PIN	LABEL	SIGNAL	TO	FUNCTION
1	GND	GND	TBD−1	GND TO GND TERMINALS
2	ACMDX	ACMD A		
3	AENX	AEN A		
4	PULSX	PULS A		
5	DIRX	DIR A		
6	ACMDY	ACMD B		
7	AENY	AEN B		
8	PULSY	PULS B		
9	DIRY	DIR B		
10	ACMDZ	ACMD C		
11	AENZ	AEN C		
12	PULSZ	PULS C		
13	DIRZ	DIR C		
14	ACMDW	ACMD D		
15	AENW	AEN D		
16	PULSW	PULS D		
17	DIRW	DIR D		
18	AN1	AN1	AIIC P1−9	ANALOG IN 1
19	AN2	AN2	AIIC P1−11	ANALOG IN 2
20	AN3	AN3	AIIC P1−13	ANALOG IN 3
21	AN4	AN4	−	ANALOG IN 4 (0 -> +10V)
22	AN5	AN5	−	ANALOG IN 5
23	AN6	AN6	−	ANALOG IN 6
24	AN7	AN7	−	ANALOG IN 7
25	GND	GND	AIIC P1−5	GND TO TEMPERATURE BD
26	OUT1	OUT1	J11−21	SPARE
27	OUT2	OUT2	J12−21	GRATING TILT #3 (FIDUCIAL ENABLE)
28	OUT3	OUT3	J13−21	GRATING TILT #4 (FIDUCIAL ENABLE)
29	OUT4	OUT4	J14−21	GRATING SLIDE (FIDUCIAL ENABLE)
30	OUT5	OUT5	AIIC P1−6	ANALOG CONTROL 0
31	OUT6	OUT6	AIIC P1−4	ANALOG CONTROL 1
32	OUT7	OUT7	AIIC P1−2	ANALOG CONTROL 2
33	OUT8	OUT8	−	−
34	INP8	INP8	−	−
35	INP7	INP7	−	−

PIN	LABEL	SIGNAL	TO	FUNCTION
36	INP6	INP6		
37	INP5	INP5		
38	INP4/LW	INP4/LD	J14−5	GRATING SLIDE (SECONDARY LIMITS)
39	INP3/LZ	INP3/LC	J13−5	GRATING TILT #4 (SECONDARY LIMITS)
40	INP2/LY	INP2/LB	J12−5	GRATING TILT #3 (SECONDARY LIMITS)
41	INP1/LX	INP1/LA	J11−5	SPARE (SECONDARY LIMITS)
42	INCOM	INCOM		(JUMPERED TO +5V ON BOARD)
43	GND	GND	J46−8	GND TO GND TERMINALS
44	WAB−	DAB−	J24−4	B− (GRATING SLIDE STAGE ENCODER)
45	WAB+	DAB+	J24−5	B+ (GRATING SLIDE STAGE ENCODER)
46	WAA−	DAA−	J24−6	A− (GRATING SLIDE STAGE ENCODER)
47	WAA+	DAA+	J24−7	A+ (GRATING SLIDE STAGE ENCODER)
48	ZAB−	CAB−	J23−4	B− (GRATING TILT #4 STAGE ENCODER)
49	ZAB+	CAB+	J23−5	B+ (GRATING TILT #4 STAGE ENCODER)
50	ZAA−	CAA−	J23−6	A− (GRATING TILT #4 STAGE ENCODER)
51	ZAA+	CAA+	J23−7	A+ (GRATING TILT #4 STAGE ENCODER)
52	YAB−	BAB−	J22−4	B− (GRATING TILT #3 STAGE ENCODER)
53	YAB+	BAB+	J22−5	B+ (GRATING TILT #3 STAGE ENCODER)
54	YAA−	BAA−	J22−6	A− (GRATING TILT #3 STAGE ENCODER)
55	YAA+	BAA+	J22−7	A+ (GRATING TILT #3 STAGE ENCODER)
56	XAB−	AAB−	J21−4	B− (SPARE STAGE ENCODER)
57	XAB+	AAB+	J21−5	B+ (SPARE STAGE ENCODER)
58	XAA−	AAA−	J21−6	A− (SPARE STAGE ENCODER)
59	XAA+	AAA+	J21−7	A+ (SPARE STAGE ENCODER)
60	GND	GND	J46−11	GND TO GND TERMINALS
61	5V	5V		(JUMPERED TO INCOM AND LSCOM ON BOARD)
62	LSCOM	LSCOM		(JUMPERED TO +5V ON BOARD)
63	FLSX	FLSA	J11−15	FWD LIMIT (SPARE)
64	RLSX	RLSA	J11−16	REV LIMIT (SPARE)
65	HOMEX	HOMEA	J11−19	HOME (SPARE)
66	FLSY	FLSB	J12−15	FWD LIMIT (GRATING TILT #3)
67	RLSY	RLSB	J12−16	REV LIMIT (GRATING TILT #3)
68	HOMEY	HOMEB	J12−19	HOME (GRATING TILT #3)
69	FLSZ	FLSC	J13−15	FWD LIMIT (GRATING TILT #4)
70	RLSZ	RLSC	J13−16	REV LIMIT (GRATING TILT #4)

PIN	LABEL	SIGNAL	TO	FUNCTION
71	HOMEZ	HOMEC	J13−19	HOME GRATING TILT #3
72	FLSW	FLSD	J14−15	FWD LIMIT (GRATING SLIDE)
73	RLSW	RLSD	J14−16	REV LIMIT (GRATING SLIDE)
74	HOMEW	HOMED	J14−19	HOME (GRATING SLIDE)
75	GND	GND	J46−14	GND TO GND TERMINALS
76	ABORT	ABORT		
77	XA+	AA+	J11−7	A+ (ENCODER SPARE)
78	XA−	AA−	J11−8	A− (ENCODER SPARE)
79	XB+	AB+	J11−9	B+ (ENCODER SPARE)
80	XB−	AB−	J11−10	B− (ENCODER SPARE)
81	XI+	AI+ (AUX)	J31−3	I+ (STAGE ENCODER SPARE)
82	XI−	AI− (AUX)	J31−2	I− (STAGE ENCODER SPARE)
83	YA+	BA+	J12−7	A+ (ENCODER GRATING TILT #3)
84	YA−	BA−	J12−8	A− (ENCODER GRATING TILT #3)
85	YB+	BB+	J12−9	B+ (ENCODER GRATING TILT #3)
86	YB−	BB−	J12−10	B− (ENCODER GRATING TILT #3)
87	YI+	BI+ (AUX)	J32−3	I+ (STAGE ENCODER GRATING TILT #3)
88	YI−	BI− (AUX)	J32−2	I− (STAGE ENCODER GRATING TILT #3)
89	ZA+	CA+	J13−7	A+ (ENCODER GRATING TILT #4)
90	ZA−	CA−	J13−8	A− (ENCODER GRATING TILT #4)
91	ZB+	CB+	J13−9	B+ (ENCODER GRATING TILT #4)
92	ZB−	CB−	J13−10	B− (ENCODER GRATING TILT #4)
93	ZI+	CI+ (AUX)	J33−3	I+ (STAGE ENCODER GRATING TILT #4)
94	ZI−	CI− (AUX)	J33−2	I− (STAGE ENCODER GRATING TILT #4)
95	WA+	DA+	J14−7	A+ (ENCODER GