SS	1.00	1.00
107	83-95-019	Washer, #8, Flat, SS	3.00	3.00
108	83-95-028	Washer, 1/4, Flat, SS	1.00	1.00
109	83-25-996	Terminal, Female Disc, Red	4.00	4.00
110	76-05-005	Filter, Interference, Power Line EMI	1.00	1.00
111	88-99-224	Ferrite, Split, EMI Suppression	1.00	1.00
112	BM-C212	Label, CE Approval, EMC Directives	1.00	1.00
113	AP-BA-C91	Azimuth Tracker Paint Masking Procedure	-	-
114	TP-BA-C91	Az Tracker Assy Adjustment/Test Procedure	-	-
120	BM-C161/A	Foam, High Den 17-1/4X14X2	2.00	2.00
121	BM-C161/B	Foam, HD 17-1/4X16-1/4X2	3.00	3.00
122	BM-C161/C	Foam, SuperBlu 18X16-1/4X1	1.00	1.00

Figure 10.1-4.3



NOTES:

1. REFER TO PARTS LIST BA-C113 FOR ITEMS LISTED ABOVE, OR MENTIONED IN THESE NOTES. ITEMS TO BE INSTALLED ARE LISTED FOR REFERENCE PURPOSES ONLY AND ARE PART OF OPTION B KIT. DWG NO. BA-C91.
2. REFER TO ACCEPTANCE MANUAL, AM-BA-C06 PRIOR TO ASSEMBLY.
3. POSITION SPECTROPHOTOMETER ON TO AZIMUTH TRACKER AS SHOWN AND SECURE USING (4) #10 CAP SCREWS. NOTE THAT THE SPECTROPHOTOMETER IS POSITIONED SUCH THAT THE SIDE WITH THE QUARTZ WINDOW GOES TO THE SIDE OF THE AZIMUTH TRACKER WITH ONLY ONE ROUNDED 3/8" SCREW.
4. CONNECT ALL CABLES TO AZIMUTH TRACKER AND SPECTROPHOTOMETER AS SHOWN.

COMPUTER GENERATED DRAWING
FILENAME: BA-C113.DWG

REV	DESCRIPTION	DCN NUMBER	DATE	DWN	APPD
1	FIRST ISSUE	—	88 9 20	CW	AM
2	REMOVED NOTE 6	DCN450	90 07 03	FV	KL
3	REMOVE FIG. 2, ZEN DRIVE KIT	DCN487	90 09 12	FV	KL
4	ADD SURGE SUPP	DCN538	91 03 19	FV	KL
5	REMOVE LOCK-WASHERS (ITEM 4)	DCN558	91 10 29	FV	KL
6	REMOVE REFERENCE TO BA-C83	DCN562	92 03 17	FV	

DOCUMENT NO.
BA-C113

QTY	UM	PART NO	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
-1						
SCALE	88 06 08	NEXT ASSY.	BA-C91			
DATE	DWN	CW				
CHKD	RA	PA				
APPD	RA					
FINISH						

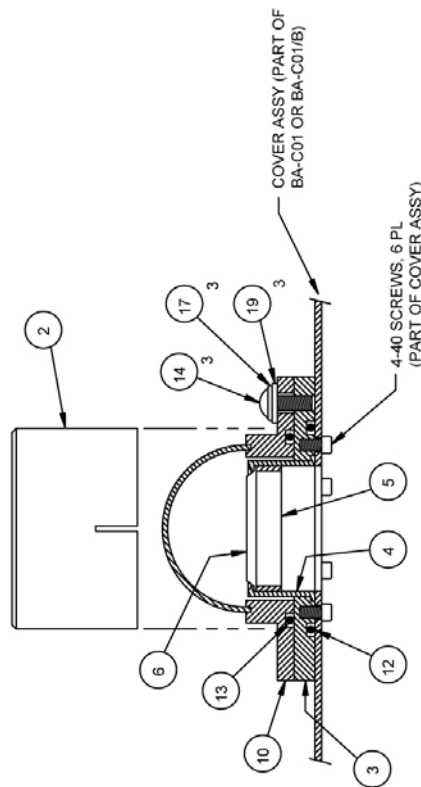
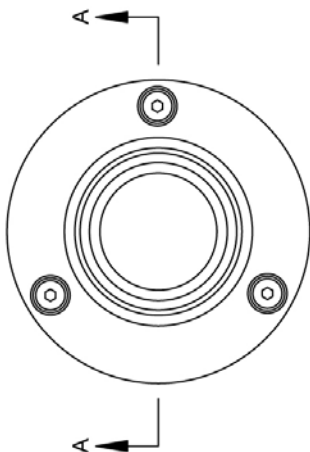
SCI-TEC
© 1994
The documents are not to be disclosed
to others, copied or used for public
distribution without written
INSTRUMENTS INC. SCI-TEC instruments inc.

OPTION B KIT
INSTALLATION

1 SHEET
DOCUMENT NUMBER
BA-C113

REV
6

Figure 10.1-5.1



SECTION A-A

FIGURE 1
UVB DOME INSTALLATION
SCALE 1:1

NOTES:

1. ITEMS TO BE INSTALLED ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE PART OF OPTION C KIT, DWG BA-C84.
2. UVB DOME INSTALLATION:
 - REFER TO FIGURE 1 (CAUTION! QUARTZ DOME IS FRAGILE)
 - REMOVE SEALING PLATE (P/N BM-C28) AND O-RING (P/N 83-10-739) FROM COVER ASSY, BA-C21 (PART OF BA-C01 OR BA-C01B). DRILL 3, Ø .20 HOLES THRU SEALING PLATE, SPOT FROM EXISTING PILOT HOLES AND DE-BURR. BAG SEALING PLATE AND O-RING AND ATTACH TO BREWER ASSY.
 - ASSEMBLE ITEMS 4, 5 AND 6 TOGETHER AS SHOWN. THIS PART IS NOW REFERRED TO AS "UVB DIFFUSER".
 - USING NEW O-RING (ITEM 12) AND 6 EXISTING 4-40 SCREWS, FASTEN UVB DIFFUSER AND ADAPTER (ITEM 3) TO COVER. ATTACH END OF CORD TO CARRYING HANDLE.
 - NOTE: PROTECTIVE CAP (ITEM 2) SHOULD ALWAYS BE USED IF COVER IS REMOVED OR UNIT IS MOVED FOR ANY REASON.
3. UVB DOME REMOVAL:
 - IF REMOVAL OF THE UVB DOME IS NECESSARY, THE SPARE SEALING PLATE AND O-RING MAY BE USED TO RE-SEAL THE DOME. FASTEN THESE TO THE UVB ADAPTER (ITEM 3) USING EXISTING HARDWARE USED TO MOUNT THE QUARTZ DOME. CAREFULLY WRAP QUARTZ DOME, UVB DIFFUSER AND O-RING AND STORE FOR FUTURE USE.
4. UVB PRISM INSTALLATION:
 - REFER TO FIGURE 2. INSTALL UVB PRISM ASSY USING ITEMS 15 AND 18.

BASE ASSY

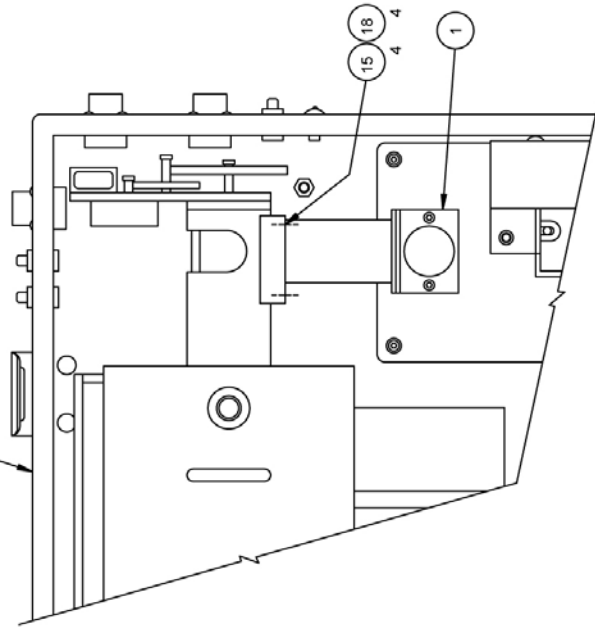


FIGURE 2
UVB PRISM INSTALLATION
SCALE 1:2

QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
1	1:1	BA-C84	BA-C84	OPTION C KIT		
DATE	88 08 08	DATE	88 08 08	DATE	88 08 08	DATE
DWN	CW	DWN	CW	DWN	CW	DWN
CHKD	RA	CHKD	RA	CHKD	RA	CHKD
APPD	RA	APPD	RA	APPD	RA	APPD
FINISH		FINISH		FINISH		FINISH
TITLE: OPTION C KIT INSTALLATION (UVB)						
SIZE C 1 1 of 1 SHEET DOCUMENT NUMBER BA-C114 REV 3						

COMPUTER GENERATED DRAWING
FILENAME BA-C114.DWG

	BA-C113	Installation Kit	
Item No.	Part No.	Description	Qty
1	BA-C91	Azimuth Tracker Assy	1.00
3	83-79-116	Screw, 10-32 x 5/8"Lg, Skt Hd, Cap, SS	4.00

	BA-C84	UV Port Assy	
Item No.	Part No.	Description	Qty
1	BA-F81	UVB Prism Assy	1.00
2	BM-C175	UVB Dome Cap	1.00
3	BM-C37	UVB Adaptor	1.00
4	BM-C38	UVB Dome Light Diffuser Holder	1.00
5	BM-C39	UVB Retaining Ring	1.00
6	BM-C40	UVB Diffuser	1.00
10	10-15-101	Quartz Hemisphere, 50mm MTD	1.00
12	83-10-739	O-Ring, 2-1/4"ID x 2-1/2"OD x 1/8, #228	1.00
13	83-10-737	O-Ring, 2"ID x 2-1/4"OD x 1/8, #226	1.00
14	83-51-834	Screw, 10-32 x 1/2"Lg, Btn Hd Hex, SS	3.00
15	83-79-052	Screw, 4-40 x 9/16"Lg, Skt Hd Cap, SS	4.00
17	83-95-787	Washer, #10, Sealing	3.00
18	83-95-748	Washer, #4, Split Lock, SS	4.00
19	83-95-023	Washer, #10, Flat, SS	3.00

P100

GRN

WHT

RED 2* 1/20

NC

BLK

F

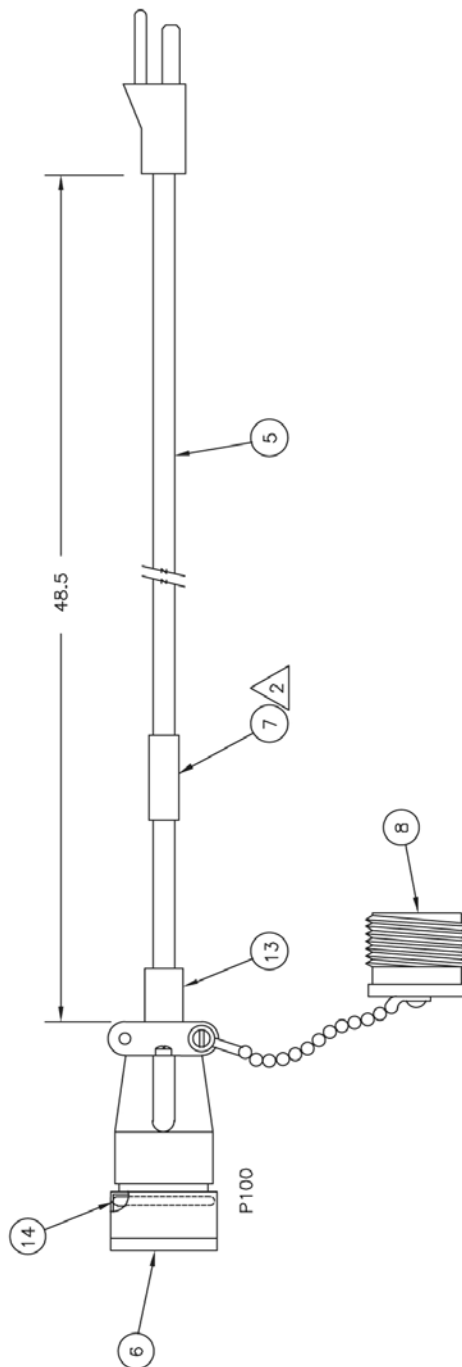
E

D

C

B

A

SCHEMATIC DIAGRAM
BA-W12

NOTES:

1. REMOVE THE RUBBER INSULATOR FROM THE INSIDE OF ITEM 6 & DISCARD. AFTER THE WIRES ARE SOLDERED TO THE CONNECTOR, USE ITEM 15 AND SEAL AROUND ALL THE SOLDER CUPS. THEN INSTALL THE PLASTIC SHELL OVER IT.

2 MARK CABLE WITH PART NO. WHERE SHOWN.

QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
- NO.	-					
SCALE	1:1	NEXT ASSY:	BA-C01	 © 1994 INSTRUMENTS INC. 30-128 Instrument Inc.	This part is not to be disclosed to others, copied or used for prod- uction without written permission from INSTRUMENTS INC. 30-128 Instrument Inc.	
DATE	83.03.01	DIMENSIONS IN	FEET			
DWN	DF	IF DUAL DIMS:	mm (inches)			
CHKD	DW	Tolerances (unless otherwise specified)				
APPD	KL	INCHES	MM			
FINISH	$.100 \pm .005$ $.01 \pm .01$		$.006 \pm 0.15$ $.x \pm 0.25$ ANGLES $\pm 1^\circ$			
		FRACTIONS $\pm 1/32$				
				SHEET	DOCUMENT NUMBER	REV.
				1	BA-W12	4
				OF	1	

COMPUTER GENERATED DRAWING
FILENAME: BA-W12.DWG

BA-C222 Brewer Electronics Spares Kit			
Item No.	Part No.	Description	Qty
2	BA-C99	Azimuth Tracker Board Assy	1.00
3	BA-E103/B	Power Supply Assy, 12V	1.00
4	BA-E124	Electronic PCB Brkt Assy	1.00
5	BA-P23	High Speed Amp Board Assy	1.00
6	BA-W76/A	CABLE ASSY, MAIN TO MOTOR, 29.0	1.00
7	BA-W76/B	CABLE ASSY, MAIN TO MOTOR, 27.0	1.00
8	BA-W76/C	CABLE ASSY, MAIN TO MOTOR, 20.0	1.00
9	BA-W77/B	CABLE ASSY, MAIN TO HV, 16.0	1.00
10	BA-W78	CABLE ASSY, HV BRD TO PMT	1.00
11	70-10-020	Silica Gel Indicating	2.00
12	93-70-401	Standard Lamp	3.00
13	93-70-406	Lamp, HG Germicidal	3.00
14	87-50-088	Power Supply, Switching, 5VDC, 10A	1.00
15	70-10-015	Desiccant Bag	6.00
16	75-01-020	Battery, Lithium, 3V, 1AH	1.00

BA-C112/B BREWER Standard Spares Kit			
Item No.	Part No.	Description	Qty
1	12501365-2	Desiccant Holder Assy	1.00
2	70-10-014	Desiccant Cartridge	--
3	70-10-013	Desiccant Humidity Indicator	2.00
4	70-10-015	Desiccant, 4 Unit, Type II, TYVEK Bag	3.00
5	93-70-401	Lamp, Tungsten, Halogen, 20W, 12V	2.00
6	93-70-406	Lamp, HG Germicidal (GTL3)	2.00
7	91-15-217	Fuse, 5A, 250V, Fast-Blow	2.00
8	91-15-257	Fuse, 2A, 125V, Slow-Blow	--
9	91-15-220	Fuse, 1A, 250V, FB, 5X20MM	2.00
10	91-15-834	Fuse, 2A, 250V, SB 5X20MM	2.00
11	91-15-223	Fuse, 2A, 250V, FB, 5X20MM	2.00
12	91-15-280	Fuse, 4A, 125V, SB, 5X20MM	2.00
13	92-90-002	Tool, Hex Key, .035"	1.00
14	92-90-020	Allen Wrench Kit, Ball Point	1.00
15	83-79-116	Screw, #10-32 x 5/8"Lg, Skt Hd Cap, SS	4.00
16	92-22-050	Insertion/Extraction Tool, 'D' Connector	1.00



NOTE:

1. ALL ITEMS LISTED ABOVE ARE SHOWN FOR INSTALLATION PURPOSES
ONLY AND ARE PART OF KIT A2-1030-135.

COMPUTER GENERATED DRAWING
FILENAME: BA-C203.DWG

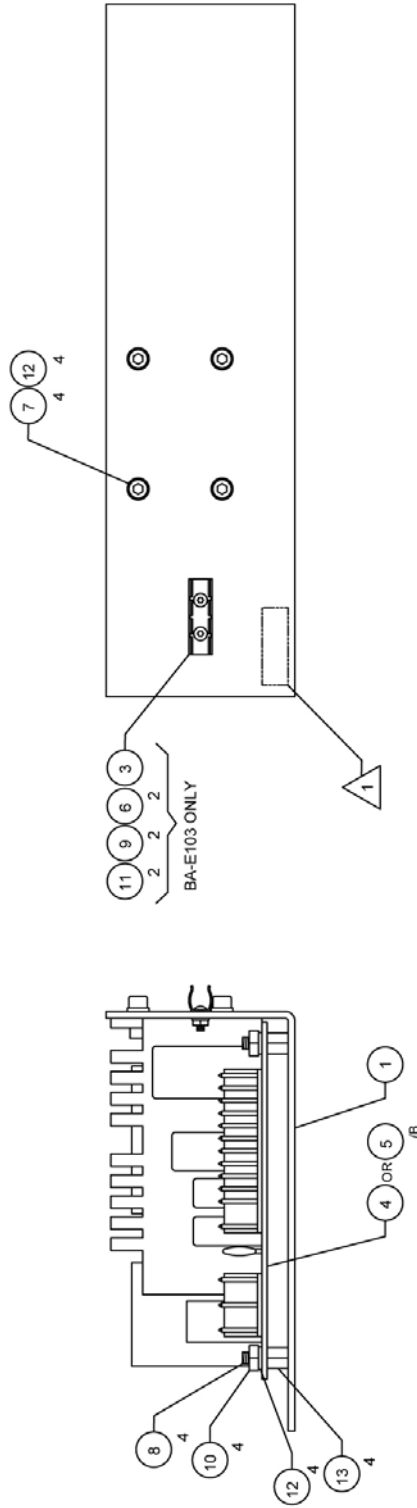
BREWER REFERENCE DOCUMENTATION

Section 10.2 Power Supply and Harness

Figure

- | | |
|---|----------|
| - Main Power Connect Cable Assembly BA-W80 | 10.2-1 |
| - Primary AC power Interconnect Harness Assembly BA-W81 | 10.2-2 |
| - Power Supply Assembly BA-E103/B | 10.2-2.1 |
| - Power Supply data sheet | 10.2-2.2 |
| | 10.2-2.3 |

Figure 10.2-2.1



NOTES:

1. LABEL WITH PART NO. AND REV.
2. BAG USING ITEM 2 AND LABEL WITH PART NO. AND REV.

REV	DESCRIPTION	DCN NUMBER	DATE	DWN	CHKD
1	INITIAL RELEASE	REF DCN872	94.01.27	FV	DJS
2	OPTION /B. BREWER NEW ELECTRONICS	922	98.11.30	MF	TKLL
3	UPDATE REDLINES	862	98.03.25	MSB	TKLL
4	ADD NOTE 4 AND ITEM 2	890	00.04.07	RKF	JR

DOCUMENT NO.
BA-E103

QTY	UM	PART NO.	NFR's NO.	DESCRIPTION	REMARKS	ITEM
1	1	1	1	1	1	1
SCALE	DATE	DWN	CHKD	APPD	FINISH	
1:1	94.01.27	FV	GM	DJS		
SEE TABLE						
DIMENSIONS IN INCHES						
IF DUAL DIMS: mm (inches)						
Tolerances (unless otherwise specified)						
FRACTIONS 2/100						
ANGLES 2.5°						
TITLES						
POWER SUPPLY ASSY						
SHEET 1 OF 1						
DOCUMENT NUMBER BA-E103						
REV 4						

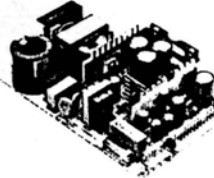
PART NO.	NEXT ASSY	APPL.
BA-E103	BA-C122/D, BA-C122/E, BA-E104, BA-E71	15V
BA-E103/B	BA-C222, BA-E71/B	12V

COMPUTER GENERATED DRAWING
FILENAME: BA-E103.DWG

Item No.	BA-E103/B Part No.	Power Supply Assembly Description	Qty
1	BM-E102	Mounting Bracket, Main Power Supply	1.00
3	89-90-220	Mounting Clip, Axial Lead Resistor	--
4	87-50-098	Power Supply, 80W, O/P, Switch, +-15V	--
5	87-50-099	Power Supply, 80W, O/P, Switch, +-12V	1.00
6	83-51-752	Screw, #2-56 x 1/4"Lg, Btn Hd Hex, SS	--
7	83-79-068	Screw, #6-32 x 3/8"Lg, Skt Hd Hex	4.00
8	83-85-724	Screw, #6-32 x 5/8"Lg, Flt Hd, 100Deg, SS	4.00
9	83-40-219	Nut, #2-56 x 3/16", Hex, SS	--
10	83-40-261	Nut, #6-32 x 5/16", Hex, SS	4.00
11	83-95-603	Washer, #2, Internal Tooth Lock, SS	--
12	83-95-605	Washer, #6, Internal Tooth Lock, SS	8.00
13	83-09-210	Spacer, Threaded, #6-32 x 1/4"Lg, Hex	4.00

NFS80 SERIES 80 Watt Universal Input Switching Power Supplies

- Balanced-current auxiliary outputs
- Universal input voltage
- Overvoltage protection
- Short circuit protection with auto-recovery
- 80 watts continuous, 110 watts peak output power
- Two year warranty
- Recommended for new designs



The NFS80 series consist of universal input, four output switching power supplies useful in motor or line driver applications. The equally rated or "balanced" outputs will each deliver up to 3A continuous and 6A peak output current. Furthermore, these supplies will deliver 80 total continuous watts with natural convection cooling, or 110 watts with forced air cooling. For starting loads such as disk

drives, they will deliver 110 peak watts.

Universal input allows the supply to operate from any line voltage throughout the world without a switch or jumper setting. The NFS80 series is approved by UL, CSA and VDE, and its built-in line filter reduces conducted noise below FCC and VDE limit B.

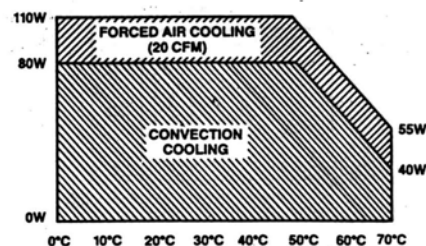
Model Number	Output Voltage ⁽¹⁾	Minimum	Output Currents Maximum ⁽²⁾	Maximum ⁽³⁾	Peak ⁽⁴⁾	Ripple P-P ⁽⁵⁾	Total Regulation ⁽⁶⁾
NFS80-7602	+5V (A)	1A	8A	1.2A	20A	50mV	±2%
	+24V (B)	0A	2A	2.5A	3A	240 mV	+10%-5%
	+12V (C)	0A	2.5A	3A	6A	120mV	±3%
	12V (D)	0A	2.5A	3A	6A	120mV	±3%
NFS80-7606	+5V (A)	1A	8A	12A	20A	50mV	±2%
	+24V (B)	0A	2A	2.5A	3A	240mV	+10%-5%
	+15V (C)	0A	2.5A	3A	6A	150mV	±3%
	15V (D)	0A	2.5A	3A	6A	150mV	±3%

Notes:

- (1) The floating fourth output (D) can be referenced as either positive or negative.
- (2) Natural convection cooling.
- (3) Forced air cooling, 20 CFM @ 1 atmosphere.
- (4) Peak output current lasting less than 60 seconds with duty cycle ≤ 10%. During peak loading, outputs may exceed total regulation limits.
- (5) 50 MHz bandwidth, peak-to-peak, measured differentially.
- (6) Total regulation is defined as the static output regulation at 25°C, including initial tolerance, line voltage within stated limits, load currents within stated limits, and output voltages adjusted to their factory settings. Also, for stated regulation on the +24V output, I(A)/I(B) ≤ 5.

Operating Temperature Limits and Output Power Range

For optimum reliability, no part of the heatsink should exceed 110°C, and no semiconductor case temperature should exceed 115°C. CAUTION: make primary circuit thermal measurements approximately one second after disconnecting line power to minimize shock hazard and damage to thermal measurement equipment.



COMPUTER PRODUCTS

A

7 Elkins Street • South Boston • MA 02127 • Phone 617-464-6600 • Fax 617-464-6612

Figure 10.2-2.2

SPECIFICATIONS

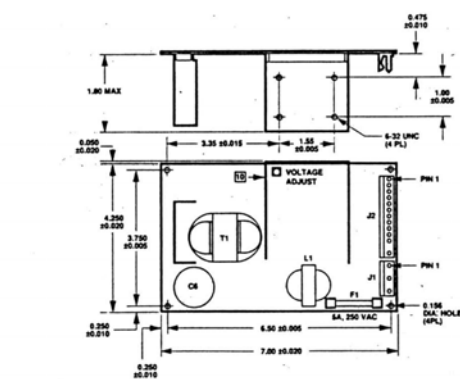
Parameter	Condition	Limits
Input Voltage		85VAC to 264VAC
Input Frequency Range		47Hz to 440Hz
Input Surge Current	Cold start 115VAC 230VAC	17A max 34A max
Conducted RFI		FCC limit B, VDE limit B
Safety Ground	110VAC, 60Hz	0.2 mA maximum
Leakage Current	233VAC, 50Hz	0.4 mA maximum
Line Regulation	Low line to high line, full load	±0.1% max
Overshoot/Undershoot	Turn-on	None
Transient Response	+5V output, 2.5A to 5A load change	150mV transient, settling to 1% in 1mS
Temperature Coefficient	All outputs	0.02%/C
Overvoltage Protection Threshold	+5V output	6.25V ±0.75V
Output Voltage Adjustability	+5V output	±3%
Total Output Power	50°C ambient temperature Continuous, convection cooling forced air cooling	80 watts 110 watts 110 watts
Holdup Time		80W 110W 140mS 100mS 80mS 50mS 35mS 17mS 12mS 8mS
Efficiency	115VAC input, 80W	70% typical
Operating Frequency	0W, 90 to 264VAC 110W, 90 to 264VAC	100 to 250 kHz 20 to 70 kHz
Altitude	Operating Non-operating	10,000 feet max 40,000 feet max
Temperature	Operating Non-operating	0°C to 50°C -40°C to +85°C
Relative Humidity	Non-condensing	5% to 95%
Vibration	Three orthogonal axes, random vibration, 10 minute test for each axis	2.4G rms (appx) 5Hz to 500Hz
MTBF	MIL-HDBK 217E, 25°C	125,000 hr
Weight		1.3 lb (0.6 Kg)

PIN CHART

CONNECTOR

J1			
Pin 1	AC Ground	AC Ground	Molex 09-50-3051 with second and fourth pins removed
Pin 2	AC Neutral	AC Neutral	
Pin 3	AC Hot	AC Hot	
J2			
Pin 1	+5.1V	+5.1V	Molex 09-50-3131 Mating connector: Molex 2139 series housing with 2878 series crimp terminal.
Pin 2	+5.1V	+5.1V	
Pin 3	+5.1V	+5.1V	
Pin 4	Return	Return	
Pin 5	Return	Return	
Pin 6	Return	Return	
Pin 7	Return	Return	
Pin 8	+12V	+15V	
Pin 9	+12V	+15V	
Pin 10	-12V Ret	-15V Ret	
Pin 11	-12V	-15V	
Pin 12	Removed for key		
Pin 13	+24V	+24V	

- (7) Pins 10 and 11 are a floating output, which can be referenced as either positive or negative. Pin 10 is positive with respect to pin 11. Either pin 10 or 11 must be connected to Return (pins 4-7) for proper operation.
- (8) All dimensions are in inches and (mm).
- (9) Either metallic or non-metallic standoffs can be used in all four mounting holes without affecting VDE safety approval. The diameter of metal standoffs, if used, must not exceed 0.212".
- (10) This heat sink is grounded, and allows system grounding when mechanically connected to the system chassis. Alternatively, the



- ground pad encircling the mounting hole near J1 allows system grounding through a metal standoff to the system chassis.
- (11) It is always advisable to attach the power supply heat sink to another thermal dissipator (such as a chassis, a finned heat sink, etc.). The resulting temperature decrease of heat sink-mounted components will improve power supply lifetime.
- (12) The supply must be mechanically supported using the PCB mounting holes, and may be additionally supported by the heat sink mounting holes.

B

COMPUTER PRODUCTS

7 Elkins Street • South Boston • MA 02127 • Phone 617-464-6600 • Fax 617-464-6612

Figure 10.2-2.3

BREWER REFERENCE DOCUMENTATION

Section 10.3 Internal Cabling

Figure

- Communication Cable Assembly BA-W84	10.3-1
- Internal Azimuth Drive Cable Assembly BA-W31	10.3-2
- DC to main & lamp Cable Interconnect Harness BA-W82	10.3-3
- Control Switch Cable assembly BA-W55	10.3-4
- Lamp Cable assembly BA-W83	10.3-5
- Motor Connectors Cable assembly BA-W76	10.3.6
- Main Lamp and HV Cable assembly BA-W77	10.3.7
- Hv board to PMT Cable assembly BA-W78	10.3.8

REV	DESCRIPTION	DCN NUMBER	DATE	DWN	CHKD
1	FIRST ISSUE		84.03.01	DF	KL
2	ADD ITEM 7, CHG QTY ITEMS 19, 21	DCN-373	88.02.18	CW	RA
3	CHG WIRE LENGTHS & P116 PIN OUT	DCN-622	93.01.20	PV	RA
4	ADD FERRITE CORE TO ASSY	DCN-604	96.12.17	CF	TKLL
5	ADD ASSY BA-W31/B	822	99.01.22	MSB	TKLL

BA-W31 SCHEM.

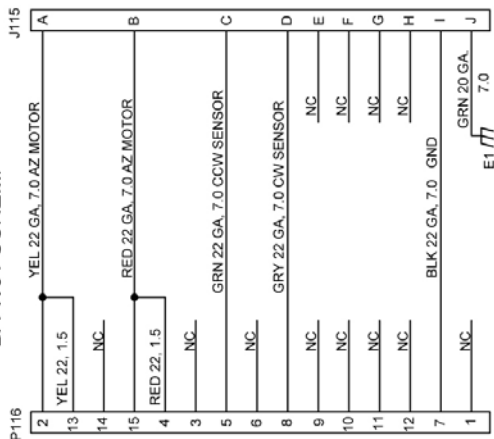
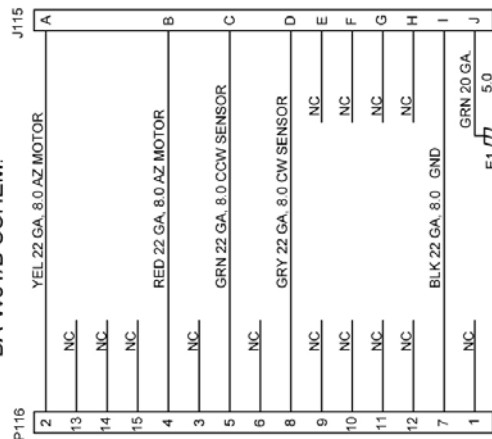


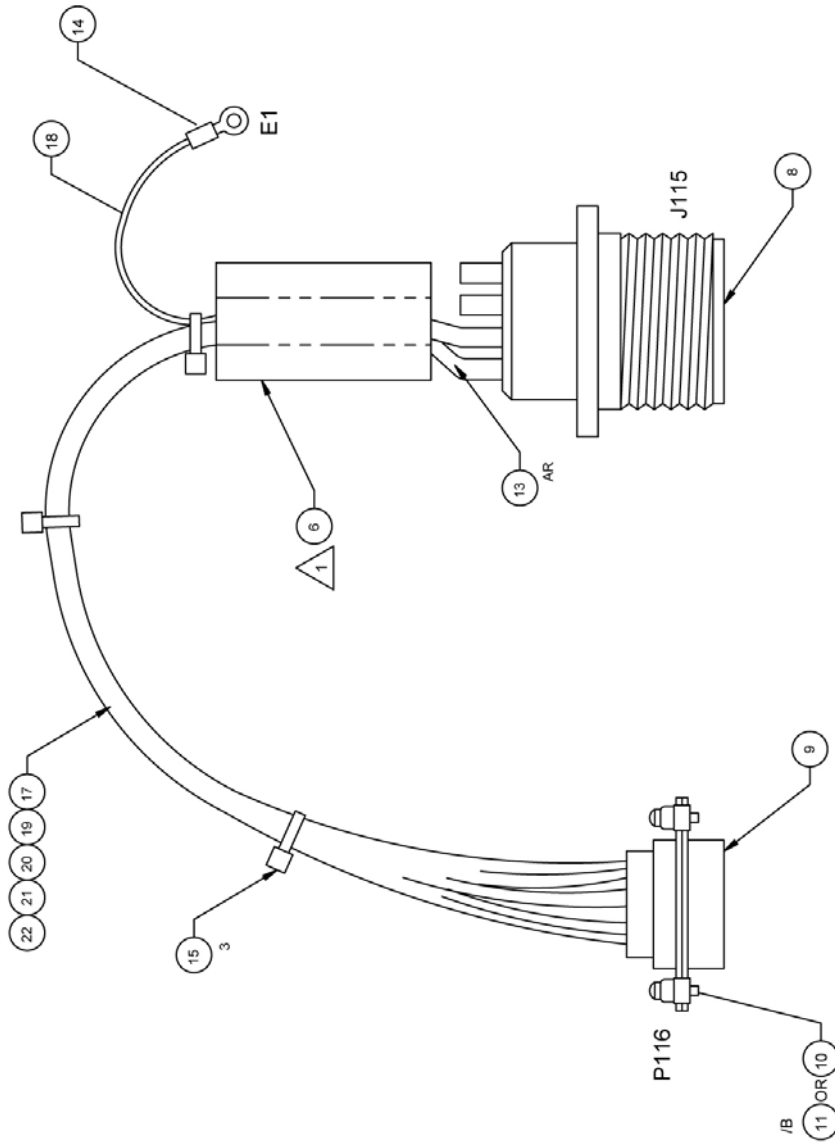
Figure 10.3-2

BA-W31/B SCHEM.



NOTES:

1. CLIP ITEM 6 OVER CABLE ASSEMBLY FOLLOWING COMPLETION OF CABLE.
2. BAG AND LABEL THUS: BA-W31, REV 5.



QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
1						
2						
3						
4						
5						

SCI-TEC

© 1995
This document is not to be disclosed
outside the company without prior
approval of the company.

INSTRUMENTS INC.

BO-TEC Instruments Inc.

TITLE:

INTERNAL AZIMUTH DRIVE
DATA CABLE ASSY

SIZE

C 1 of 1

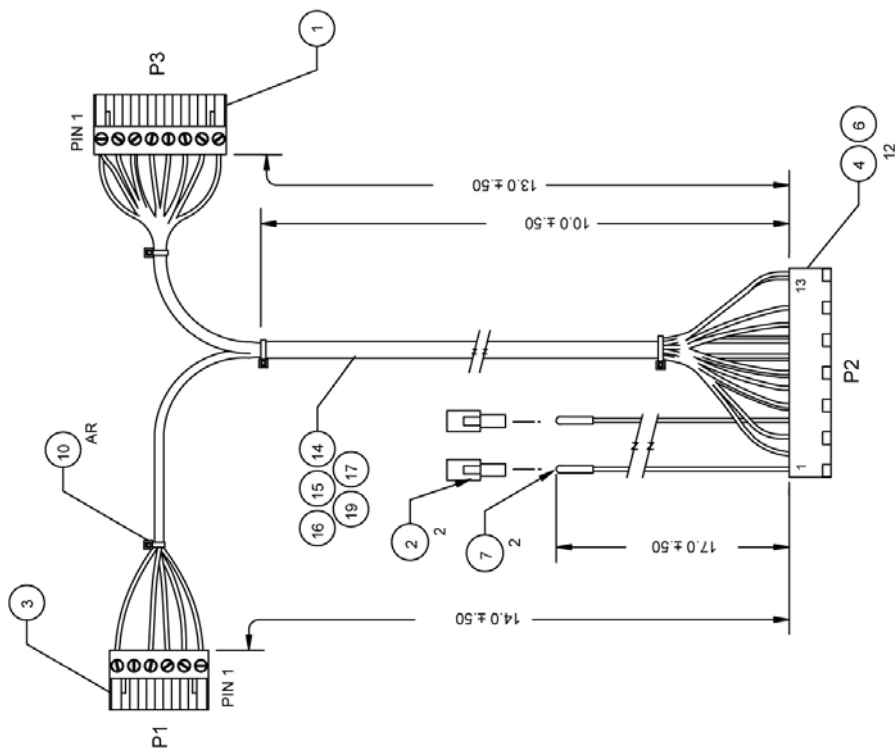
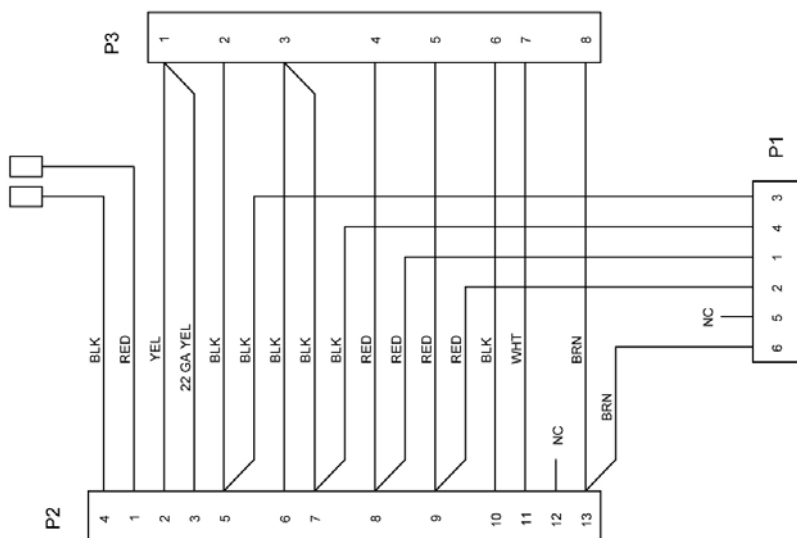
BA-W31

REV: 5

PART NO.	NEXT ASSY
BA-W31	BA-C11, BA-C208
BA-W31/B	BA-C220, BA-C220/B

COMPUTER GENERATED DRAWING
FILENAME: BA-W31.DWG

Figure 10.3-3



REV	DESCRIPTION	DCN NUMBER	DATE	DWN	CHKD
-	INITIAL RELEASE	822	99.01.27	MSB	TKLL

DOCUMENT NO.
BA-W82

QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
1	NONE			SEE TABLE		
SCALE	DATE	DATE	DATE	DATE	DATE	DATE
90.05.04	90.05.04	90.05.04	90.05.04	90.05.04	90.05.04	90.05.04
INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES
IF DUAL DIMS	IF DUAL DIMS	IF DUAL DIMS	IF DUAL DIMS	IF DUAL DIMS	IF DUAL DIMS	IF DUAL DIMS
MM	MM	MM	MM	MM	MM	MM
APPD	APPD	APPD	APPD	APPD	APPD	APPD
FINISH	FINISH	FINISH	FINISH	FINISH	FINISH	FINISH
BA-W82	BA-W82	BA-W82	BA-W82	BA-W82	BA-W82	BA-W82
BA-C230, BA-C2201B	BA-C230, BA-C2201B	BA-C230, BA-C2201B	BA-C230, BA-C2201B	BA-C230, BA-C2201B	BA-C230, BA-C2201B	BA-C230, BA-C2201B
BA-C231	BA-C231	BA-C231	BA-C231	BA-C231	BA-C231	BA-C231
COMPUTER GENERATED DRAWING	COMPUTER GENERATED DRAWING	COMPUTER GENERATED DRAWING	COMPUTER GENERATED DRAWING	COMPUTER GENERATED DRAWING	COMPUTER GENERATED DRAWING	COMPUTER GENERATED DRAWING
FILENAME: BA-W82.DWG	FILENAME: BA-W82.DWG	FILENAME: BA-W82.DWG	FILENAME: BA-W82.DWG	FILENAME: BA-W82.DWG	FILENAME: BA-W82.DWG	FILENAME: BA-W82.DWG
PART NO.	NEXT ASSY	PART NO.	NEXT ASSY	PART NO.	NEXT ASSY	PART NO.
BA-W82	BA-C230, BA-C2201B	BA-W82	BA-C230, BA-C2201B	BA-W82	BA-C230, BA-C2201B	BA-W82
BA-C231	BA-C231	BA-C231	BA-C231	BA-C231	BA-C231	BA-C231
SIZE	SHEET	SIZE	SHEET	SIZE	SHEET	SIZE
C	1	C	1	C	1	C
REV.	REV.	REV.	REV.	REV.	REV.	REV.
-	-	-	-	-	-	-

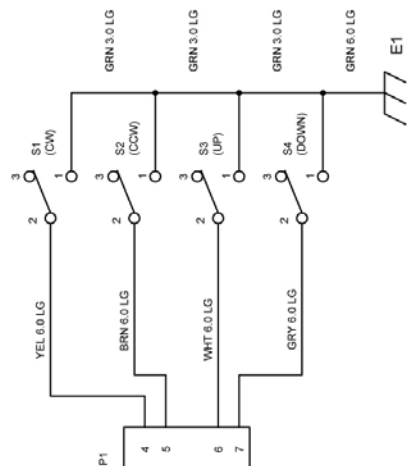
NOTES:

1. ALL WIRE 20 AWG UNLESS OTHERWISE SPECIFIED.
2. BAG AND LABEL THUS: BA-W82 REV -

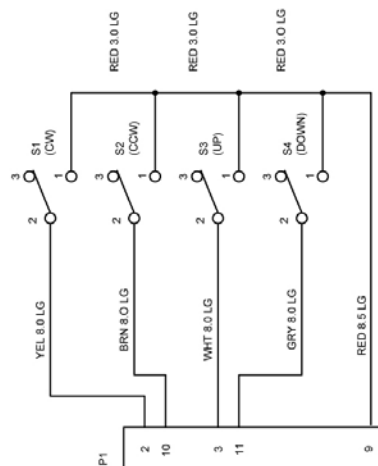
ESCITEC

© 1995
INSTRUMENTS INC.
DO NOT REPRODUCE OR TRANSMIT
IN ANY FORM OR BY ANY MEANS
WITHOUT PERMISSION FROM
ESCITEC INSTRUMENTS INC.

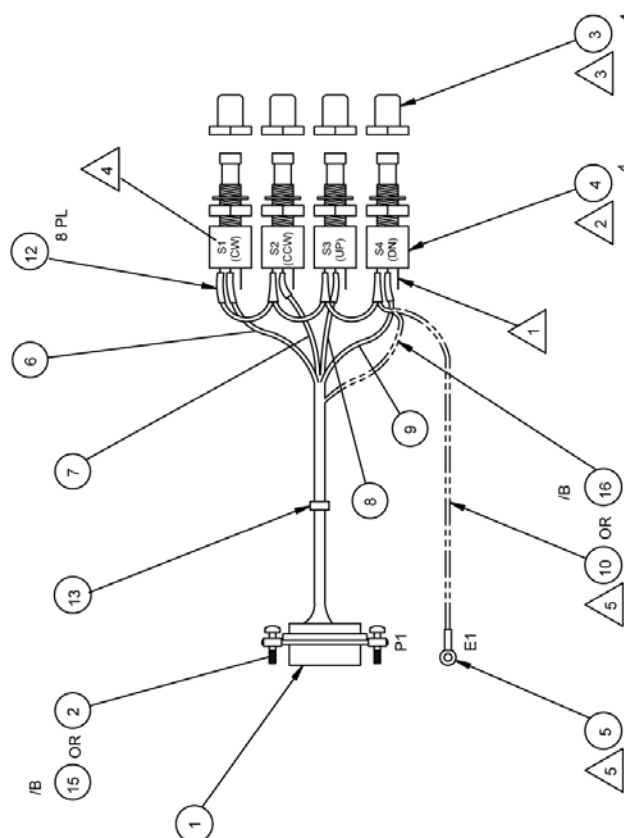
TITLE:
CABLE ASSY,
DC TO MAIN/LAMP



BA-W55/B SCHEMATIC



1. COVER ALL UNUSED TERMINALS WITH RTV (ITEM 11).
2. REMOVE AND DISCARD KEYING WASHER (PART OF ITEM 4) FROM SWITCH.
3. FINGER TIGHTEN BOOT (ITEM 3) ONTO SWITCH.
4. LABEL SWITCH WITH DESIGNATIONS AS SHOWN.
5. FOR BA-W55 ASSY: ITEM 16 NOT USED.
FOR BA-W55/B ASSY: ITEMS 5 AND 10 NOT USED.
6. BAG AND LABEL WITH PART NO. AND REV.

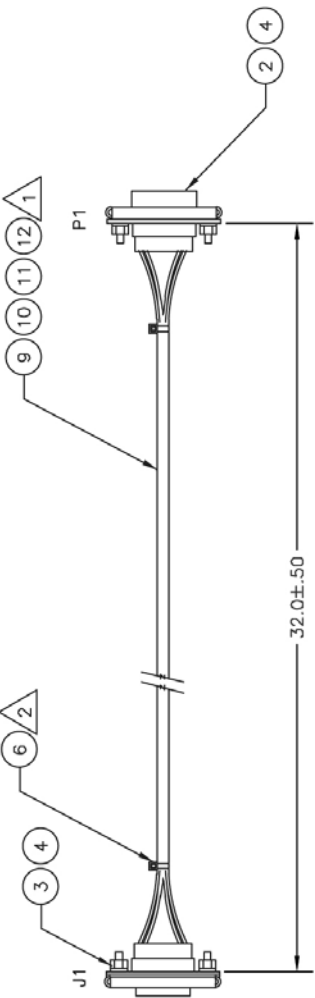


QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
-NO-						
SCALE	2:1	NEXT ASSY:	SEE TABLE	 © 1995 This document is not to be disclosed in whole, copied or used for partial reproduction without written consent from BO-TEC Industries Inc.		
DATE	90 08 20	DIMENSIONS IN	INCHES			
DWN	FV	IF DUAL DIMS	mm (inches)			
CHKD	PA	TOLERANCES	(unless otherwise specified)			
APPD	KL	INCHES	MM			
FINISH				TITLE: CONTROL SWITCH CABLE ASSY		
				SIZE	SHEET	REV
				C	1 of 1	2
					DOCUMENT NUMBER	
					BA-W55	

PART NO.	NEXT ASSY
BA-W55	BA-C11, BA-C209
BA-W55/B	BA-C220, BA-C221

COMPUTER GENERATED DRAWING
FILENAME: BA-W55.DWG

Figure 10.3-5



J1		P1	
9	NC	9	GRN
8	NC	8	NC
7	NC	7	NC
6	NC	6	WHT
5	NC	5	RED
4	NC	4	NC
3	NC	3	NC
2	NC	2	NC
1	NC	1	BLK

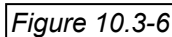
NOTES:

- 1 MAKE TWISTED PAIRS OF BLK/RED & WHT/GRN AS SHOWN.
- 2 USE TIE-WRAPS, APPROXIMATELY EVERY 4.0 IN.
- 3. BAG AND LABEL THUS: BA-W83, REV -.

PART NO.	NEXT ASSY
BA-W83	BA-C230, BA-C230/B,
	BA-C231

QTY		UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
- NO.		A					
SCALE		NTS	NEXT ASSY: SEE TABLE		 ESCHITEC © 1995 INSTRUMENTS INC. 35-102 INSTRUMENTS INC. TITLE: CABLE ASSY, LAMP		
DATE		98.05.04	DIMENSIONS IN INCHES				
DWN		MF	IF DUAL DIMS: mm (inches)				
CHKD		RKF	Tolerances (unless otherwise specified)				
APPD		TKLL	INCHES		MM		
FINISH							
		.005 ± .003		.005 ± .015			
		.005 ± .01		.005 ± .025			
		ANGLES ± 1°		ANGLES ± 1°			
		FRACTIONS ± 1/32		SIZE		SHEET	DOCUMENT NUMBER
				C 1		1 of 1	BA-W83
							REV. —

COMPUTER GENERATED DRAWING
FILENAME: BA-W83.DWG



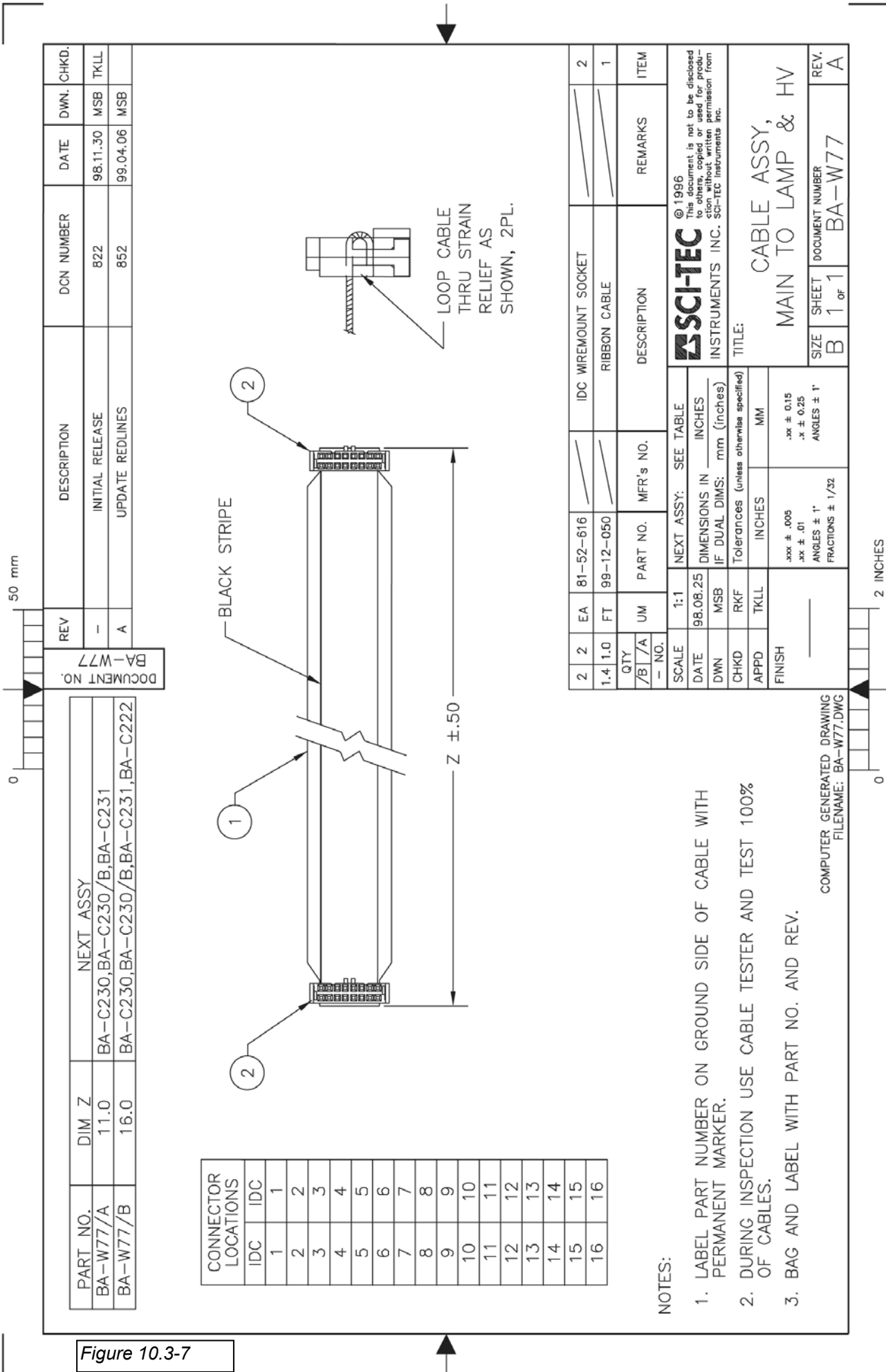


Figure 10.3-7

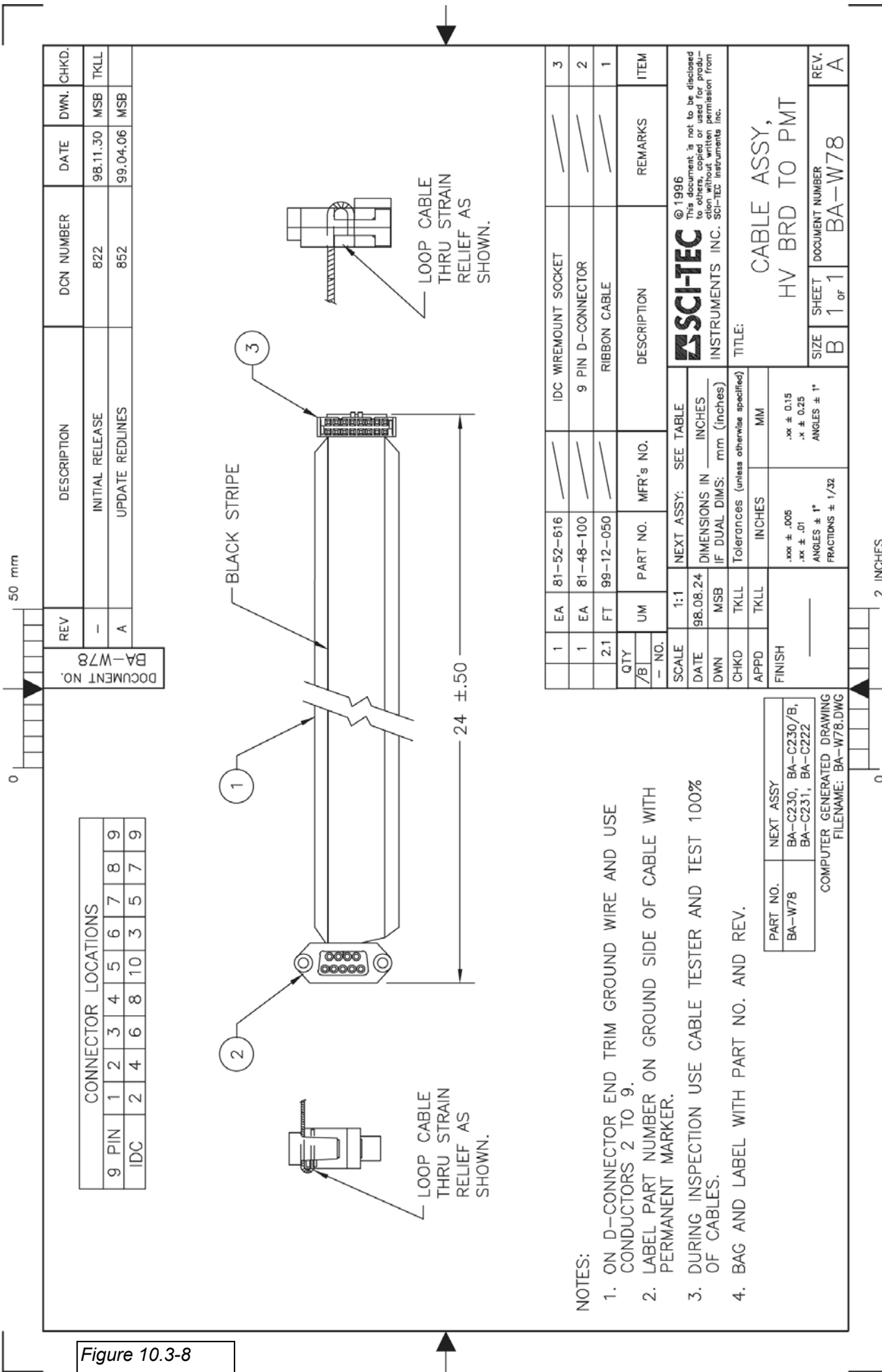


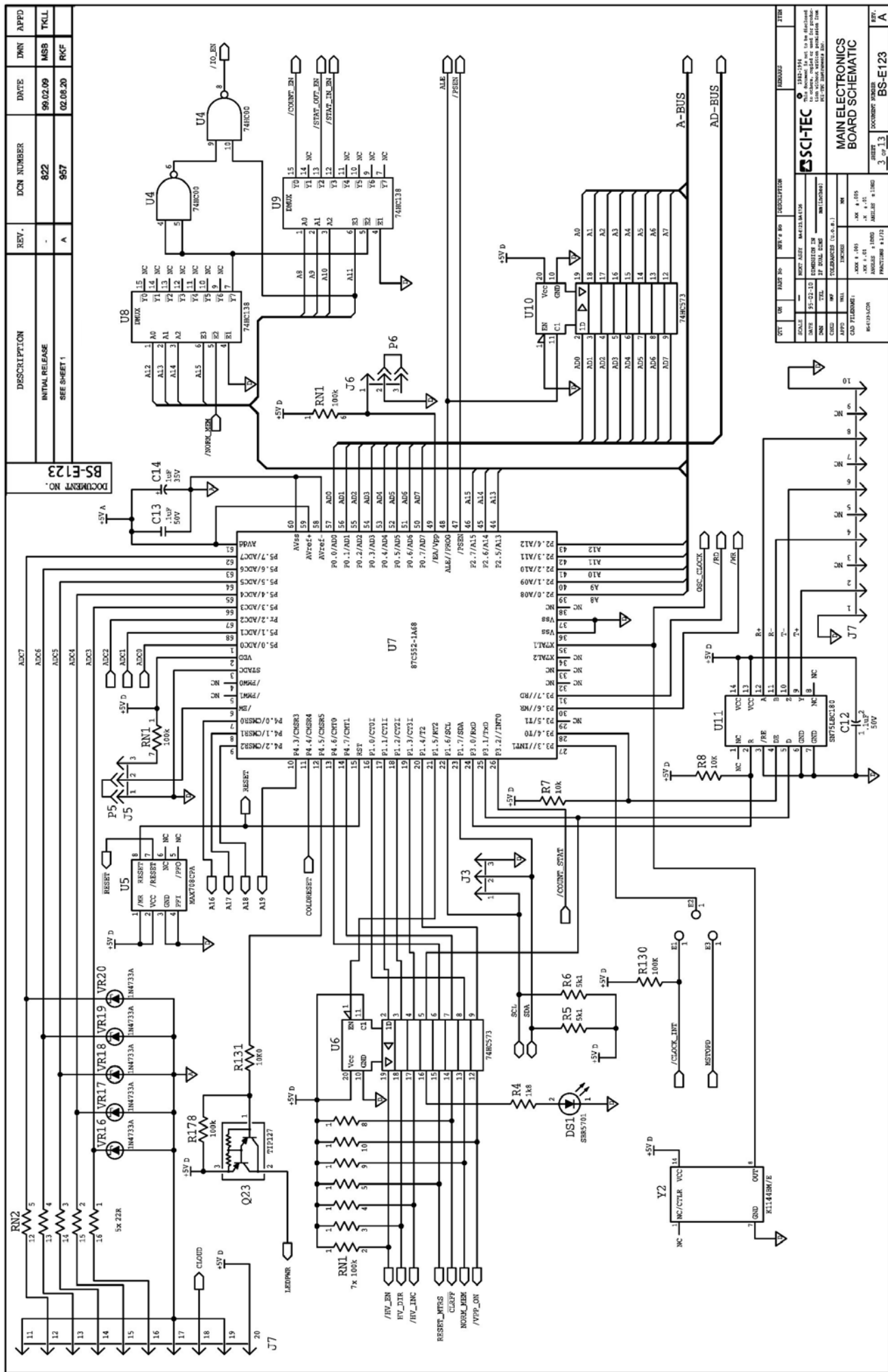
Figure 10.3-8

BREWER REFERENCE DOCUMENTATION

Section 10.4 Electronics Schematics

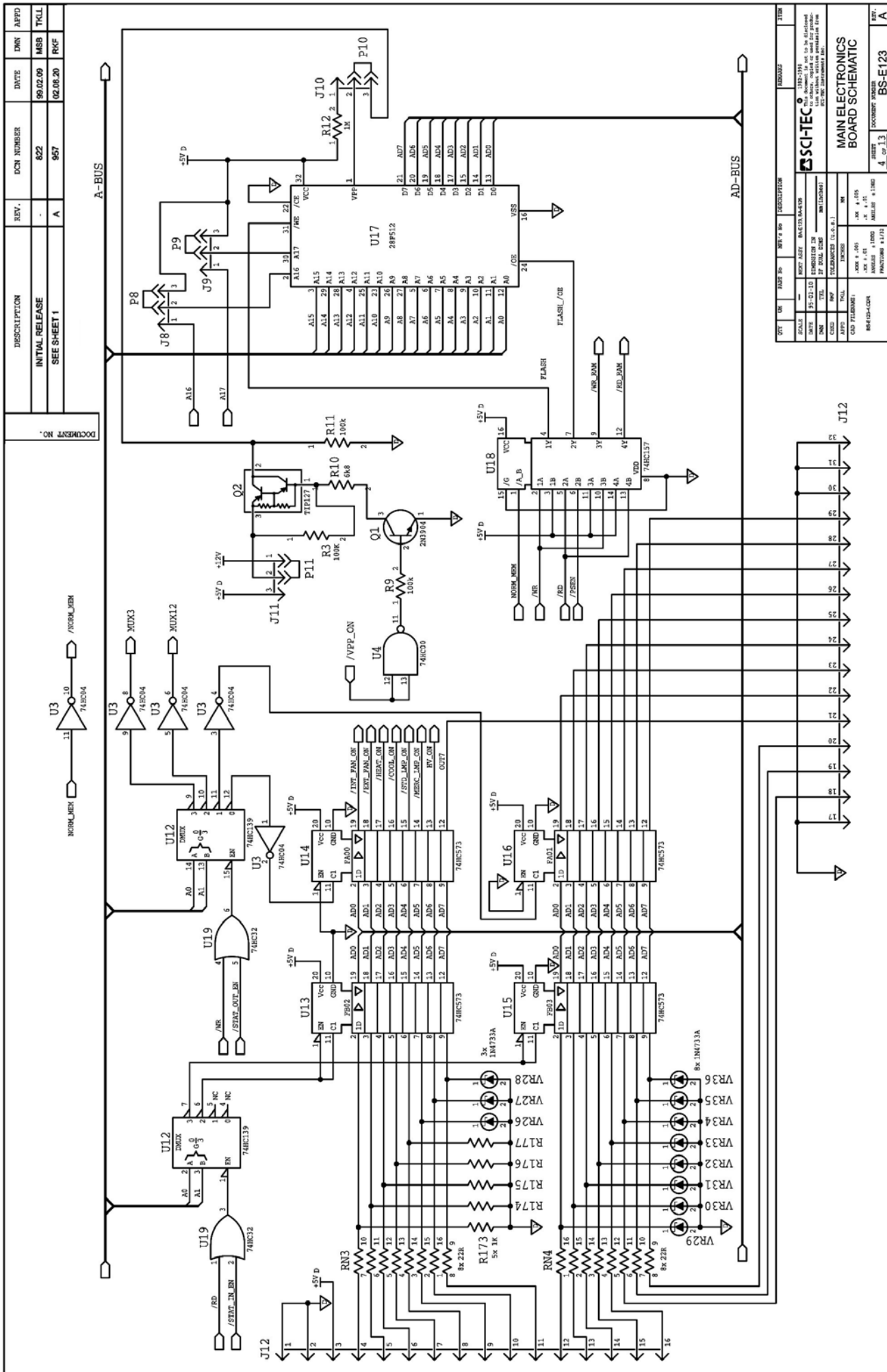
Figure

- Main Electronics Board Schematics BS-E123	10.4-1
- Lamp Control Electronics board Schematic BS-E129	10.4-2
- High Voltage Control Schematic BS-E131	10.4-3
- High Voltage supply Data Sheet	10.4-4
- Humidity Sensor Data Sheet	10.4-5
- Humidity Sensor Board Schematic (option) BS-E131	10.4.6
- Heater Control Board Schematic (option) 12505290	10.4-7



DESCRIPTION	REV.	DCN NUMBER	DATE	DWN	APPD
INITIAL RELEASE	-	822	99.02.09	MSB	TKLL
SEE SHEET 1	A	957	02.06.20	RKF	

DOCUMENT NO.

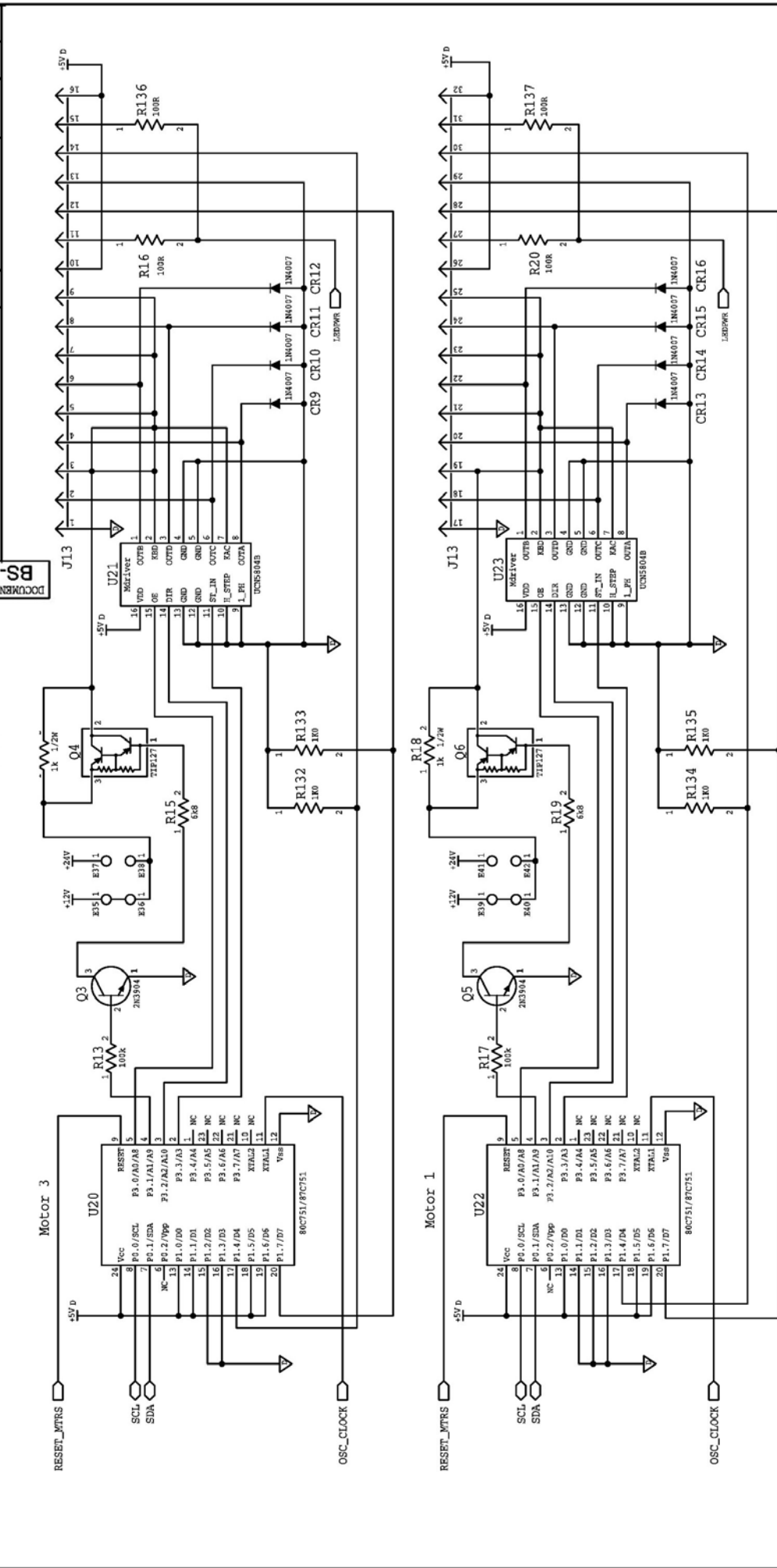


QTY	UNIT	PART NO.	REV. & BY	DESCRIPTION	DATE
1	PCB	822	MSB	PCB LAYOUT	99.02.09
1	PCB	957	RKF	PCB LAYOUT	02.06.20
1	PCB	822	MSB	PCB LAYOUT	99.02.09
1	PCB	957	RKF	PCB LAYOUT	02.06.20
1	PCB	822	MSB	PCB LAYOUT	99.02.09
1	PCB	957	RKF	PCB LAYOUT	02.06.20
1	PCB	822	MSB	PCB LAYOUT	99.02.09
1	PCB	957	RKF	PCB LAYOUT	02.06.20
1	PCB	822	MSB	PCB LAYOUT	99.02.09
1	PCB	957	RKF	PCB LAYOUT	02.06.20

QTY	UNIT	PART NO.	REV. & BY	DESCRIPTION	DATE
1	PCB	822	MSB	PCB LAYOUT	99.02.09
1	PCB	957	RKF	PCB LAYOUT	02.06.20
1	PCB	822	MSB	PCB LAYOUT	99.02.09
1	PCB	957	RKF	PCB LAYOUT	02.06.20
1	PCB	822	MSB	PCB LAYOUT	99.02.09
1	PCB	957	RKF	PCB LAYOUT	02.06.20
1	PCB	822	MSB	PCB LAYOUT	99.02.09
1	PCB	957	RKF	PCB LAYOUT	02.06.20
1	PCB	822	MSB	PCB LAYOUT	99.02.09
1	PCB	957	RKF	PCB LAYOUT	02.06.20

DESCRIPTION	REV.	DCN NUMBER	DATE	DWN	APPD
INITIAL RELEASE	-	822	99.02.08	MSB	TKLL
SEE SHEET 1	A	967	02.08.20	RKF	

QTY	TR	UNIT	REF. NO.	DESCRIPTION	REMARKS	TEST
1	1	1	1	1	1	1

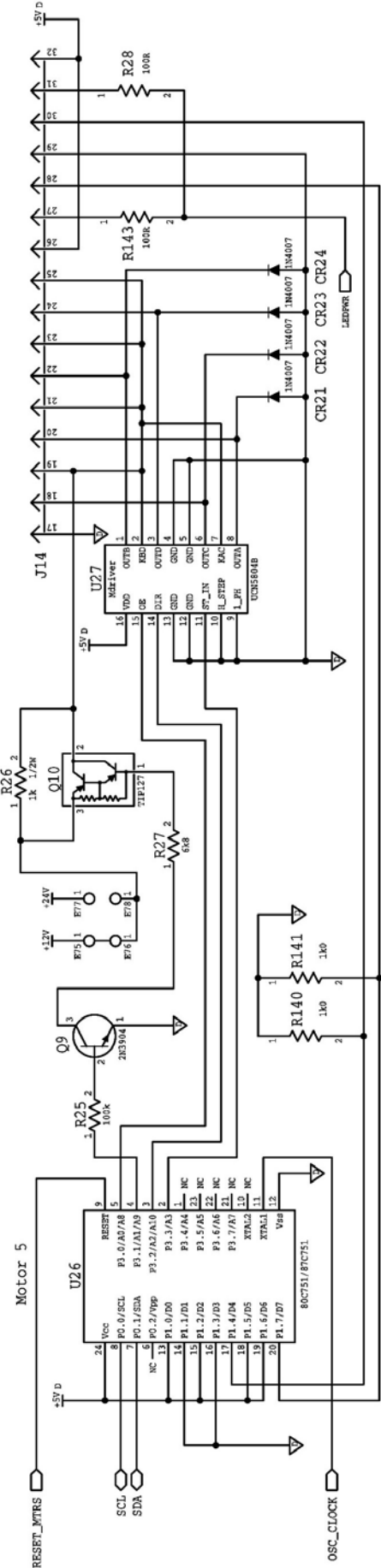
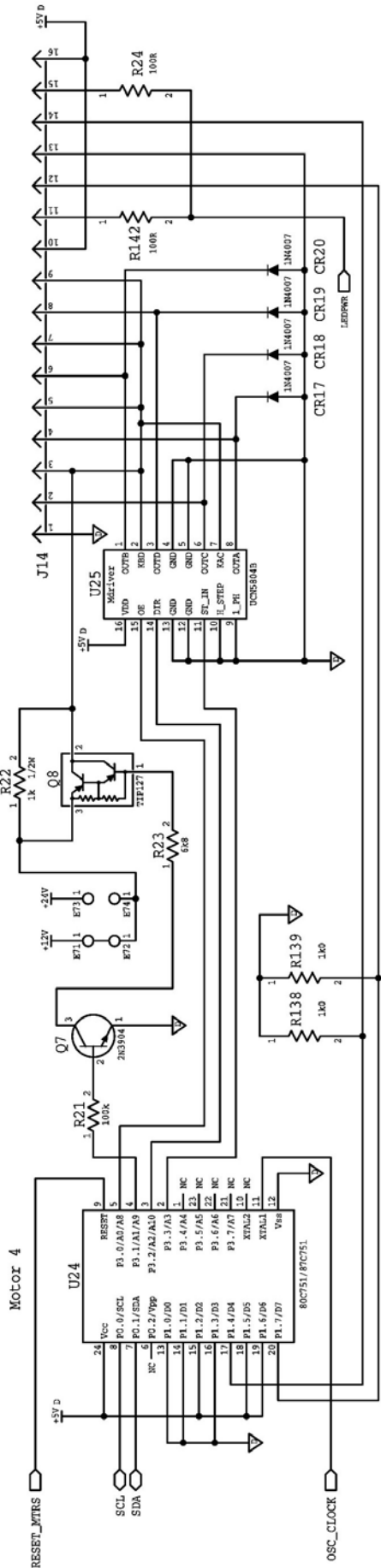


QTY	TR	UNIT	REF. NO.	DESCRIPTION	REMARKS	TEST
1	1	1	1	1	1	1

QTY	TR	UNIT	REF. NO.	DESCRIPTION	REMARKS	TEST
1	1	1	1	1	1	1

DESCRIPTION	REV.	DCN NUMBER	DATE	DRAWN	APPD
INITIAL RELEASE	-	822	99.02.09	MSB	TKLL
SEE SHEET 1	A	967	02.08.20	RKF	

DOCUMENT NO.
BS-E123

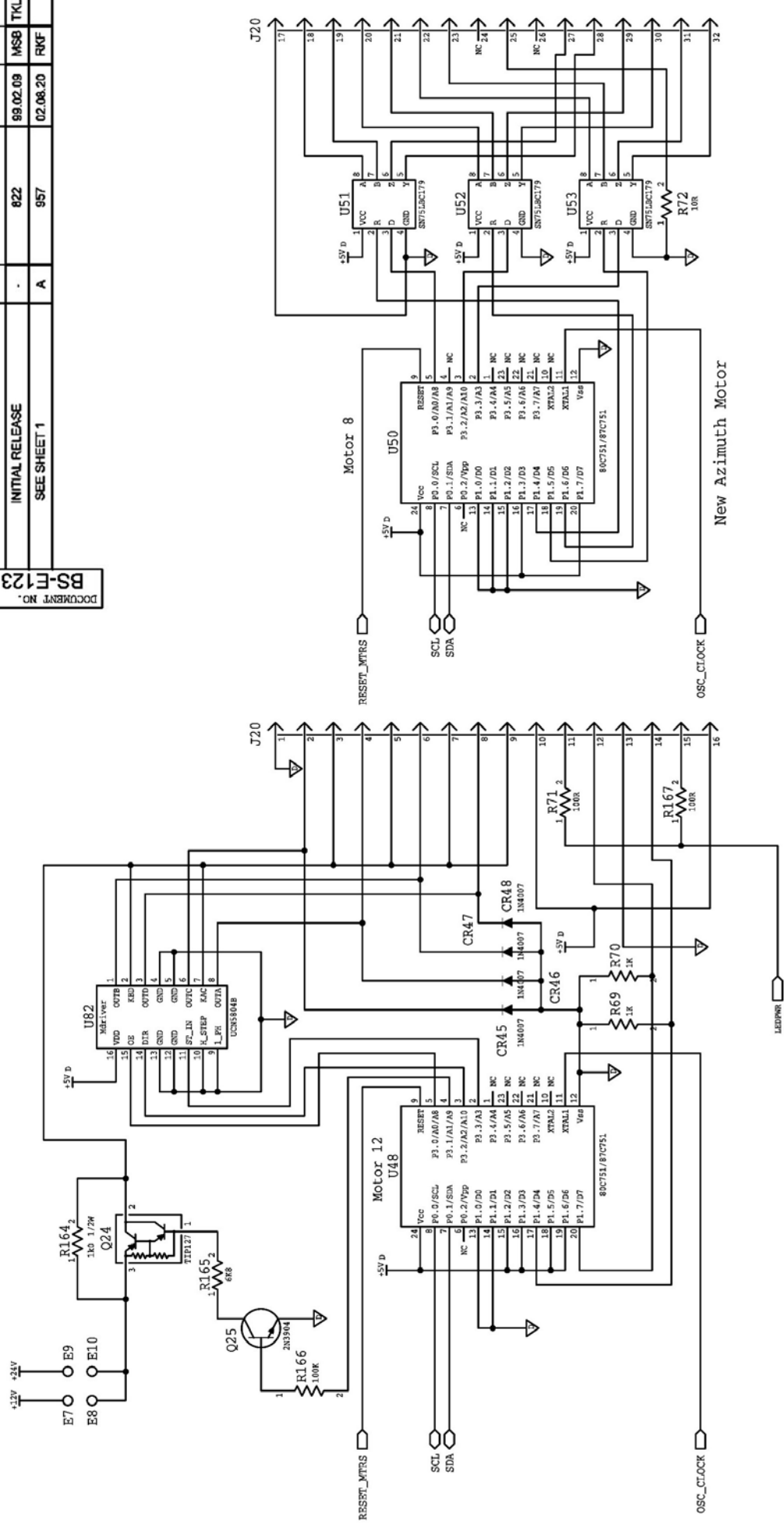


QTY	REF	VALUE	UNIT	QTY	REF	VALUE	UNIT
1	U24	80C751/87C751		1	U25	MAX196	
1	U26	80C751/87C751		1	U27	MAX196	
1	Q8	263894		1	Q9	263894	
1	R21	100K		1	R22	1K	
1	R23	68K		1	R24	100K	
1	R138	1K		1	R139	1K	
1	R140	1K		1	R141	1K	
1	R142	100K		1	R143	100K	
1	R28	100K		1	R29	100K	
1	C1	100N		1	C2	100N	
1	C3	100N		1	C4	100N	
1	C5	100N		1	C6	100N	
1	C7	100N		1	C8	100N	
1	C9	100N		1	C10	100N	
1	C11	100N		1	C12	100N	
1	C13	100N		1	C14	100N	
1	C15	100N		1	C16	100N	
1	C17	100N		1	C18	100N	
1	C19	100N		1	C20	100N	
1	C21	100N		1	C22	100N	
1	C23	100N		1	C24	100N	
1	C25	100N		1	C26	100N	
1	C27	100N		1	C28	100N	
1	C29	100N		1	C30	100N	
1	C31	100N		1	C32	100N	
1	C33	100N		1	C34	100N	
1	C35	100N		1	C36	100N	
1	C37	100N		1	C38	100N	
1	C39	100N		1	C40	100N	
1	C41	100N		1	C42	100N	
1	C43	100N		1	C44	100N	
1	C45	100N		1	C46	100N	
1	C47	100N		1	C48	100N	
1	C49	100N		1	C50	100N	
1	C51	100N		1	C52	100N	
1	C53	100N		1	C54	100N	
1	C55	100N		1	C56	100N	
1	C57	100N		1	C58	100N	
1	C59	100N		1	C60	100N	
1	C61	100N		1	C62	100N	
1	C63	100N		1	C64	100N	
1	C65	100N		1	C66	100N	
1	C67	100N		1	C68	100N	
1	C69	100N		1	C70	100N	
1	C71	100N		1	C72	100N	
1	C73	100N		1	C74	100N	
1	C75	100N		1	C76	100N	
1	C77	100N		1	C78	100N	
1	C79	100N		1	C80	100N	
1	C81	100N		1	C82	100N	
1	C83	100N		1	C84	100N	
1	C85	100N		1	C86	100N	
1	C87	100N		1	C88	100N	
1	C89	100N		1	C90	100N	
1	C91	100N		1	C92	100N	
1	C93	100N		1	C94	100N	
1	C95	100N		1	C96	100N	
1	C97	100N		1	C98	100N	
1	C99	100N		1	C100	100N	

QTY	REF	VALUE	UNIT	QTY	REF	VALUE	UNIT
1	U24	80C751/87C751		1	U25	MAX196	
1	U26	80C751/87C751		1	U27	MAX196	
1	Q8	263894		1	Q9	263894	
1	R21	100K		1	R22	1K	
1	R23	68K		1	R24	100K	
1	R138	1K		1	R139	1K	
1	R140	1K		1	R141	1K	
1	R142	100K		1	R143	100K	
1	R28	100K		1	R29	100K	
1	C1	100N		1	C2	100N	
1	C3	100N		1	C4	100N	
1	C5	100N		1	C6	100N	
1	C7	100N		1	C8	100N	
1	C9	100N		1	C10	100N	
1	C11	100N		1	C12	100N	
1	C13	100N		1	C14	100N	
1	C15	100N		1	C16	100N	
1	C17	100N		1	C18	100N	
1	C19	100N		1	C20	100N	
1	C21	100N		1	C22	100N	
1	C23	100N		1	C24	100N	
1	C25	100N		1	C26	100N	
1	C27	100N		1	C28	100N	
1	C29	100N		1	C30	100N	
1	C31	100N		1	C32	100N	
1	C33	100N		1	C34	100N	
1	C35	100N		1	C36	100N	
1	C37	100N		1	C38	100N	
1	C39	100N		1	C40	100N	
1	C41	100N		1	C42	100N	
1	C43	100N		1	C44	100N	
1	C45	100N		1	C46	100N	
1	C47	100N		1	C48	100N	
1	C49	100N		1	C50	100N	
1	C51	100N		1	C52	100N	
1	C53	100N		1	C54	100N	
1	C55	100N		1	C56	100N	
1	C57	100N		1	C58	100N	
1	C59	100N		1	C60	100N	
1	C61	100N		1	C62	100N	
1	C63	100N		1	C64	100N	
1	C65	100N		1	C66	100N	
1	C67	100N		1	C68	100N	
1	C69	100N		1	C70	100N	
1	C71	100N		1	C72	100N	
1	C73	100N		1	C74	100N	
1	C75	100N		1	C76	100N	
1	C77	100N		1	C78	100N	
1	C79	100N		1	C80	100N	
1	C81	100N		1	C82	100N	
1	C83	100N		1	C84	100N	
1	C85	100N		1	C86	100N	
1	C87	100N		1	C88	100N	
1	C89	100N		1	C90	100N	
1	C91	100N		1	C92	100N	
1	C93	100N		1	C94	100N	
1	C95	100N		1	C96	100N	
1	C97	100N		1	C98	100N	
1	C99	100N		1	C100	100N	

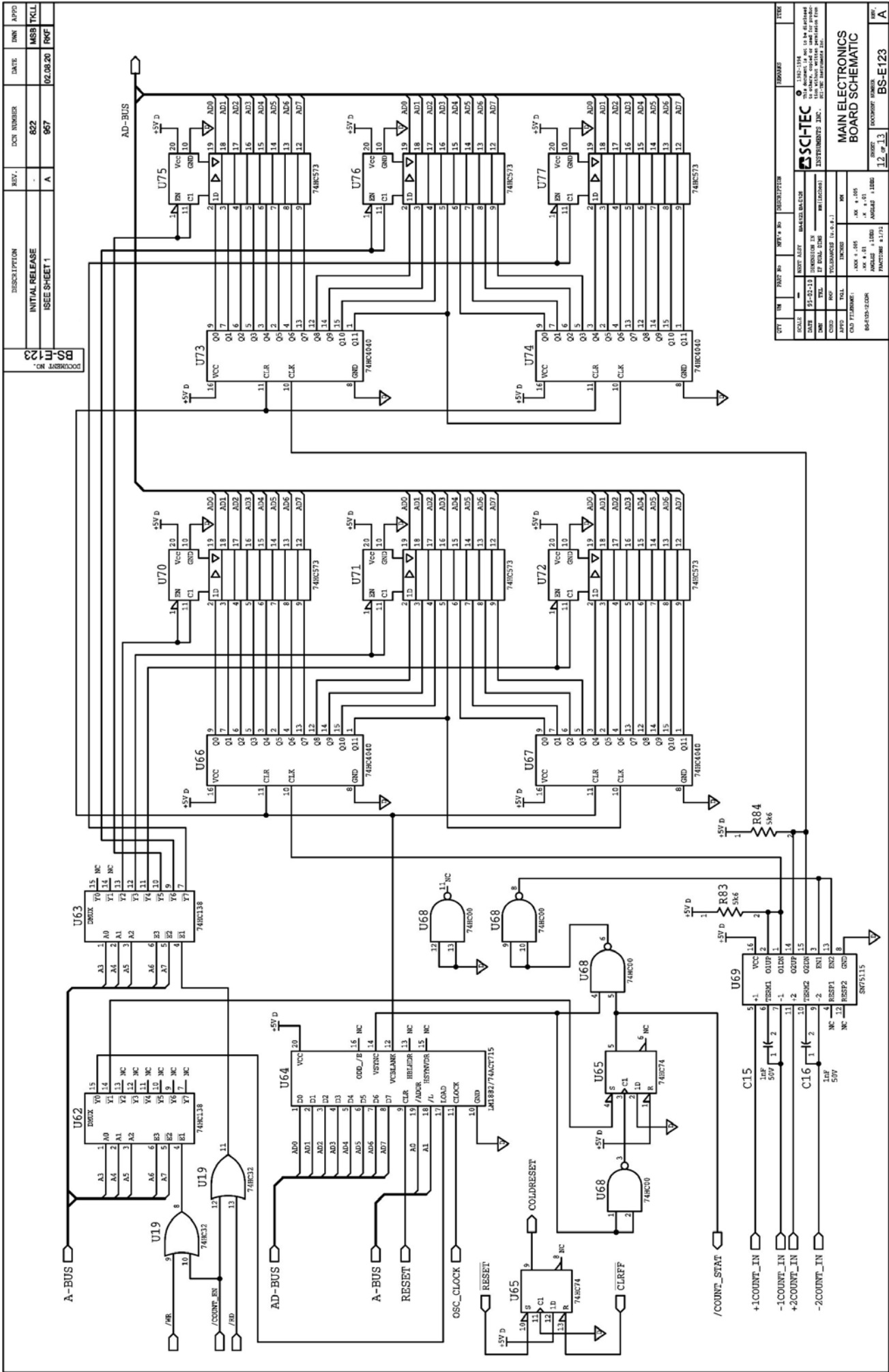
DESCRIPTION	REV.	DCN NUMBER	DATE	DWG APPD
INITIAL RELEASE	-	822	99.02.09	MSB TKLL
SEE SHEET 1	A	957	02.08.20	RKF

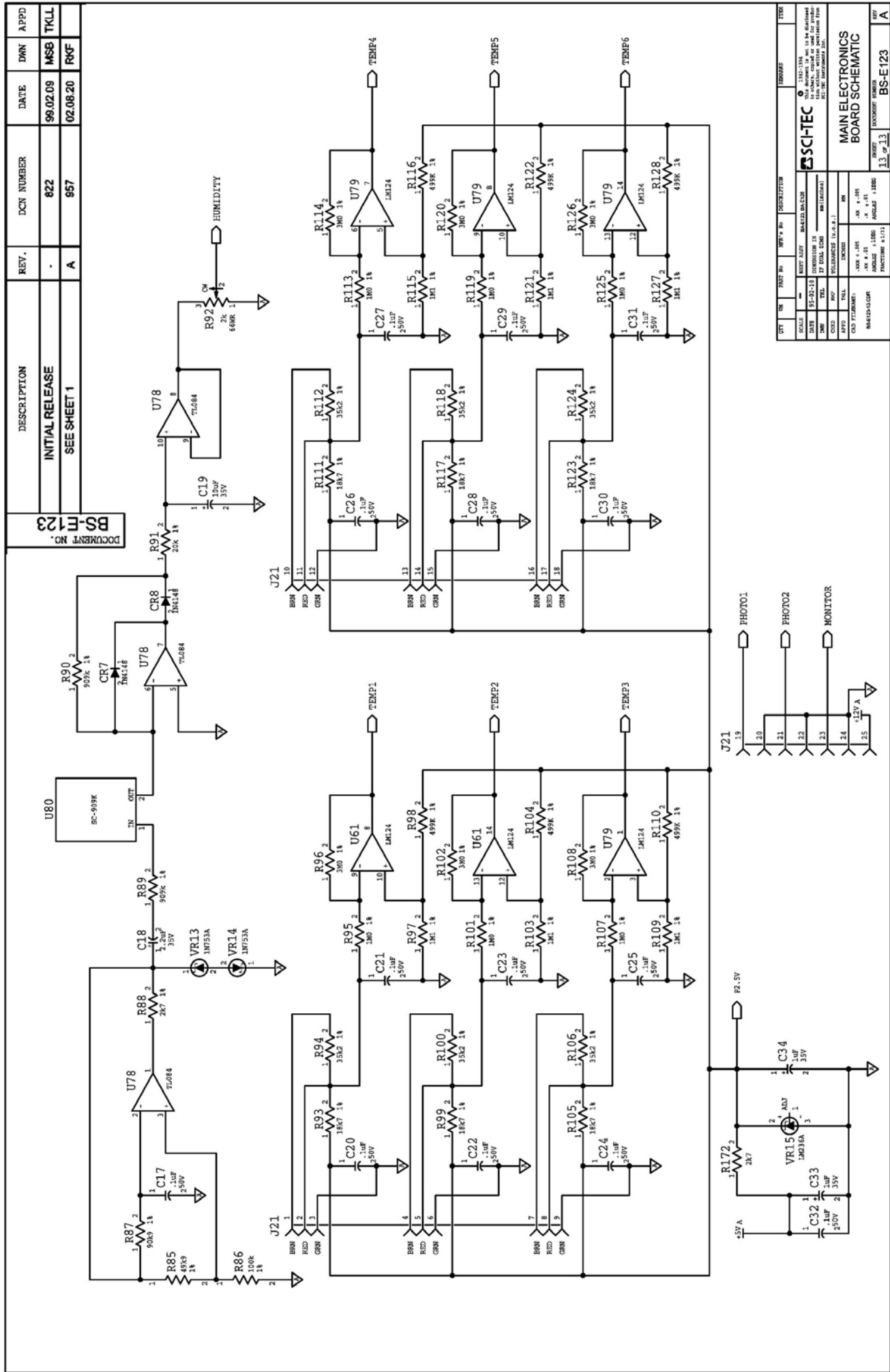
DOCUMENT NO.
BS-E123



QTY	TR	TRST NO	WFF. NO	DESIGNATION	REVISION	DATE
1				BS-E123	1	99.02.09
1				BS-E123	2	02.08.20
1				BS-E123	3	
1				BS-E123	4	
1				BS-E123	5	
1				BS-E123	6	
1				BS-E123	7	
1				BS-E123	8	
1				BS-E123	9	
1				BS-E123	10	
1				BS-E123	11	
1				BS-E123	12	
1				BS-E123	13	
1				BS-E123	14	
1				BS-E123	15	
1				BS-E123	16	
1				BS-E123	17	
1				BS-E123	18	
1				BS-E123	19	
1				BS-E123	20	
1				BS-E123	21	
1				BS-E123	22	
1				BS-E123	23	
1				BS-E123	24	
1				BS-E123	25	
1				BS-E123	26	
1				BS-E123	27	
1				BS-E123	28	
1				BS-E123	29	
1				BS-E123	30	
1				BS-E123	31	
1				BS-E123	32	

QTY	TR	TRST NO	WFF. NO	DESIGNATION	REVISION	DATE
1				BS-E123	1	99.02.09
1				BS-E123	2	02.08.20
1				BS-E123	3	
1				BS-E123	4	
1				BS-E123	5	
1				BS-E123	6	
1				BS-E123	7	
1				BS-E123	8	
1				BS-E123	9	
1				BS-E123	10	
1				BS-E123	11	
1				BS-E123	12	
1				BS-E123	13	
1				BS-E123	14	
1				BS-E123	15	
1				BS-E123	16	
1				BS-E123	17	
1				BS-E123	18	
1				BS-E123	19	
1				BS-E123	20	
1				BS-E123	21	
1				BS-E123	22	
1				BS-E123	23	
1				BS-E123	24	
1				BS-E123	25	
1				BS-E123	26	
1				BS-E123	27	
1				BS-E123	28	
1				BS-E123	29	
1				BS-E123	30	
1				BS-E123	31	
1				BS-E123	32	





REV	DATE	BY	CHKD	APPD	DESCRIPTION	REVISION	DATE	BY	CHKD	APPD	DESCRIPTION
1	99.02.09	MSB	TKLL		INITIAL RELEASE						
2	02.08.20	RKF			SEE SHEET 1						

REV	DATE	BY	CHKD	APPD	DESCRIPTION	REVISION	DATE	BY	CHKD	APPD	DESCRIPTION
1	99.02.09	MSB	TKLL		INITIAL RELEASE						
2	02.08.20	RKF			SEE SHEET 1						

REV	DATE	BY	CHKD	APPD	DESCRIPTION	REVISION	DATE	BY	CHKD	APPD	DESCRIPTION
1	99.02.09	MSB	TKLL		INITIAL RELEASE						
2	02.08.20	RKF			SEE SHEET 1						

REV	DATE	BY	CHKD	APPD	DESCRIPTION	REVISION	DATE	BY	CHKD	APPD	DESCRIPTION
1	99.02.09	MSB	TKLL		INITIAL RELEASE						
2	02.08.20	RKF			SEE SHEET 1						

REV	DATE	BY	CHKD	APPD	DESCRIPTION	REVISION	DATE	BY	CHKD	APPD	DESCRIPTION
1	99.02.09	MSB	TKLL		INITIAL RELEASE						
2	02.08.20	RKF			SEE SHEET 1						

REV	DATE	BY	CHKD	APPD	DESCRIPTION	REVISION	DATE	BY	CHKD	APPD	DESCRIPTION
1	99.02.09	MSB	TKLL		INITIAL RELEASE						
2	02.08.20	RKF			SEE SHEET 1						

"F" SERIES

HIGH VOLTAGE POWER SUPPLY ACCESSORY

- ❑ Output Ripple Filter
- ❑ Output Test Point
- ❑ Optional Flying Lead
- ❑ Mates with "A" Series Power Supplies

GENERAL INFORMATION:

The "F" Series of Ripple Stripper™ Output Filters provide significant ripple reduction, While adding only 4000 pF of output capacitance and increasing output impedance by < 650 ohms, output ripple is reduced > 100 time's! Also included is an Output Test Point and an Output Current Moinitor feature. A High Voltage Shielded output cable is available as an optional feature.

HIGH VOLTAGE OUTPUT FILTER:

Strips the output ripple on Mu-Metal Shielded "A" Series High Voltage Power Supplies down to :

2A12	2Kv	4WATT	< 0.001%Vp-p
2A24	2Kv	20WATT	< 0.002%Vp-p
4A12	4Kv	4WATT	< 0.0005%Vp-p
4A24	4Kv	20WATT	< 0.0015%Vp-p
6A12	6Kv	4WATT	< 0.0015%Vp-p
6A24	6Kv	20WATT	< 0.0015%Vp-p

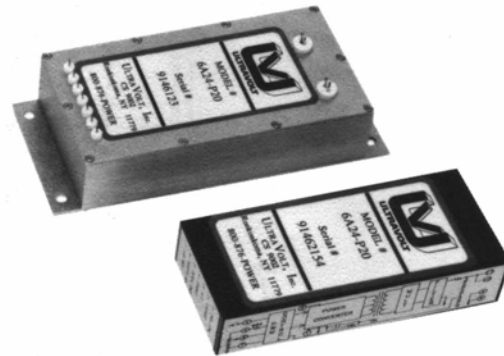
HIGH VOLTAGE OUTPUT:

Square .025" pins are used for high voltage output and high voltage return. These pins can be used for PCB mounting or direct wiring. An optional High Voltage Output Flying Lead is available.

HIGH VOLTAGE TEST POINT:

A 100 megohm divider provides a 100:1 test point output on a 2 pin header. This test point has an output impedance of 1.11 megohm and is calibrated for use with a 10 megohm input impedance meter. Overall accuracy is $\pm 2.5\%$ with a temperature coefficient of ± 200 ppm per $^{\circ}\text{C}$.

For applications requiring a different scale factor, such as a DAC compatible design, an external impedance may be added in parallel with the output.



OUTPUT CURRENT MONITOR:

The "F" Series have a feature where the output current of the high voltage multiplier can be monitored by reading the voltage appearing between Output Monitor pin 3 and Signal Ground pin 5. Detailed information is described on applications note "AP-13".

SHIELDING:

All models are available with optional wrap-around Mu-Metal Shielding. This shielding attenuates magnetic and electrostatic emissions, while shielding ripple reduction circuitry from outside noise.

MECHANICAL:

The "F" Series accessories are designed to be added to the basic "A" module at the factory prior to encapsulation. The combined package is 6.35 In³. As always, a Chassis Mount metal package is also available.

ENVIRONMENT:

The "F" Series meets all environmental specifications for temperature, shock & vibration as the "A" series.



C S 9002
RONKONKOMA, NY 11779
800-876-POWER
FAX 516-363-2423
"Making High Voltage Easier"

Figure 10.4-4

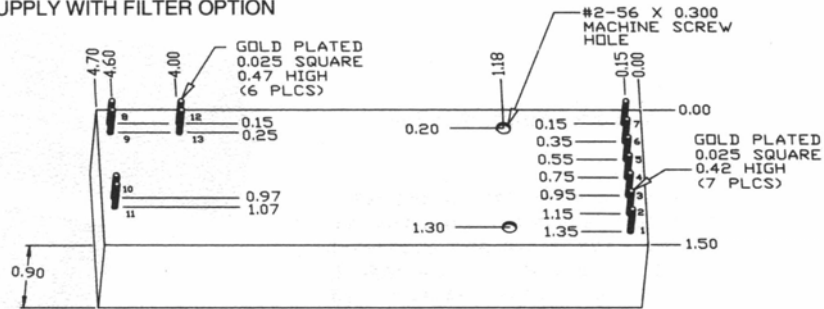
“F” SERIES

HIGH VOLTAGE POWER SUPPLY ACCESSORY

PLASTIC CASE: POWER SUPPLY WITH FILTER OPTION

CONSTRUCTION:
Epoxy Filled DAP Box
Certified to MIL-M-14F
SDG-F

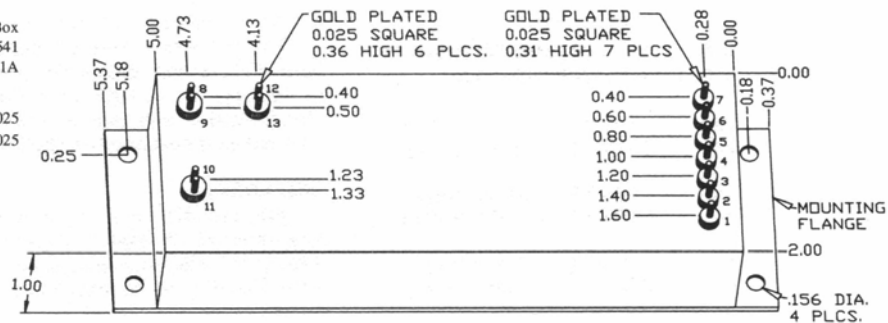
TOLERANCE:
Overall ± 0.050
Pin to Pin ± 0.025



METAL CASE: POWER SUPPLY WITH FILTER OPTION

CONSTRUCTION:
Epoxy Filled Aluminum Box
Chem Film per MIL-C-5541
Class 1A

TOLERANCE:
Overall ± 0.025
Pin to Pin ± 0.025



Connections

1 - Input PWR Return
2 - Positive PWR Input
3 - Output Current Monitor
4 - Enable
5 - Signal Return
6 - Remote Adjust
7 - Reference
8 & 9 - H.V. Return
10 & 11 - H.V. Output
12 & 13 - Output Test Point
All grounds joined internally. Power supply mounting points isolated from internal grounds by $>100K\Omega / .01\mu F$ 50V (Max)

Ordering Information

Case:	Plastic Case - Diallyl Phthalate	Std
	Aluminum Case	- C
Shield:	Mu Metal shield	- M

Example: 2 A 12 - P 4 - F - C

Option (Case)
Ripple Stripper_{Tm} Filter



“Making High Voltage Easier”

CS 9002, Ronkonkoma, NY 11779

Humidity Sensors

Relative Humidity



FEATURES

- Linear voltage output vs % RH
- Laser trimmed interchangeability
- Low power design
- High accuracy
- Fast response time
- Stable, low drift performance
- Chemically resistant

TYPICAL APPLICATIONS

- Refrigeration
- Drying
- Meteorology
- Battery-powered systems
- OEM assemblies

HIH Series

GENERAL INFORMATION

The HIH-3605 monolithic IC (Integrated Circuit) humidity sensor is designed specifically for high volume OEM (Original Equipment Manufacturer) users. Direct input to a controller or other device is made possible by this sensor's linear voltage output. With a typical current draw of only 200 μ A, the HIH-3605 is ideally suited for low drain, battery powered systems.

The HIH-3605 delivers instrumentation quality RH sensing performance in a low cost, solderable SIP (Single In-line Package). Available in two lead spacing configurations, the RH sensor is a laser trimmed thermoset polymer capacitive sensing element with on-chip integrated signal conditioning.

ORDER GUIDE

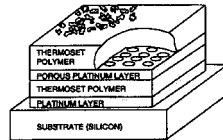
Catalog Listing	Description
HIH-3605-A	Integrated circuit humidity sensor, 0.100 in. lead pitch SIP
HIH-3605-A-CP	Integrated circuit humidity sensor, 0.100 in. lead pitch SIP with calibration and data printout
HIH-3605-B	Integrated circuit humidity sensor, 0.050 in. lead pitch SIP
HIH-3605-B-CP	Integrated circuit humidity sensor, 0.050 in. lead pitch SIP with calibration and data printout.

NIST CALIBRATION

HIH-3605 sensors may be ordered with a NIST calibration and sensor specific data printout. Append "CP" to the model number to order.

RH SENSOR CONSTRUCTION

Sensor construction consists of a planar capacitor with a second polymer layer to protect against dirt, dust, oils and other hazards.

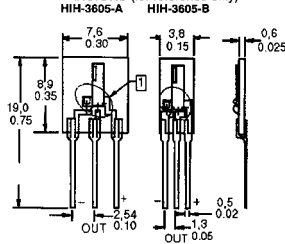


CAUTION

PRODUCT DAMAGE

The inherent design of this component causes it to be sensitive to electrostatic discharge (ESD). To prevent ESD-induced damage and/or degradation, take normal ESD precautions when handling this product.

MOUNTING DIMENSIONS (for reference only)



□ Protective Sealant

Humidity Sensors

Relative Humidity

HIH Series

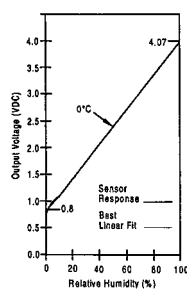
PERFORMANCE SPECIFICATIONS

Parameter	Conditions
RH Accuracy ¹⁾	±2% RH, 0-100% RH non-condensing, 25°C, V _{DD} = 5 VDC
RH Interchangeability	±5% RH, 0-60% RH; ±8% @ 90% RH typical
RH Linearity	±0.5% RH typical
RH Hysteresis	±1.2% of RH span maximum
RH Repeatability	±0.5% RH
RH Response Time, 1/e	15 sec in slowly moving air at 25°C
RH Stability	±1% RH typical at 50% RH in 5 years
Power Requirements	
Voltage Supply	4 to 5.8 VDC, sensor calibrated at 5 VDC
Current Supply	200 μ A at 5 VDC, 2 mA typical at 9 VDC
Voltage Output	V _{OUT} = V _{DD} (0.0062 (Sensor RH) + 0.16), typical @ 25°C (Data printout provides a similar, but sensor specific, equation at 25°C.) 0.8 to 3.5 VDC output @ 25°C typical Push/pull symmetric; 50 μ A typical, 20 μ A minimum, 100 μ A maximum Turn-on $\leq$ 0.1 second
Temp. Compensation	True RH = (Sensor RH)/(1.093-0.012T), T in °F True RH = (Sensor RH)/(1.0546-0.00216T), T in °C Effect @ 0% RH Effect @ 100% RH -0.22% RH/°C (<1% RH effect typical in occupied space systems above 15°C (59°F))
Humidity Range	
Operating	0 to 100% RH, non-condensing ²⁾
Storage	0 to 90% RH, non-condensing
Temperature Range	
Operating	-40° to 85°C (-40° to 185°F)
Storage	-51° to 125°C (-60° to 257°F)
Package ³⁾	Three pin solderable ceramic SIP
Handling	Static sensitive diode protected to 15 kV maximum

Notes:

1. Extended exposure to $\geq$ 90% RH causes a reversible shift of 3% RH.
2. This sensor is light sensitive. For best results, shield the sensor from bright light.

OUTPUT VOLTAGE VS RELATIVE HUMIDITY (at 0°C)



OUTPUT VOLTAGE VS RELATIVE HUMIDITY (at 0°C, 25°C, and 85°C)

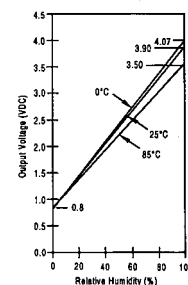


Figure 10.4-5

REV	DESCRIPTION	DCN NUMBER	DATE	DWN.	CHKD.
-	INITIAL RELEASE	856	99.04.22	GB	TKLL

DOCUMENT NO.
BS-E134

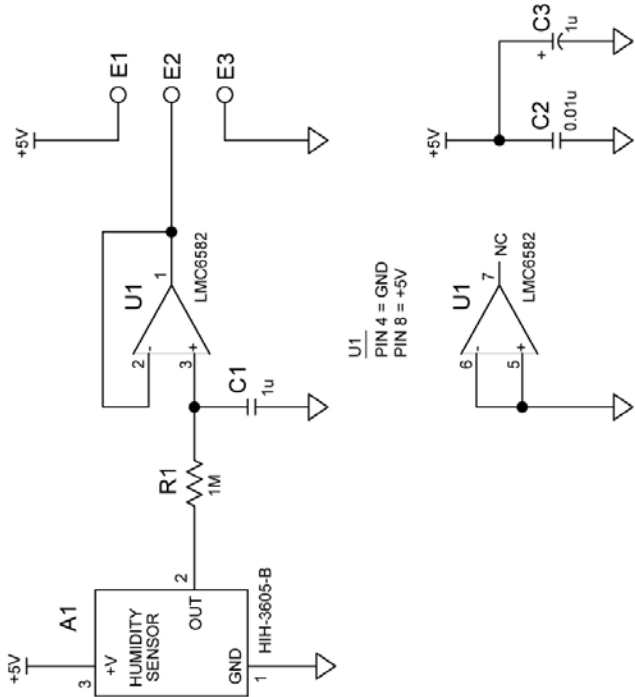


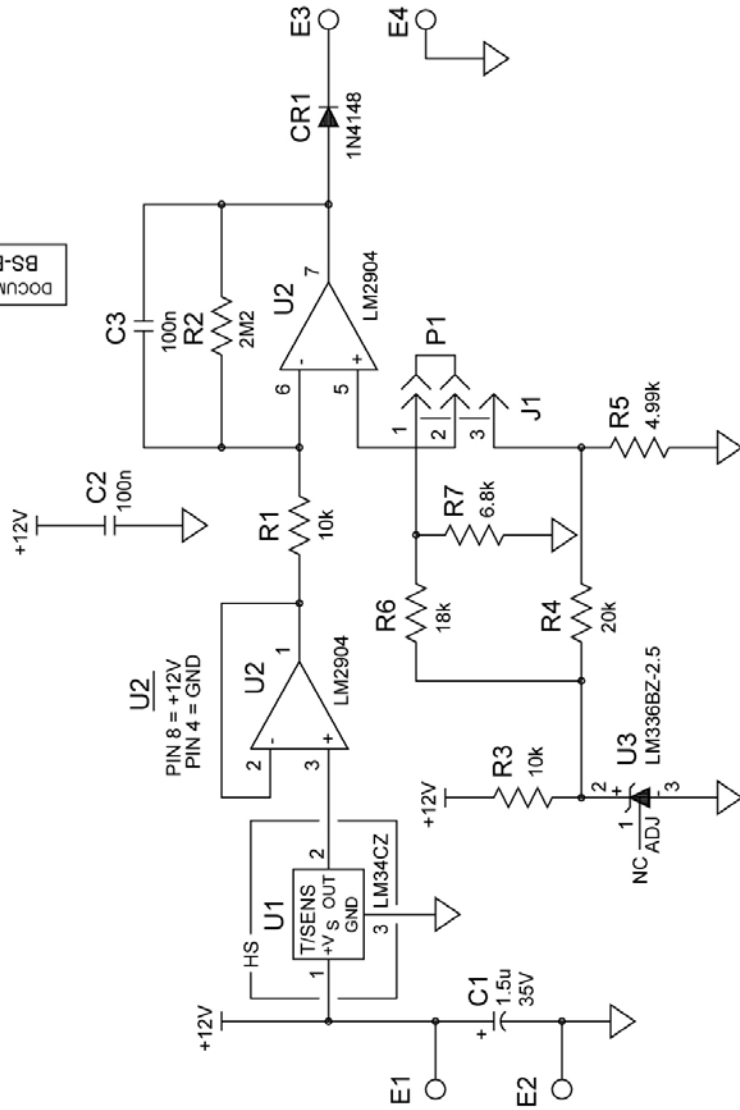
Figure 10.4-6

QTY		UM	PART NO.	MFR's NO.	DESCRIPTION	REMARKS	ITEM	
- NO.								
SCALE	NTS	NEXT ASSY:		BA-E134	 © 1996 This document is not to be disclosed to others, copied or used for production without written permission from SCI-TEC Instruments Inc.			
DATE	99.04.22	DIMENSIONS IN		-				
DWN	GB	IF DUAL DIMS:		mm (inches)				
CHKD	RKF	Tolerances		(unless otherwise specified)				
APPD	TKLL	INCHES		MM	TITLE:			HUMIDITY SENSOR BOARD SCHEMATIC
FINISH			xxx ± .005 xx ± .01 ANGLES ± 1 ° FRACTIONS ± 1/32	xx ± 0.15 x ± 0.25 ANGLES ± 1 °	SIZE	SHEET	DOCUMENT NUMBER	REV.
					B	1 OF 1	BS-E134	-

U1	LAST USED	NOT USED
R1		
C3		
A1		

COMPUTER GENERATED DRAWING
FILENAME: BS-E134.DWG

Figure 10.4-7



NOTES:

1. RESISTOR VALUES IN OHMS.
2. CAPACITOR VALUES IN FARADS.

COMPUTER GENERATED DRAWING
FILENAME: BS-E141.DWG

LAST USED NOT USED

U3
R7
P1
J1
E4
CR1
C3

QTY		UM	PART NO.	MFR's NO.	DESCRIPTION	REMARKS	ITEM	
- NO.		NONE	NEXT ASSY: BA-E141/A		 © 2000 This document is not to be disclosed to others, copied or used for produ- ction without written permission from Kipp & Zonen Inc.			
SCALE	00.05.31	DIMENSIONS IN -						
DWN	TKLL	IF DUAL DIMS: mm (inches)						
CHKD	RKF	Tolerances (unless otherwise specified)						
APPD	JR	INCHES	MM	TITLE: HEATER CONTROL BOARD SCHEMATIC				
FINISH		xxx ±.005 xx ±.01 ANGLES ±1° FRACTIONS ±1/32						
		xxx ±.015 x ±.025 ANGLES ±1°						
		SIZE	SHEET	DOCUMENT NUMBER		REV		
		B	1 OF 1	BS-E141		1		

BREWER REFERENCE DOCUMENTATION

Section 10.6 Optics	Figure
10.6.1 Instrument Optics Overall Diagram	10.6-1.1
-Optical Assembly BA-C191/B	10.6-1.2
10.6.2 Foreoptics	
- Assembly BA-F01 /C	10.6-2.1
- Lamp BA-F96	10.6-2.2
- IRIS Actuator BA-F106	10.6-2.3
- Zenith Drive BA-F114	10.6-2.4
10.6.3 Spectrometer	
- Assembly BA-S120	10.6-3.1
- Slitmask Motor Wiring diagram	10.6-3.2
- Spectrometer Assembly Dispersing half BA-S110	10.6-3.3
- Micrometer motor wiring diagram	10.6-3.4
- Spectrometer Assembly Combining half BA-S112	10.6-3.5
- Micrometer motor wiring diagram	10.6-3.6
10.6.4 Photomultiplier	
- Assembly BA-P01	10.6-4.1
- Tube Assembly BA-P02	10.6-4.2
- High Speed Amp Assembly BA-P23	10.6-4.3
- High Speed Amp Board Schematic BS-P23	10.6-4.4

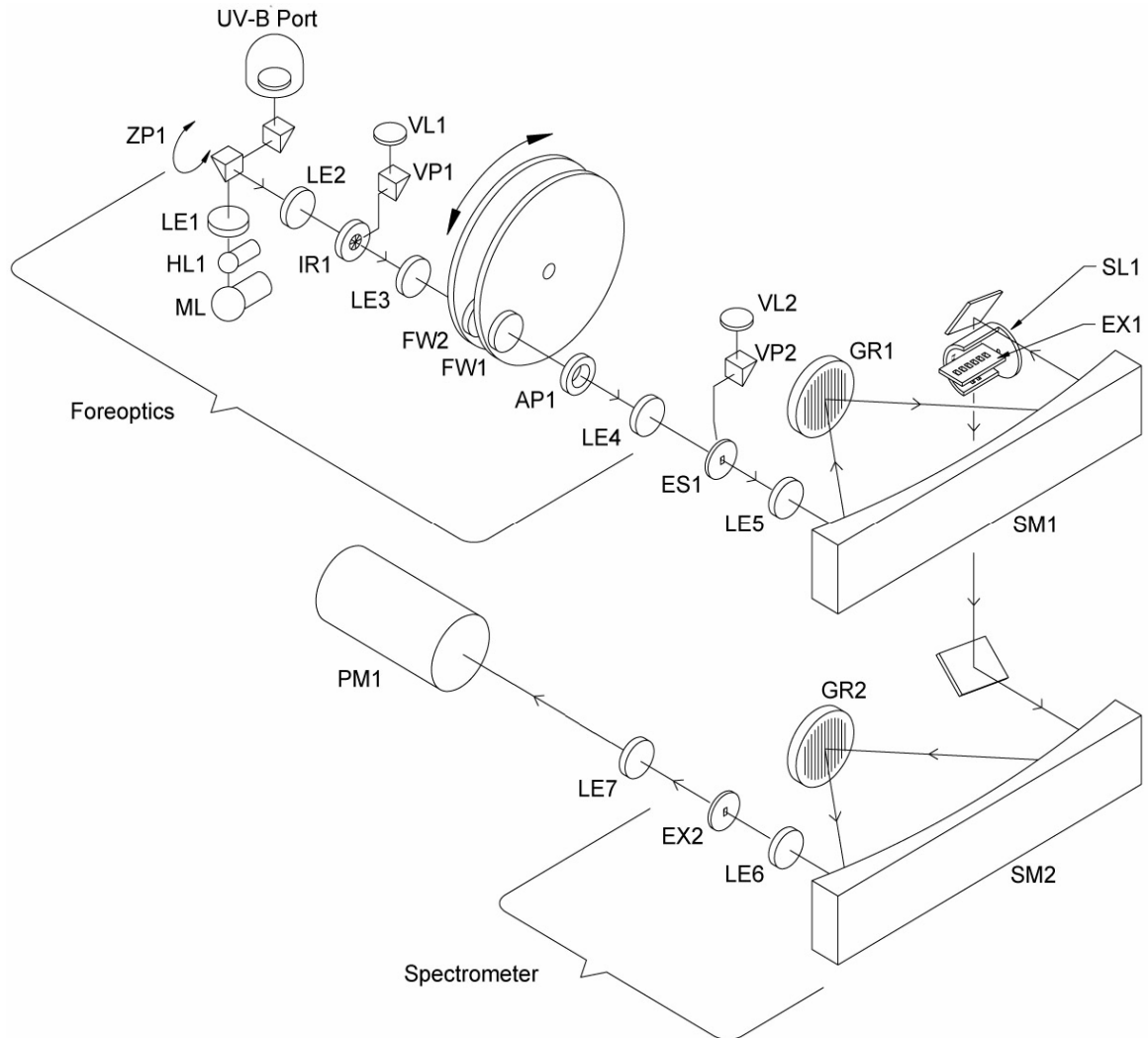
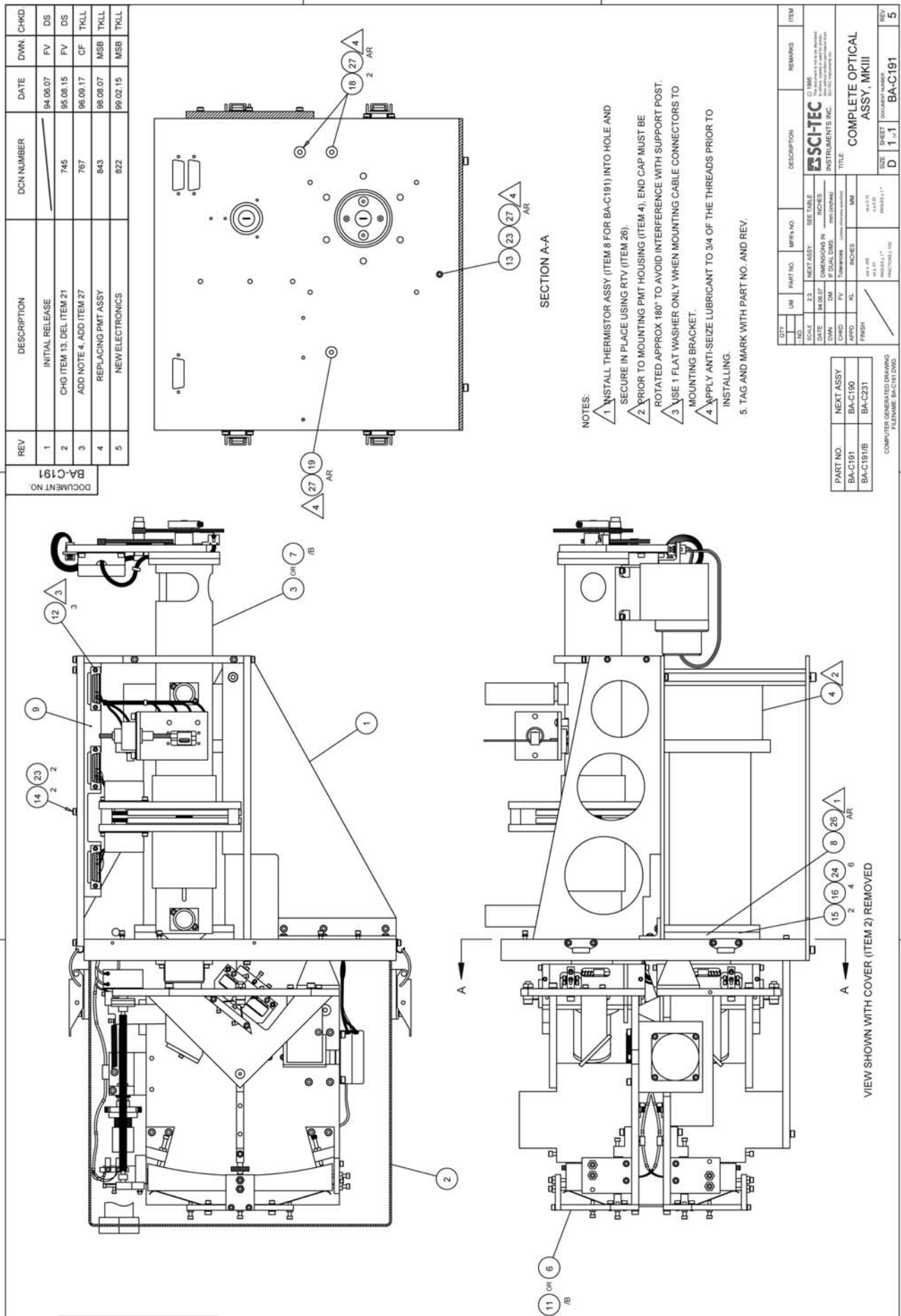


Figure 10.6-1.1

Figure 10.6-1.2



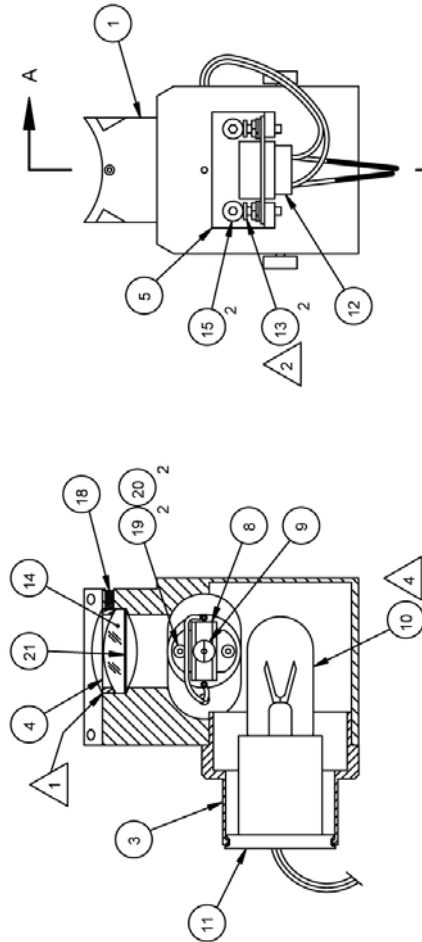
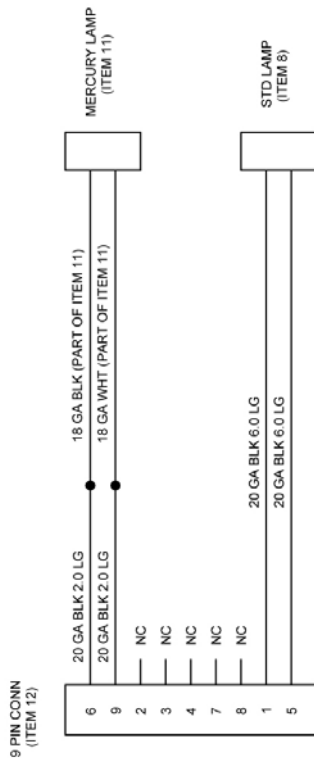
Item No.	BA-C191/B Part No.	BREWER Complete Optical Assy Description	Qty
1	BA-C192	MAIN FRAME ASSY	1.00
2	BA-C196	LIGHT COVER ASSY	1.00
3	BA-F01/B	FORE OPTICS ASSY, MKIV	--
4	BA-P01/B	PHOTOMULTIPLIER HOUSING ASSY	1.00
6	BA-S120	DOUBLE SPECTROMETER ASSY, MKIII	--
7	BA-F01/D	FORE OPTICS ASSY , MKIII, MKIV	1.00
8	BA-W52	THERMISTOR ASSEMBLY	--
9	BM-C70	OPTIONS CONN BRACKET	1.00
11	BA-S120/B	DOUBLE SPECTROMETER ASSY, NEW MKIII	1.00
12	81-90-620	LOCK, CONN SLIDE LOCK POS	3.00
13	83-79-072	SCREW 6-32 X 5/8 HSC SS	1.00
14	83-79-070	SCREW 6-32 X 1/2 HSC SS	2.00
15	83-79-114	SCREW 10-32 X 1/2" LG, SKT HD CAP,SS	2.00
16	83-79-119	SCREW 10-32 X 1" LG, SKT HD CAP,SS	4.00
18	83-87-194	SCRW,8-32X1/2 FL HD HS SS	2.00
19	83-87-211	SCREW,MACH 10-32X5/8 FH H	1.00
23	83-95-749	WASHER #6 SPLIT LOCK SS	3.00
24	83-95-607	WASHER #10, INTERNAL TOOTH LOCK,SS	6.00
26	85-10-150	ADHESIVE, SEALANT RTV	--
27	85-10-905	ANTI-SEIZE LUBRICANT	2.00

DOCUMENT NO. BA-F01	REV	DESCRIPTION	DCN NUMBER	DATE	DWN.	CHKD.
	1	FIRST ISSUE	391400-RN-289			
	2	WAS SED 391400-ID-240		82.11.01	DF	WB
	3	ADD NOTES 1 & 2, REMOVE 'BP-F01'	DCN-352	87.11.18	MS	RA
	4	PICTORIAL CHG. ITEM 4, P/L CHG ITEM 15	DCN-370	88.01.19	CW	RP
	5	INCORPORATE BA-F02; CREATE /B ASSY	DCN-457-3	90.03.27	FV	RA
	6	UPDATE ITEM 6 TO SHOW NEW DESIGN	DCN-506	90.10.24	FV	RA
	7	UPDATE NOTES	DCN-564	92.05.21	FV	RP
	8	PICT. CHG ONLY, ITEM 7, UPDATE NOTES	DCN-674	94.02.21	FV	DS
	9	CHG ITEM 6, UPDATE NOTES	DCN-735	96.09.30	CF	DS
	10	PICTORIAL CHANGES	DCN-785	96.10.07	CF	TKLL
	11	NEW ELECTRONICS	822	99.03.19	MSB	TKLL
	12	ADD CABLE TIES, ITEM 23	889	99.11.15	RKF	TKLL

NOTES:

- 1 The following is a clarification for items 1, 4, 5, 7 and 8, these items go into different assemblies.
Item 1 (BA-F114/B) is for assemblies BA-F01/C and BA-F01/D.
Item 4 (BA-F08) is for assemblies BA-F01 and BA-F01/C.
Item 5 (BA-F08/B) is for assemblies BA-F01/B and BA-F01/D.
Item 7 (BA-F106) is for assemblies BA-F01 and BA-F01/B.
Item 8 (BA-F106/B) is for assemblies BA-F01/C and BA-F01/D.
- 2 Install the Rear Optics Tube Assy (item 3) and the FilterWheel Housing Assy (item 4 or 5). Using the ground quartz position on the filterwheel and viewing a distant object, obtain a clear image looking through the filterwheel and out the rear optics tube. Reposition the optics tube 3.8mm (.15) away from the filterwheel assy (to correct for UV focus). Tighten the set screws on the filterwheel rear tube.
- 3 Install the Front Optics Tube Assy (item 2) and adjust so there is approx. 21cm (8.27) between the centers of the viewing tubes. Tighten the set screws on the filterwheel front tube.
- 4 Install the Calibration Lamp Assy (item 6) on the side opposite that of the viewing tubes and with the leads directed toward the filterwheels. Secure the #4-40 screws (item 15) and lock washers (item 16).
- 5 Prior to mounting gear (item 11) to motor, ensure that set screw can be turned freely into bore.
- 6 Install stepper motors (item 10) using screws and washers (items 17, 20). Wire connectors (item 12) as per schematic.
- 7 Install the Actuator Assy (item 7 or 8) using screws and washers (items 18, 21).
- 8 When building BA-F01/C and BA-F01/D install item 19 before the installation of item 1.
- 9 The assy of BA-F01/C and BA-F01/D refer to drawing BA-F114 for assembly details.
10. Place finished assy in a clean plastic bag and label with part no. and current rev of this doc.

Figure 10.6-2.2

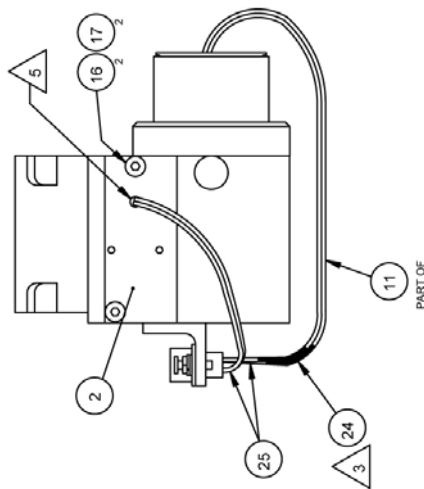
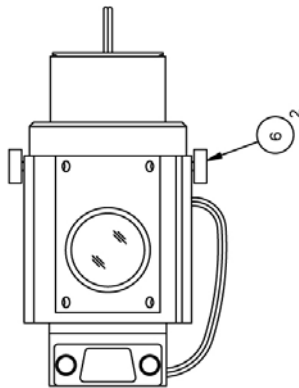


PARTIAL SECTION A-A SOME HARDWARE NOT SHOWN FOR CLARITY

NOTES:

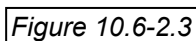
1. ENSURE LENS RETAINER (ITEM 4) IS INSTALLED WITH CHAMFERED EDGE TOWARDS LENS AND TOP SIDE FLUSH WITH BOTTOM OF CURVED SURFACE OF ITEM 1. THIS CAN BE ACCOMPLISHED BY USING JIG BA-F81 PA01 BY PLACING THE TUBE ON TOP OF THE CURVED SURFACE ON ITEM 1 AND ADJUSTING THE SET SCREW (ITEM 18).
2. INSTALL POSTS (ITEM 13) WITH ONE FLATWASHER AND ONE LOCKWASHER AS SHOWN. DISCARD OTHER HARDWARE.
3. SPlice 2.0 IN. PIECES OF WIRE (ITEM 25) TO ENDS OF WIRES OF LAMP HOLDER (ITEM 11) AND COVER WITH HEATSHRINK (ITEM 24) PRIOR TO INSTALLING IN CONN.
4. ENSURE MERCURY LAMP IS ROTATED SO THAT ITS FILAMENTS ARE PERPENDICULAR TO THE STANDARD LAMP (ITEM 9).
5. AFTER ASSY, SECURE WIRES IN HOLE USING RTV (ITEM 23). APPLY RTV FROM OUTSIDE OF THE HOUSING.
6. ENSURE LENS AND LAMPS (ITEMS 9, 10 AND 21) ARE FREE OF FINGERPRINTS AFTER ASSY. (CLEAN WITH ALCOHOL AND Q-TIP)

REV	DESCRIPTION	DCN NUMBER	DATE	DWN	CHKD
1	INITIAL RELEASE		90.11.06	FV	KL
2	CHG NOTE 2	597	92.06.09	FV	KL
3	CHG ITEM 10, UPDATE PIL	786	97.03.26	CF	TKLL



QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
1	1	BA-F01		BA-F01		
SCALE	1:1	NEXT ASSY:		BA-F01		
DATE	90.10.11	DIMENSIONS IN		INCHES (PCHS)		
DWN	FV	IF DUAL DIMS		MM (PCHS)		
CHKD	RA	TOLERANCES		(unless otherwise specified)		
APPD	KL	INCHES		MM		
FINISH		AS S. 025		AS S. 025		
		AS S. 01		AS S. 01		
		ANGLES ± 1°		ANGLES ± 1°		
		FRACTIONS: 1/32		FRACTIONS: 1/32		
COMPUTER GENERATED DRAWING FILENAME: BA-F96.DWG						
CALIBRATION LAMP ASSY						
SIZE	C	SHEET	1 of 1	DOCUMENT NUMBER	BA-F96	REV.
						3

Item No.	BA-F01/D Part No.	FORE OPTICS ASSY Description	Qty
1	BA-F114/B	Zenith Drive Assy	1.00
2	BA-F04	Front Optics Tube Assy	1.00
3	BA-F06	Rear Optics Tube Assy	1.00
4	BA-F08	Filterwheel Housing Assy	--
5	BA-F08/B	Filterwheel Housing Assy	1.00
6	BA-F96	Calibration Lamp Assy	1.00
7	BA-F106	Iris Actuator Assy	--
8	BA-F106/B	Iris Actuator Assy	1.00
9	81-90-630	Lock, Conn SI Ret	2.00
10	50-10-030	Motor Stepper PPS-0-380 1	2.00
11	88-85-653	Gear, 24T, 48P, 1/8F, 1/8B, NY	2.00
12	81-46-124	Conn 'D' 15 Cir M Crimp B	2.00
15	83-79-048	Screw, Mach 4-40 x 5/16 HX	4.00
16	83-95-748	Washer, #4, Split Lock, SS	4.00
17	83-79-047	Screw 4-40 x 1/4 HSC SS	4.00
18	83-51-786	Screw 6-32 x 5/8 Button HD	2.00
19	83-56-143	Screw, Set 6-32 x 1/4 Cup	3.00
20	83-95-604	Washer, #4, Internal Tooth Lock, SS	4.00
21	83-95-605	Washer, #6, Internal Tooth Lock, SS	2.00
22	99-31-441	Wire Hookup, 20AWG IRR PV	0.20

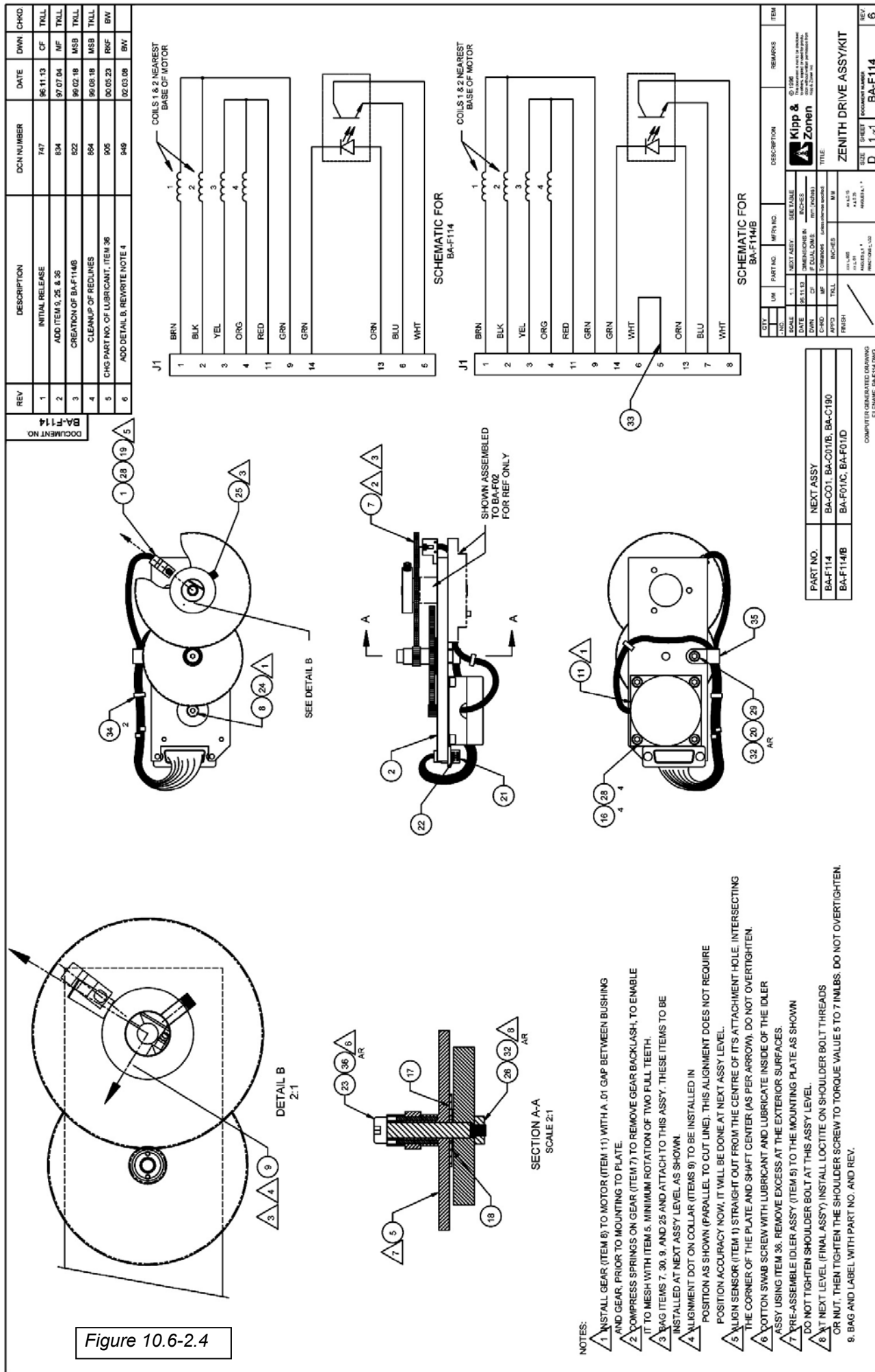


QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
-	-	NEXT ASSY:	SEE TABLE			
SCALE	I 12	DIMENSIONS IN INCHES				
SHEET DATE	FV	FW	mm (inches)			
DWN CHKD	RKF	TOLERANCES (unless otherwise specified)	MM			
APPD TKL		INCHES				
FINISH						
	/					
		REV. L 025	A-X 0-15			
		REV. JI	A-J 0-25			
		ANGLES ± 1°	ANGLES ± 1°			
		FRACTIONS ± 1/32				

COMPUTER GENERATED DRAWING
FILENAME: BA-F106.DWG

NOTES:

1. PASS SENSOR WIRES THRU HOLES IN SPACER BAR AS SHOWN PRIOR TO ASSEMBLING TO CONNECTOR AND TIE-WRAPPING WIRES.
2. FOR BA-F106 EXCHANGE THE LOCATIONS OF PIN 6 FOR PIN 7 AND EXCHANGE THE LOCATIONS OF PIN 5 FOR PIN 8.
3. TAG AND LABEL WITH PART NO. AND REV.



DOCUMENT NO. BA-S120	REV	DESCRIPTION	DCN NUMBER	DATE	DWN.	CHKD.
	1	INITIAL RELEASE		94.06.10	FV	DS
	2	ADD NOTE 10	728	95.08.02	FV	DS
	3	ADD NOTE 12	767	96.09.17	CF	TKLL
	4	RUBBER WASHER NEEDED	771	96.09.18	MF	TKLL
	5	NEW MOTOR ITEM 15	838	98.01.18	MF	TKLL
	6	NEW ELECTRONICS (BA-S120/B)	822	99.03.05	MSB	TKLL

NOTES:

1 FROM ITEM 36 CUT 6 PIECES AS FOLLOWS: 2 PIECES 1.0 X .50,
4 PIECES .50 X .50

2 INSTALL MIRROR AS SHOWN (WITH WIDE SIDE TOWARDS TOP OF FRAME)
USING CUT PIECES FROM ITEM 36 LOCATED AS SHOWN.

3 TO INSTALL CORRECTION LENS, FIRST INSTALL FOAM WASHER (ITEM 13),
THEN LENS (ITEM 5), THEN NYLON WASHER (ITEM 32). SCRIBE MARK
IN LENS SHOULD INITIALLY BE ALIGNED WITH THE SCRIBE MARK ON
THE LENS MOUNT, INSTALL LENS WITH CONCAVE SURFACE FACING
ENTRANCE SLIT FOR DISPERSING HALF AND INSTALL WITH CONCAVE
SURFACE FACING EXIT SLIT FOR RE-COMBINING HALF.

4. ADJUST AND ALIGN OPTICS AND FRAME AS DESCRIBED IN LP-BA-C191
(OPTICAL FRAME ALIGNMENT PROCEDURES.)

5. PERFORM ACCEPTANCE TEST PROCEDURES PER TP-BA-S120
(SPECTROMETER ACCEPTANCE TEST RECORD.)

6 TORQUE TO 8 IN/LBS AFTER ALIGNMENT.

7 LOCK ONLY AFTER ALIGNMENT.

8 ADHERE A NARROW STRIP OF FOAM (ITEM 36) TO EDGES OF LENS
RETAINER (ITEM 8) TO CUSHION BOTTOM EDGES OF LENS (ITEM 10).

NOTE, ENSURE THE STRIP DOES NOT INTERFERE WITH THE LIGHT PATH.

9 SEE SHT 2 FOR SHUTTER MOTOR WIRING DIAGRAM.

10 ADHERE MIRROR (ITEM 14) TO MOUNTING BLOCK USING
ADHESIVE (ITEM 35) AND ASSY JIG BA-S120PA01.

11 AFTER ADHERING MIRROR, ENSURE MIRROR MOUNTING BLOCKS
(ITEM 9) ARE MOUNTED SQUARE TO BOTTOM PLATES AND SIDE
OF THE FRONT PLATES FOR EACH HALF.

12 APPLY ANTI-SEIZE LUBRICANT, ITEM 33 TO THREADS PRIOR
TO INSTALLING.

13 SLITMASK SENSOR ASSEMBLY IS FOR BA-S120/B ONLY.

14. TAG AND MARK WITH PART NO. AND REV.

PART NO.	NEXT ASSY
BA-S120	BA-C191
BA-S120/B	BA-C191/B

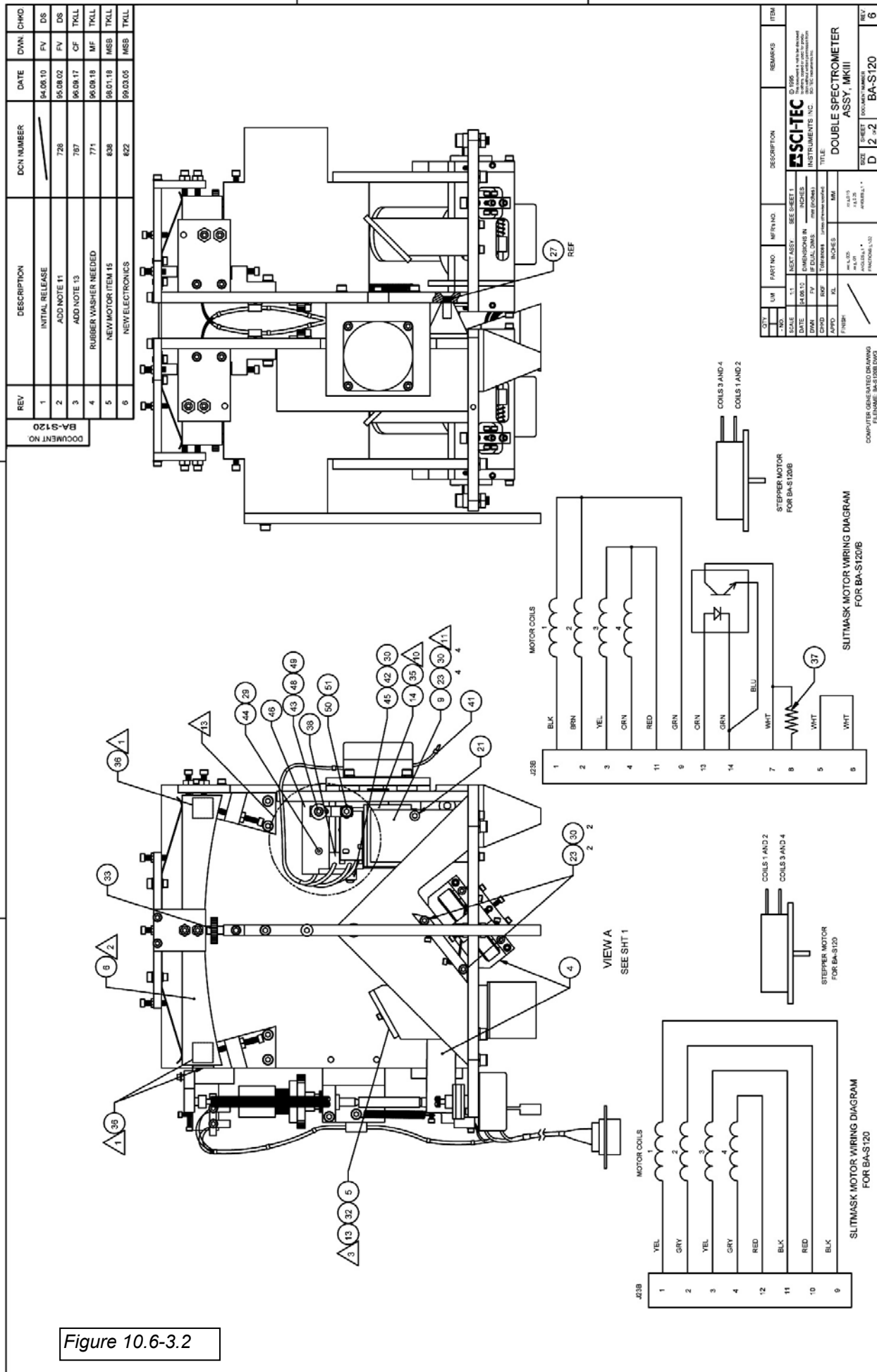


Figure 10.6-3.2

BA-S120/B		DOUBLE SPECTROMETER ASSEMBLY	
Item No.	Part No.	Description	Qty
1	BA-S110	SPECTR MECH ASSY,DISPERSG	1.00
2	BA-S112	SPECTR MECH ASSY,RE-COMBINING	--
3	BA-S115/A	GRATING SUPPT ASSY, DISPERSING	1.00
4	BA-S115/B	GRATING SUPPT ASSY, RE-COMBINING	1.00
5	BM-S42	CORRECTION LENS	2.00
6	BM-S47	SPHERICAL MIRROR	2.00
7	BM-S130	SHUTTER MOTOR MOUNT , MKIII	1.00
8	BM-S88	LENS RETAINER	1.00
9	BM-S92	MIRROR MOUNT	2.00
10	BM-S94	PLANO-CONCAVE QUARTZ LENS	1.00
11	BM-S129	EXIT SLITMASK, MKIII	1.00
12	BM-S127	SLITMASK MOTOR MOUNTING BLOCK	2.00
13	BM-S121	WASHER, CORRECTION LENS	2.00
14	10-14-010	FLAT MIRROR, 1.5" x 1.5" x 3mm	2.00
15	50-10-033	MOTOR, STEPPER, 12V,48 STEP	1.00
16	81-46-124	CONN "D" 15 CIR M CRIMP B	1.00
17	LP-BA-S120	OPTICAL FRAME ALIGNMENT PROC	--
18	83-79-067	SCREW 6-32 X 5/16 HX	4.00
19	83-51-802	SCREW,8-32 X 3/8 BUTTON H	1.00
20	83-79-047	SCREW 4-40 X 1/4 HSC SS	2.00
21	83-78-046	SCREW, MACH, 6-32x3/4 HX	1.00
22	83-79-027	SCREW, 2-56 X 1/4 HSC SS	4.00
23	83-79-051	SCREW 4-40 X 1/2 HSC SS	17.00
24	83-79-068	SCREW 6-32 X 3/8 HSC SS	1.00
25	83-79-070	SCREW 6-32 X 1/2 HSC SS	4.00
26	83-87-179	SCREW,6-32X1/2 FL HD HS SS	1.00
27	83-87-211	SCREW,MACH 10-32X5/8 FH H	1.00
28	TP-BA-S120	ACCEPTANCE TEST RECORD	--
29	83-95-747	WASHER #2 SPLIT LOCK SS	5.00
30	83-95-748	WASHER #4 SPLIT LOCK SS	18.00
31	83-95-749	WASHER #6 SPLIT LOCK SS	9.00
32	83-95-830	WASHER, SPECIAL 7/8 ID X1	2.00
33	85-10-905	ANTI-SEIZE LUBRICANT	2.00
34	85-10-145	ADHESIVE SEALANT (LOCTITE 242)	0.10
35	85-10-150	ADHESIVE SEALANT (RTV 3145)	2.00
36	98-10-010	SHEET, CLOSED CELL NEOPRENE, 1/16"	4.00
37	88-09-122	RES, 100 K, 1/4 W, 5%, CARBON	1.00
38	89-70-030	SENSOR, OP SW, SLOT 0.003" APR	1.00
39	99-20-035	SLEEVING HEAT SHRNK 0.063	0.40
40	99-20-027	SLEEVING HEAT SHRNK 0.125	0.33
41	85-80-450	TIE-CABLE 4-1/8X0.1 NYL 18	4.00
42	83-51-763	SCREW, 4-40 X 3/8 BUTTON H	1.00
43	83-51-765	SCRW 4-40 X 1/2 BUTTON HD	1.00
44	83-51-754	SCRW 2-56 X 3/8 BUTTON HD	1.00
45	BM-S132	SLITMASK SENSOR MTG NUT MKIII	1.00
46	BM-S131	SLITMASK SENSOR MTG BLK MKIII	1.00
47	BA-S112/B	SPECTR MECH ASSY,RE-COMBINING	1.00
48	BM-S93	SHUTTER STOP	1.00
49	83-95-011	WASHER #4 FLAT SS	1.00
50	83-79-044	SCREW, MACH 6-32 X 1/2 HX	1.00
51	83-40-257	NUT 6-32 HX HYLON	1.00
52	99-31-441	WIRE HOOKUP 20 AWG IRR PV	0.20

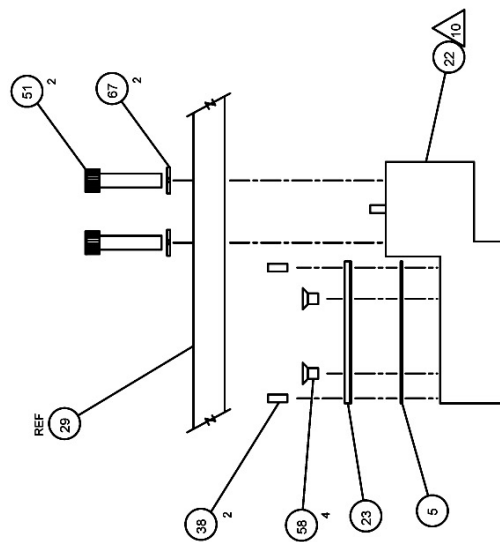
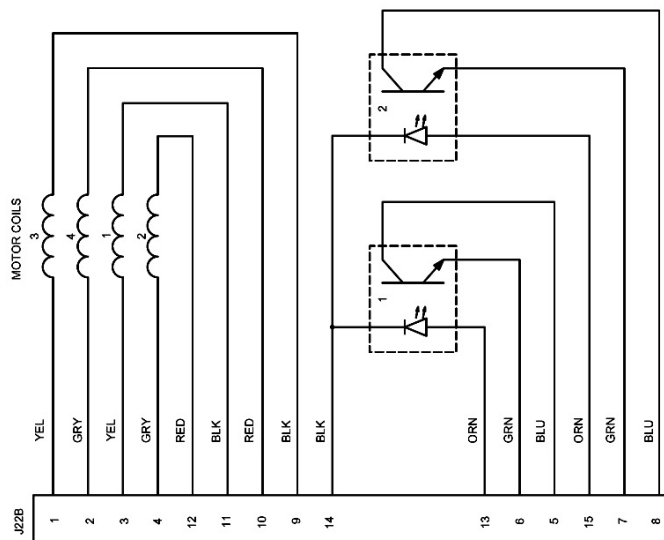


Figure 10.6-3.4

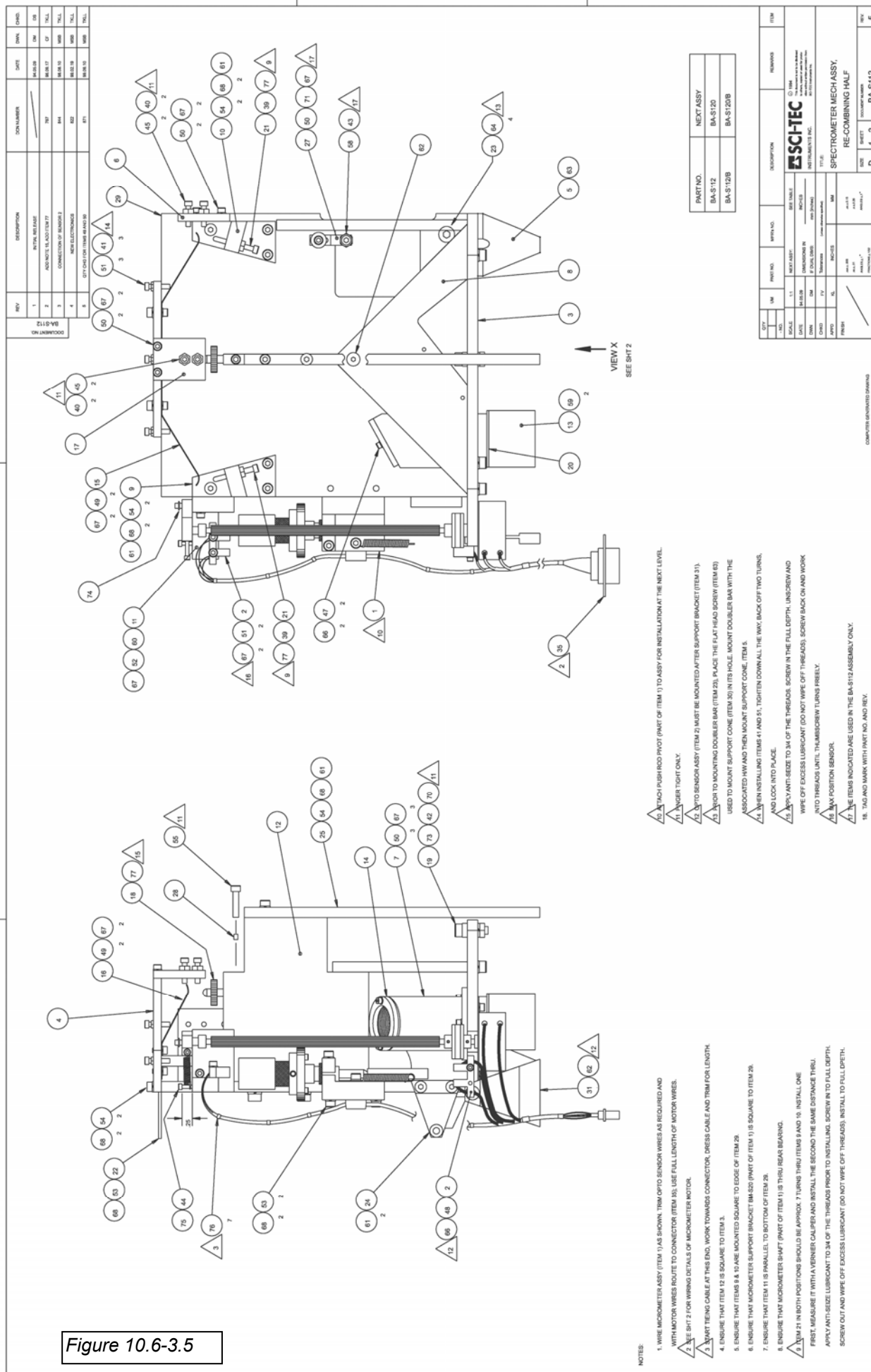
Diagram of a stepper motor showing four coils labeled COILS 1 AND 2, COILS 3 AND 4, and STEPPER MOTOR.



MICROMETER MOTOR SCHEMATIC

QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
NO.						
SCALE	1:1	NEXT ASSY: BA-5120	51200	 SCHTEC INSTRUMENTS INC. 300 N.E. 4th Avenue Fort Lauderdale, FL 33304		
DATE	JUN 04-02	PREVIOUS WORK IN PROGRESS				
ENVD	DM	IF OVER DIMS. NOT (INDIC)				
CHGD	R07	Total work (used shims provided)				
APPD	R07					
FINISH				TITLE		
1.50 1.50 1.50 1.50 1.50 1.50				SPECTROMETER MECH ASSY, DISPERSING HALF		
ANGLES 1.50 ANGLES 1.50 ANGLES 1.50				SIZE 2 SHEET 2 of 2 DOCUMENT NUMBER BA-5110		
				REV. 4		

COMPUTER GENERATED DRAWING
FILENAME: BA-S1103.DWG



DOCUMENT NO. BA-S112	REV	DESCRIPTION	DCN NUMBER	DATE	DWN.	CHKD.
	1	INITIAL RELEASE		94.05.09	DM	DS
	2	ADD NOTE 15, ADD ITEM 77	787	96.09.17	CF	TKLL
	3	CONNECTION OF SENSOR 2	844	98.08.10	MSB	TKLL
	4	NEW ELECTRONICS	822	99.02.19	MSB	TKLL
	5	QTY CHG FOR ITEMS 49 AND 50	871	99.09.10	MSB	TKLL

NOTES:

1. WIRE MICROMETER ASSY (ITEM 1) AS SHOWN. TRIM OPTO SENSOR WIRES AS REQUIRED AND WITH MOTOR WIRES ROUTE TO CONNECTOR (ITEM 35); USE FULL LENGTH OF MOTOR WIRES.
2. SEE SHT 2 FOR WIRING DETAILS OF MICROMETER MOTOR.
3. START TIEING CABLE AT THIS END, WORK TOWARDS CONNECTOR, DRESS CABLE AND TRIM FOR LENGTH.
4. ENSURE THAT ITEM 12 IS SQUARE TO ITEM 3.
5. ENSURE THAT ITEMS 9 & 10 ARE MOUNTED SQUARE TO EDGE OF ITEM 29.
6. ENSURE THAT MICROMETER SUPPORT BRACKET BM-S20 (PART OF ITEM 1) IS SQUARE TO ITEM 29.
7. ENSURE THAT ITEM 11 IS PARALLEL TO BOTTOM OF ITEM 29.
8. ENSURE THAT MICROMETER SHAFT (PART OF ITEM 1) IS THRU REAR BEARING.
9. ITEM 21 IN BOTH POSITIONS SHOULD BE APPROX. 7 TURNS THRU ITEMS 9 AND 10. INSTALL ONE FIRST, MEASURE IT WITH A VERNIER CALIPER AND INSTALL THE SECOND THE SAME DISTANCE THRU. APPLY ANTI-SEIZE LUBRICANT TO 3/4 OF THE THREADS PRIOR TO INSTALLING. SCREW IN TO FULL DEPTH. SCREW OUT AND WIPE OFF EXCESS LUBRICANT (DO NOT WIPE OFF THREADS). INSTALL TO FULL DPETH.
10. ATTACH PUSH ROD PIVOT (PART OF ITEM 1) TO ASSY FOR INSTALLATION AT THE NEXT LEVEL.
11. FINGER TIGHT ONLY.
12. OPTO SENSOR ASSY (ITEM 2) MUST BE MOUNTED AFTER SUPPORT BRACKET (ITEM 31).
13. PRIOR TO MOUNTING DOUBLER BAR (ITEM 23), PLACE THE FLAT HEAD SCREW (ITEM 63) USED TO MOUNT SUPPORT CONE (ITEM 30) IN ITS HOLE. MOUNT DOUBLER BAR WITH THE ASSOCIATED HW AND THEN MOUNT SUPPORT CONE, ITEM 5.
14. WHEN INSTALLING ITEMS 41 AND 51, TIGHTEN DOWN ALL THE WAY, BACK OFF TWO TURNS, AND LOCK INTO PLACE.
15. APPLY ANTI-SEIZE TO 3/4 OF THE THREADS. SCREW IN THE FULL DEPTH. UNSCREW AND WIPE OFF EXCESS LUBRICANT (DO NOT WIPE OFF THREADS). SCREW BACK ON AND WORK INTO THREADS UNTIL THUMBSCREW TURNS FREELY.
16. MAX POSITION SENSOR.
17. THE ITEMS INDICATED ARE USED IN THE BA-S112 ASSEMBLY ONLY.
18. TAG AND MARK WITH PART NO. AND REV.

PART NO.	NEXT ASSY
BA-S112	BA-S120
BA-S112/B	BA-S120/B

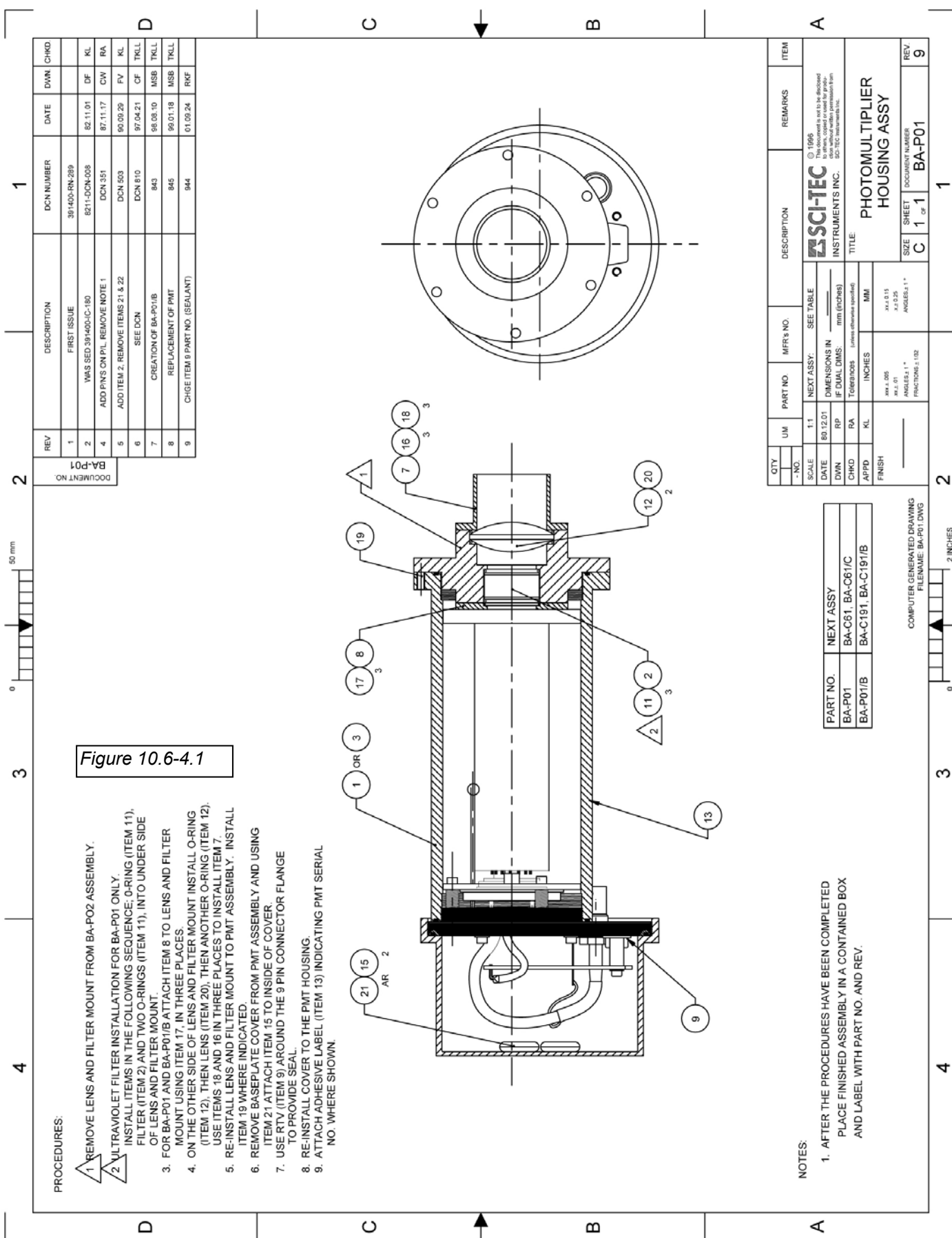


Figure 10.6-4.1

PROCEDURES:

- 1 REMOVE LENS AND FILTER MOUNT FROM BA-P02 ASSEMBLY.
- 2 ULTRAVIOLET FILTER INSTALLATION FOR BA-P01 ONLY.
INSTALL ITEMS IN THE FOLLOWING SEQUENCE: O-RING (ITEM 11), FILTER (ITEM 2), AND TWO O-RINGS (ITEM 11), INTO UNDER SIDE OF LENS AND FILTER MOUNT.
3. FOR BA-P01 AND BA-P01/B ATTACH ITEM 8 TO LENS AND FILTER MOUNT USING ITEM 17, IN THREE PLACES.
4. ON THE OTHER SIDE OF LENS AND FILTER MOUNT INSTALL O-RING (ITEM 12). THEN LENS (ITEM 20), THEN ANOTHER O-RING (ITEM 12). USE ITEMS 18 AND 16 IN THREE PLACES TO INSTALL ITEM 7.
5. RE-INSTALL LENS AND FILTER MOUNT TO PMT ASSEMBLY. INSTALL ITEM 19 WHERE INDICATED.
6. REMOVE BASEPLATE COVER FROM PMT ASSEMBLY AND USING ITEM 21 ATTACH ITEM 15 TO INSIDE OF COVER.
7. USE RTV (ITEM 9) AROUND THE 9 PIN CONNECTOR FLANGE TO PROVIDE SEAL.
8. RE-INSTALL COVER TO THE PMT HOUSING.
9. ATTACH ADHESIVE LABEL (ITEM 13) INDICATING PMT SERIAL NO. WHERE SHOWN.

REV	DESCRIPTION	DCN NUMBER	DATE	DWN	CHKD
1	FIRST ISSUE	391400-RN-289			
2	WAS SED 391400-IC-180	8211-DCN-008	82.11.01	DF	KL
4	ADD PINS ON P/L REMOVE NOTE 1	DCN 351	87.11.17	CW	RA
5	ADD ITEM 2, REMOVE ITEMS 21 & 22	DCN 503	90.09.29	FV	KL
6	SEE DCN	DCN 810	97.04.21	CF	TKLL
7	CREATION OF BA-P01/B	843	98.08.10	MSB	TKLL
8	REPLACEMENT OF PMT	845	99.01.18	MSB	TKLL
9	CHANGE ITEM 9 PART NO. (SEALANT)	944	01.03.24	RGF	

QTY	UM	PART NO	MFR & NO	DESCRIPTION	REMARKS	ITEM
1	1	1	1	1	1	1
SCALE	DATE	DWN	CHKD	APPD	FINISH	
80.12.01	80.12.01	BA-P01	BA-C01, BA-C61/C	BA-C191, BA-C191/B		
RP	RP	BA	BA	BA	BA	
BA	BA	BA	BA	BA	BA	
KL	KL	KL	KL	KL	KL	
MM	MM	MM	MM	MM	MM	
INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	
ANGLES 1°	ANGLES 1°	ANGLES 1°	ANGLES 1°	ANGLES 1°	ANGLES 1°	
FRACTIONS 1/32	FRACTIONS 1/32	FRACTIONS 1/32	FRACTIONS 1/32	FRACTIONS 1/32	FRACTIONS 1/32	

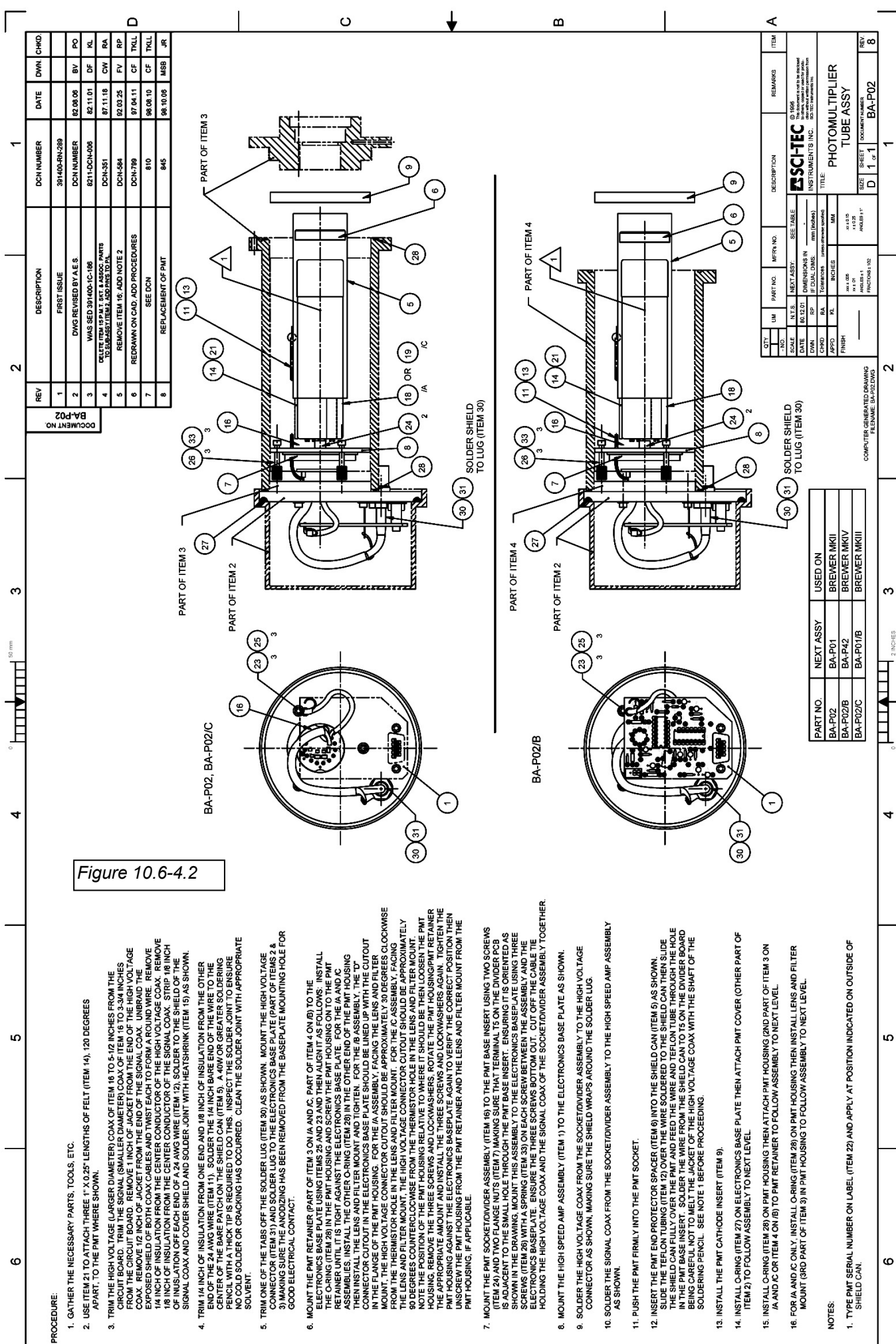
NOTES:

1. AFTER THE PROCEDURES HAVE BEEN COMPLETED PLACE FINISHED ASSEMBLY IN A CONTAINED BOX AND LABEL WITH PART NO. AND REV.

PART NO.	NEXT ASSY
BA-P01	BA-C01, BA-C61/C
BA-P01/B	BA-C191, BA-C191/B

INSTRUMENTS INC. 500-TEC INSTITUTE, INC.	
TITLE PHOTOMULTIPLIER HOUSING ASSY	
SIZE	REV
C 1 of 1	9
SHEET	DOCUMENT NUMBER
1	BA-P01

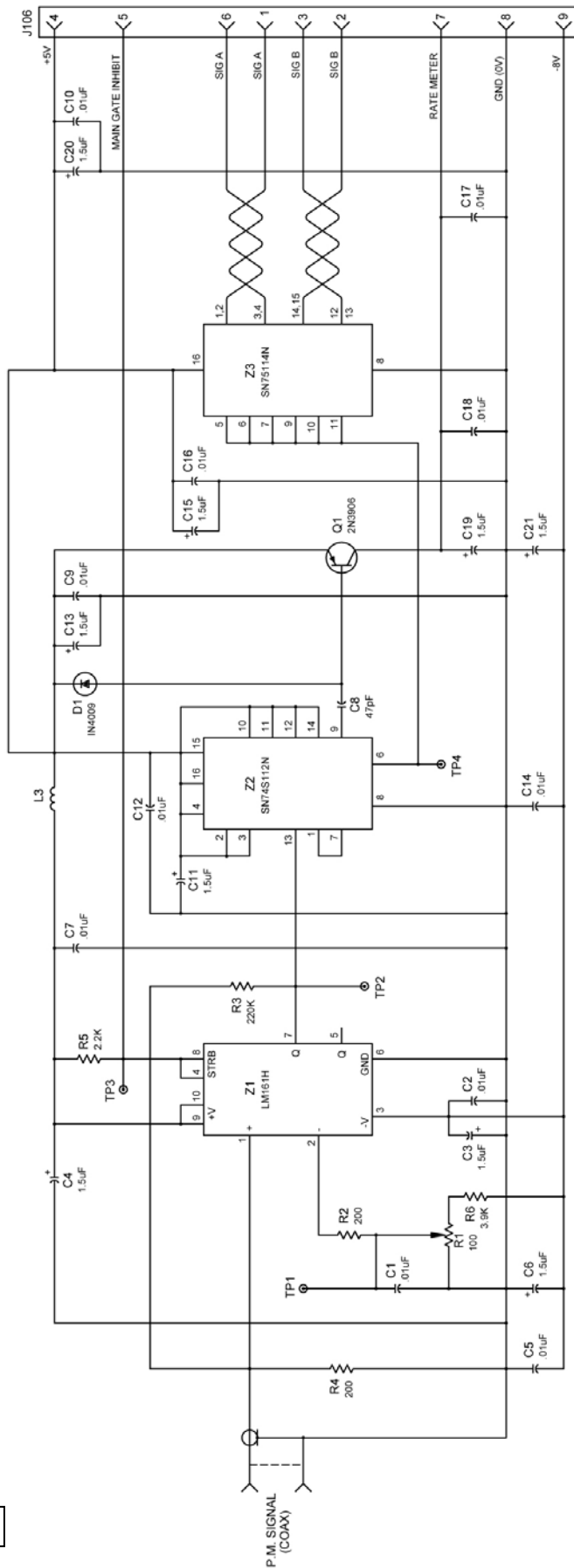
COMPUTER GENERATED DRAWING
FILENAME: BA-P01.DWG



Item No.	BA-P01/B Part No.	PHOTOMULTIPLIER HOUSING ASSY Description	Qty
1	BA-P02	Photomultiplier Tube Assy	1.00
2	BA-P46	Ultraviolet Filter	--
3	BA-P02/C	Photomultiplier Tube Assy	1.00
7	BM-P16	Lens Retainer & Light Trac	1.00
8	BM-P17	Filter Retainer	1.00
9	85-10-790	Sealant, Contr Volatility	0.10
11	83-10-620	O-ring, #020, 7/8x1x1/16 N.B.R.	--
12	83-10-628	O-ring, #028, 1 3/8x1 1/2x1/16 N.B.R.	2.00
13	85-41-115	Label, Adhesive, 3/8"x1 1/4"	1.00
15	70-10-012	Dessicant 2164 Minipax T 1.56gm - 900/gal	2.00
16	83-95-748	Washer, #4 Split Lock, SS, Med Pat. 316	3.00
17	83-87-161	Screw, Mach. 4-40x1/4, FH, HX, SC, 82D, SS	3.00
18	83-51-762	Screw, 4-40x5/16 Button HD, HX. Soc. Cap, SS	3.00
19	83-56-143	Screw, Set, 6-32x1/4 Cup PT, SS, HX. Soc.	1.00
20	10-10-020	Lens, BI/CX G1 FSD QTZ, 38.1 mm D, 38.1 mm FL.	1.00
21	85-80-385	Adhes Transfer Tape 0.75"	3.00

Item No.	BA-P02/C Part No.	PHOTOMULTIPLIER HOUSING ASSY Description	Qty
1	BA-P23	Component Assy, High Speed Amp	1.00
2	BM-P52	Baseplate Cover Assy, PMT	1.00
3	BM-P53	Housing Cap Assy, PMT	1.00
4	BM-P53/B	Housing Cap Assy, PMT	-
5	BM-P54	Magnetic Shield, Can	1.00
6	BM-P55	Spacer, PMT End Protector	1.00
7	BM-P56	Nut, PMT Socket Flange	2.00
8	BM-P57	Insert, PMT Base	1.00
9	BM-P58	Insert, PMT Cathode	1.00
11	99-31-365	Wire Sfrd IRR PVC 24Ga YL	0.24
12	99-31-362	Wire Hookup 24 AWG IRR PV	0.125
13	99-20-291	Slev Tefn 15 Ga 0.059 ID.	0.20
14	98-45-100	Felt, Any Colour, Approx .05" Thk	0.75
15	99-20-049	Sleeving Heat Shrnk 0.187	0.06
16	95-40-082	Photomultiply Skt/Vlt Dvdr	1.00
18	89-70-088	PMT 30mm UV CB>11 DC<300	--
19	89-70-089	PMT 30mm UV CB>11 DC<100	1.00
21	85-80-385	Tape, Adhesive, Transfer, 3/4" Wide	1.00
22	85-41-115	Label, Adhesive, 3/8"x1 1/4"	1.00
23	83-95-604	Washer, #4, Internal Tooth Lock, SS	3.00
24	83-79-082	Screw, 8-32 x 3/8" Hsc, SS	2.00
25	83-79-051	Screw, 4-40 x 1/2" Hsc, SS	3.00
26	83-78-023	Screw, Mach 4-40 x 3/4	3.00
27	83-10-644	O-Ring #044 - 3 3/4 x 3 7	1.00
28	83-10-638	O-Ring #038 - 2 5/8 x 2 3	2.00
30	81-90-370	Lug Connector, BNC	1.00
31	81-15-242	Bulkhead Jack, BNC	1.00
33	78-10-527	Sprng Comp, .88x.24dx.018w	3.00

Figure 10.6-4.4



QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
- NO.						
SCALE	81.12 03	NEXT ASSY:	BA-P23			
DATE	81.12 03	DIMENSIONS IN				
DWN	H8	IF DUAL DIMS				
CHKD	WC	TOLERANCES				
APPD	DW					
FINISH						

© 1986 This document is not to be disclosed in any form without the written consent of Kipp & Zonen Inc.	HIGH SPEED AMP BOARD SCHEMATIC
XXX 1.025 XX 2.01 ANGLES 1.1° FRACTIONS 1/32	XXX 1.025 XX 2.01 ANGLES 1.1° FRACTIONS 1/32

COMPUTER GENERATED DRAWING
FILENAME: BS-P23.DWG

SIZE	SHEET	DOCUMENT NUMBER	REV.
C	1 of 1	BS-P23	3

BREWER REFERENCE DOCUMENTATION

Section 10.7 Brewer Options

10.7.1 Option B - Azimuth Pointing System	Figure
- Azimuth Tracker and Stand	10.7-1.1
- Azimuth Tracker Unit Schematic BA-C91	10.7-1.2
- Azimuth Tracker Board Schematic BS-C99	10.7-1.3
- Azimuth Motor Wiring BA-W20	10.7-1.4
- Azimuth Power Supply Specifications	10.7-1.5
 10.7.3 Heater Option	
- Assembly BA-C223	10.7-3.1
	10.7-3.2
 10.7.4 Moisture Sensor	
- Assembly BA-E135	10.7-4

Section 10.8 Desiccant holder	
Assembly BA-C223	10.8

Section 10.9 Main Electronics Firmware / Configuration Loading Procedures

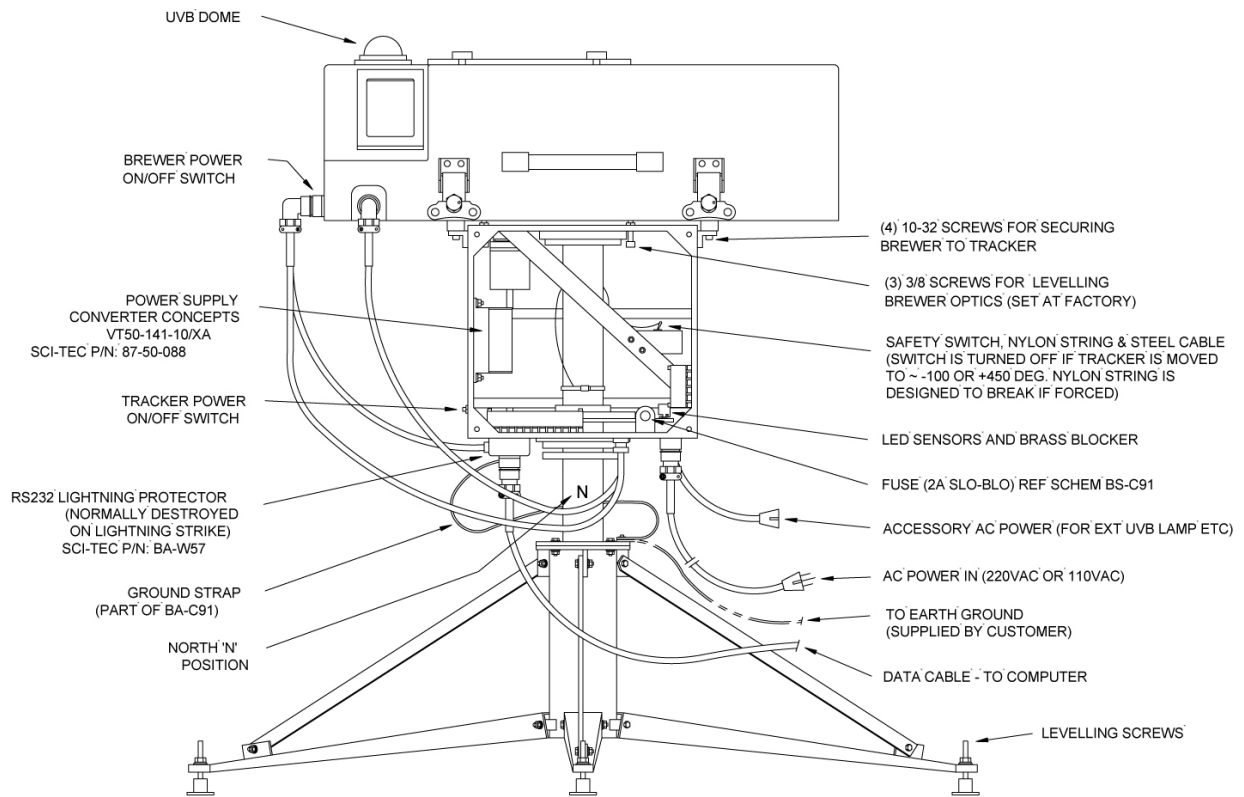
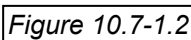


Figure 10.7-1.1



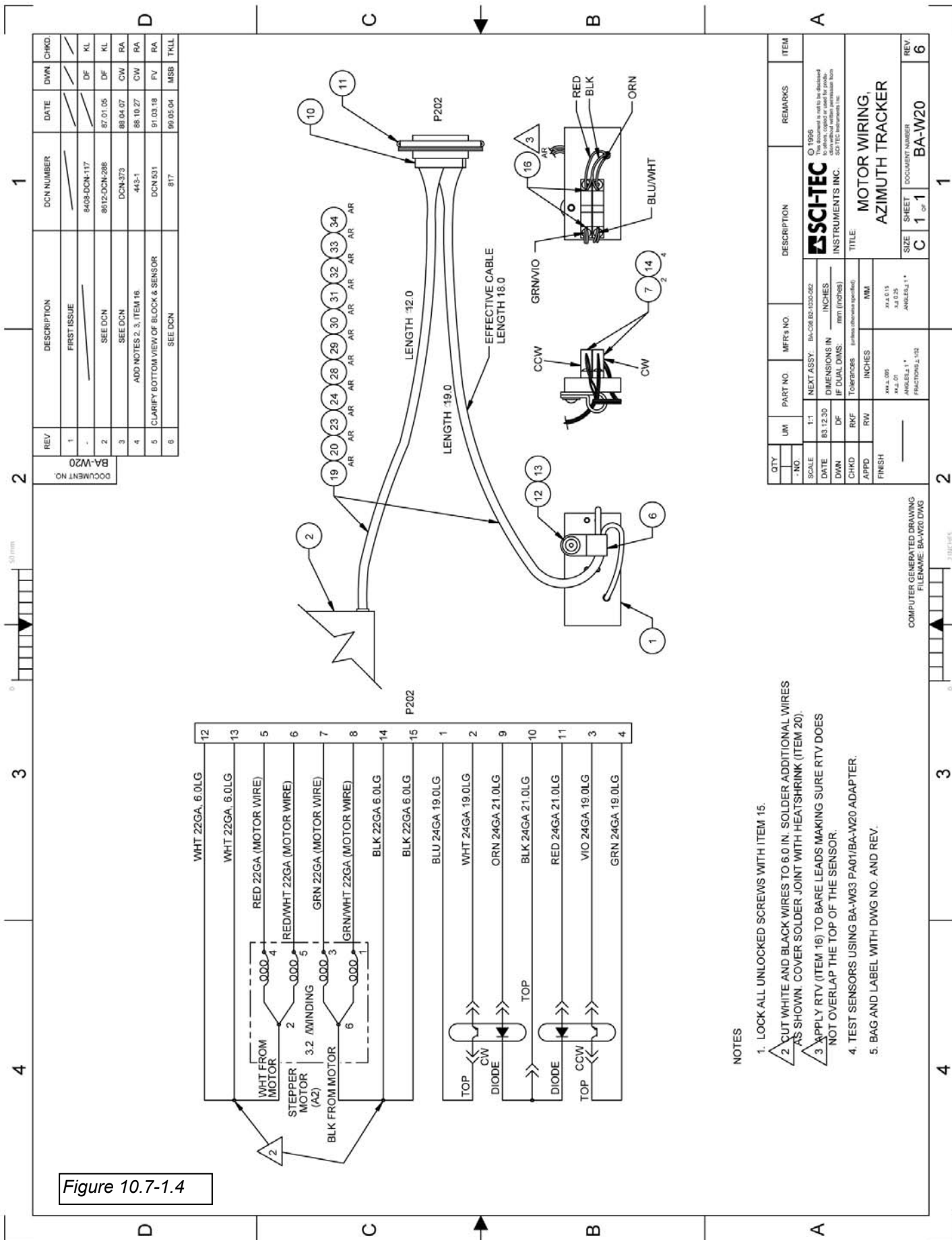


Figure 10.7-1.4

NOTES

1. LOOK ALL UNLOCKED SCREWS WITH ITEM 15.
2. CUT WHITE AND BLACK WIRES TO 6.0 IN. SOLDER ADDITIONAL WIRES AS SHOWN. COVER SOLDER JOINT WITH HEATSHRINK (ITEM 20).
3. APPLY RTV (ITEM 16) TO BARE LEADS MAKING SURE RTV DOES NOT OVERLAP THE TOP OF THE SENSOR.
4. TEST SENSORS USING BA-W33 PA01/BA-W20 ADAPTER.
5. BAG AND LABEL WITH DWG NO. AND REV.

IDEAS THAT POWER TECHNOLOGY



CONVERTER
CONCEPTS

SCI-TEC # 87-50-088
(VT50-141-10/XA)

FEATURES

- 50 Watt Switching Power Supply
- Single, Dual and Triple Output
- AC/DC or DC/DC Models Available
- Best Low DC Input-High Power Output Ratio
- Overvoltage Limit Protection
- UL Recognized

SPECIFICATIONS

Efficiency AC Input:

Single Output: 75% Typical 70% Min.

Multiple Output: 70% Typical 65% Min.

Efficiency DC Input:

Single Output: 75% Typical 55% Min.

Multiple Output: 70% Typical 50% Min.

Turn-On Overshoot: None

Turn-On Surge Current: Limited by active soft-start to 5A 1st cycle

Turn-On Time: 100 msec.

Hold-Up Time: 90 VAC Input (low line) 12 msec.

115 VAC Input (nominal line) 20 msec.

250 VAC Input 180 msec.

Ripple: 20 mV pk-pk Max.

Switching Noise: 2 MHz @ 20 kHz Rep. Rate; 100 mV pk-pk or 1%

Transient Response: 0.5V excursion for 50% to 100% or 100% to 50%

load change with return to regulation in 2 msec. Load change 1 A/μ sec.

Operating Temp: -20°C to +80°C Base Plate Full Load. -20°C to

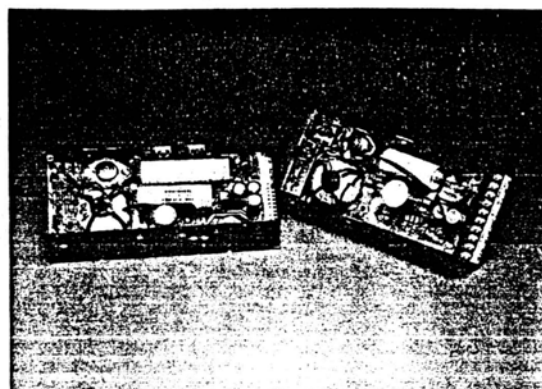
+55°C Free Air Full Load. Derate linearly to 50% output at 80°C

Temperature Coefficient: 0.02%/°C

Storage Temp: -55°C to +85°C

Isolation:

	Input	
Hipot	AC	DC
Input to Output	1.5kVAC	250 VDC
Input to Case	1.5kVAC	250 VDC
Output to Case	250 VDC	250 VDC



Shock & Vibration: Designed to withstand normal commercial shock and vibration conditions.

Short Circuit Protection: Current limited for overload and short circuit protection.

Multiple Output Regulation Specifications:

Regulation: Line, All Outputs: .3%

Regulation: Load, Output No. 1: 20% Load—Full Load 1%

Regulation: Load, All Other Outputs: 50 ma—Full Load 1.5%

	% of Full Load Current				
Output #1 load current	20	35	50	75	100
Each Auxiliary load current	50	75	100	100	100

Size: VT 50 2.063" x 4.187" x 8.063" (52.4 x 106.4 x 204.8 mm)

Size: VX 50 2.125" x 3.581" x 8.000" (54.0 x 91.0 x 203.2 mm)

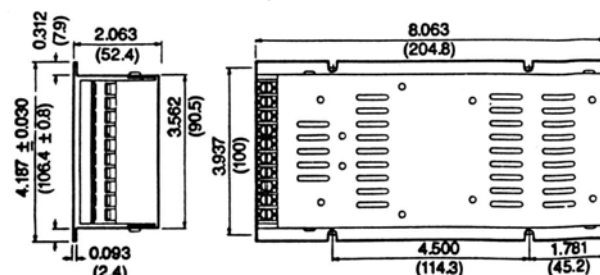
Weight: 2.0 lbs. (0.91 kg)

MECHANICAL DIMENSIONS

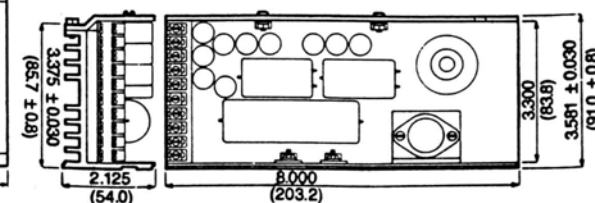
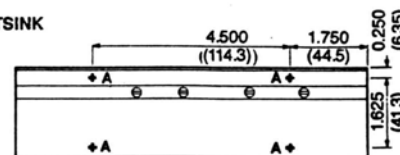
VT 50 OPEN FRAME & ENCLOSED MODULES

Four No. 8 mounting
screws recommended

Optional remote sense and shutdown terminals
2-56 spade lug terminal block



VX 50 HEATSINK MODULES



Dimensions shown in inches. Dimensions in parentheses () indicate millimeters. Tolerance ± 0.010 (0.3 mm) unless otherwise noted.

Figure 10.7-1.5

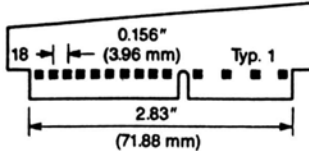
VT 50/VX 50



Industrial Parkway • Pardeeville, WI 53954
(608) 429-2144 • TWX: 910-280-2630
Toll-Free 800/253-5227

TERMINATION OPTIONS

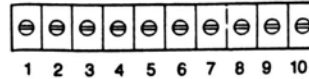
SQUARE PINS (OPTIONAL)



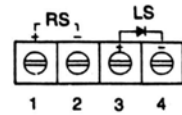
- | | |
|---------------|-------------|
| 18. V3 Output | 9. Chassis |
| 17. V4 Output | 8. Keyslot |
| 16. V4 Output | 7. -V Input |
| 15. V2 Output | 6. NC |
| 14. V2 Output | 5. +V Input |
| 13. V1 Output | 4. NC |
| 12. V1 Output | 3. AC Input |
| 11. Ground | 2. NC |
| 10. Ground | 1. AC Input |

SCI-TEL #87-50-088 (VT 50-141-10/XA)

4-40 TERMINAL BLOCK (STANDARD)



REMOTE SENSE AND LOGIC SHUTDOWN



TYPICAL

- | | | |
|--------------|--------------|---------|
| 1. V3 Output | 6. Chassis | 1. RS + |
| 2. V4 Output | 7. -DC Input | 2. RS - |
| 3. V2 Output | 8. +DC Input | 3. LS + |
| 4. V1 Output | 9. AC Input | 4. LS - |
| 5. Return | 10. AC Input | |

Caution:
Shutdown Current 20mA max.

INPUT AND OUTPUT RANGES

INPUT VOLTAGE RANGE (SERIES SPECIFIC)

Input Option	Input Voltage Range AC	DC	Frequency In Hz	Input Fuse (User Provided)
1	90-250	100-350	44-440	1.0A Slow Blow Fuse
2		10-40		10.0A Slow Blow Fuse
3		20-60		5.0A Slow Blow Fuse

OUTPUT RANGE (SERIES SPECIFIC)

Model No.	Output	Volts	Amps	Adjustment
14	V1	+5	0-10	± 10%
16	V1	+12	0-5	± 10%
17	V1	+15	0-4	± 10%
18	V1	+28	0-2	± 10%
22	V1	+5	1.8-9	± 10%
	V3	-5	.05-1	± 5% Fixed

Model No.	Output	Volts	Amps	Adjustment
24	V1	+5	1.6-8	± 10%
	V2	+12	.05-1	± 5% Fixed
26	V1	+12	.6-3	± 10%
	V3	-12	.05-1	± 5% Fixed
27	V1	+15	.4-2	± 10%
	V3	-15	.05-1	± 5% Fixed
32	V1	+5	1.2-6	± 10%
	V2	+12	.05-1	± 5% Fixed
	V3	-5	.05-1	± 5% Fixed
34	V1	+5	1-5	± 10%
	V2	+12	.05-1	± 5% Fixed
	V3	-12	.05-1	± 5% Fixed
37	V1	+5	1-5	± 10%
	V2	+15	.05-.8	± 5% Fixed
	V3	-15	.05-.8	± 5% Fixed

SELECTING A UNIT: VT 50/VX 50

Series	Total Power	No. of Outputs	Output Range	Input	Package	Termination	Group 1 Options	Group 2 Options
VT	50	1	2	1	0	0	A	A
Standard		2	4	2	Open Frame	Terminal Block	B	B
		3	6	3			C	C
VX			7		1	1	D	D
Heat Sink (open frame only)			8		Enclosed	Square Pin	E	E
			See series specific output range	See series specific input range			F	F
					2	2	G	G
					P.C. Board	Wire Holes Only	H	H
							I	I
							J	J
							K	K
							See group 1 chart	See group 2 chart

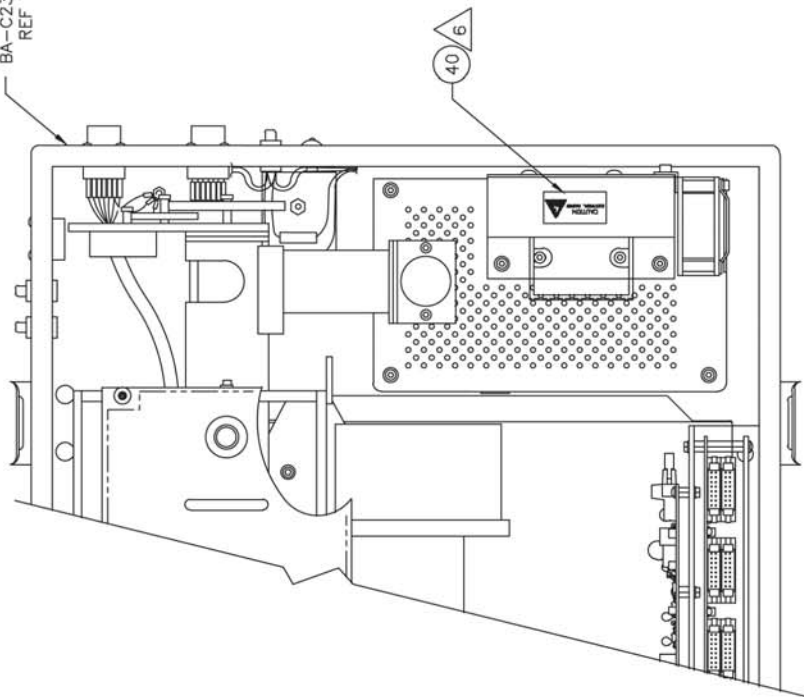
GROUP 1 OPTIONS	Remote Sense	Logic Shutdown	Overvoltage Protection	Power Fail Detect
A	•			
B		•		
C			•	
D				•
E	•	•		
F	•		•	
G	•			•
H		•	•	
I		•		•
J	•	•	•	
K	•	•		•
X	No Options			

GROUP 2 OPTIONS	Regulated	Reverse Polarity Protection	Thermal Shutdown
A	•		
B		•	
C			•
D	•	•	
E	•		•
F		•	•
G	•	•	•
X	No Options		

For all U.L. recognized products, the application criteria is available at customer request. This material will give additional guidelines for installation and operation as per Underwriters Laboratory.

Figure 10.7-3.2

BA-C230 ASSY
REF ONLY



SCALE: 1:2

SCALE: 1:2

INSTALLATION NOTES:

1. REMOVE POWER SUPPLY COVER.
2. MOUNT BA-C223 TO COVER THROUGH THE FOUR TAPPED HOLES OF COVER, USING ACCOMPANYING HARDWARE, ITEMS 22, 28 AND 37. THE HEATER KIT MOUNTS WITH HEATER ELEMENTS FACING THE INTERIOR OF THE BREWER. MAKE SURE MOUNTING BRACKET SITS FLUSH TO POWER SUPPLY COVER.
3. CONNECT P4, ITEM 9 TO J4 ON LAMP BOARD. CONNECT ITEM 8 TO P4 CONNECTOR IN BREWER.
4. MOUNT HEATER CONTROL BOARD ASSEMBLY, ITEM 1 TO BA-C191 OR BA-C61 ASSEMBLIES AT LOCATION INDICATED, USING EXISTING HARDWARE.
5. RE-INSTALL POWER SUPPLY COVER.
6. SEE NOTES 7 AND 8 ON SHEET 1.

COMPUTER GENERATED DRAWING
FILENAME: BA-C223B.DWG

QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
1	BA-C223	1:1	—	—	—	—
DATE	98.03.18	DATE	98.03.18	DATE	98.03.18	DATE
DWN	MSB	DWN	MSB	DWN	MSB	DWN
CHKD	RKF	CHKD	RKF	CHKD	RKF	CHKD
APPD	TKLL	APPD	TKLL	APPD	TKLL	APPD
FINISH	—	FINISH	—	FINISH	—	FINISH
SCALE: 1:1 IF DUAL DIMS: mm (inches) Tolerances (unless otherwise specified) INCHES MM .xxx ± .005 .xx ± .01 .x ± .025 ANGLES ± 1° FRACTIONS ± 1/32						
© 1995 SCITEC INSTRUMENTS INC. SCITEC INSTRUMENTS INC. TITLE: HEATER/FAN MOUNTING KIT ASSY						
SIZE	C	SHEET	22	DOCUMENT NUMBER	BA-C223	REV.

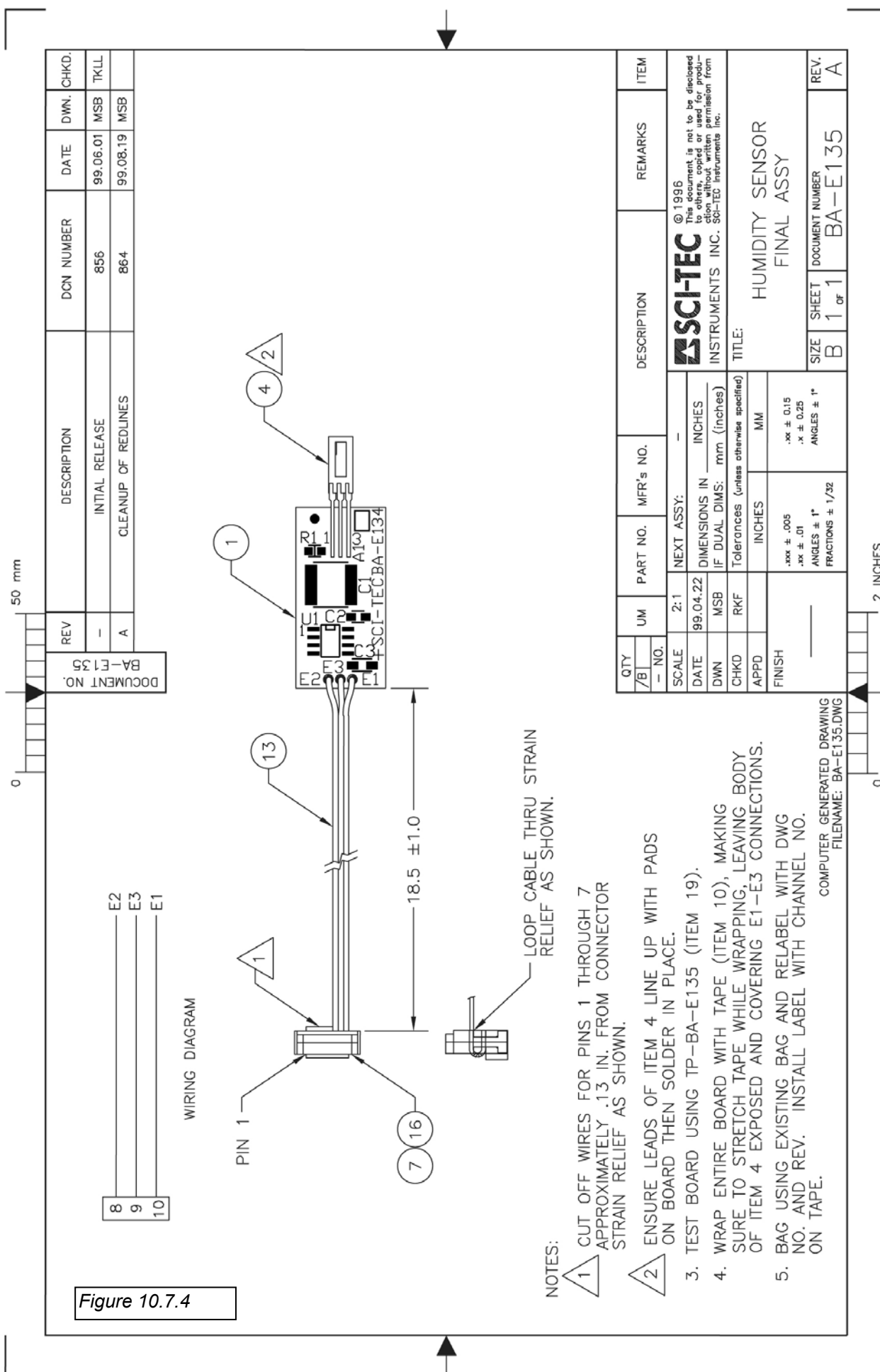
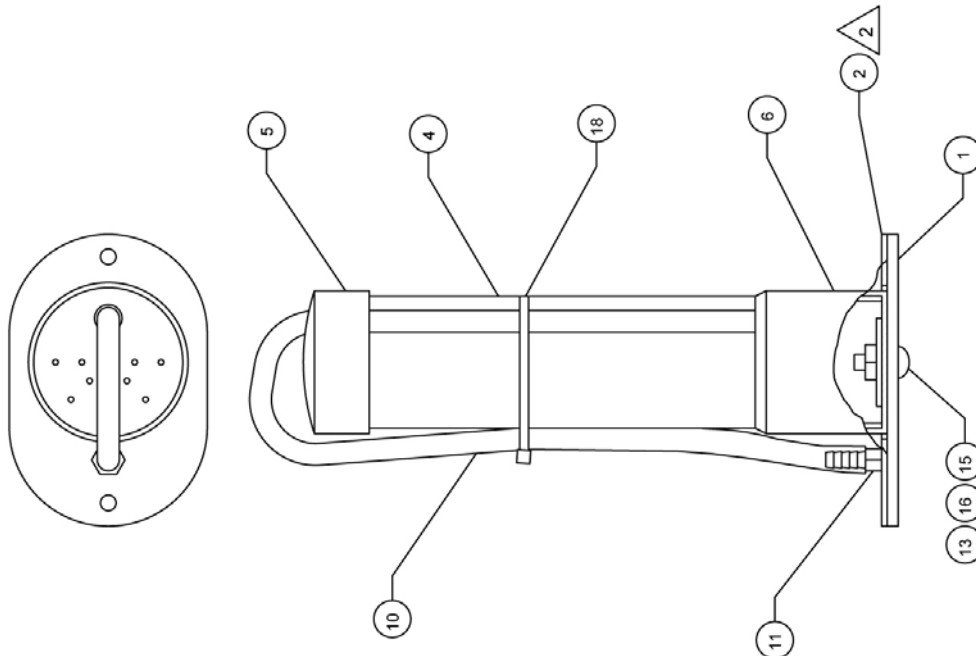


Figure 10.7.4

Figure 10.8



NOTES:

1. ATTACH ITEMS 8 AND 14 TO TUBE WITH TAPE FOR INSTALLATION OF CARTRIDGE AT NEXT ASSEMBLY LEVEL.
2. REMOVE PROTECTIVE BACKING FROM GASKET AND FIT AS SHOWN.
3. BAG AND LABEL THUS: BA-C233/A R3.

PART NO.	NEXT ASSY
BA-C233/A	BA-C230, BA-C230/B BA-C231, BA-C112/B

COMPUTER GENERATED DRAWING
FILENAME: BA-C233.DWG

QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	DCN NUMBER	DATE	DWN	CHKD
1				INITIAL RELEASE	900	00.05.19	RKF	BW
2				CHANGE TO BOTTOM CAP AND GASKET	930	01.07.12	RKF	BW
3				CHANGE TO TOP AND BOTTOM CAPS	951	02.04.29	RKF	

DOCUMENT NO.
BA-C233

QTY	UM	PART NO.	MFR'S NO.	DESCRIPTION	REMARKS	ITEM
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						
86						
87						
88						
89						
90						
91						
92						
93						
94						
95						
96						
97						
98						
99						
100						



© 2000
This document is not to be disclosed
to others, copied or used for product
development without prior permission from
Kipp & Zonen Inc.

TITLE
DESICCANT HOLDER
ASSY

REV	SHEET	DOCUMENT NUMBER	REV
1	1 of 1	BA-C233	3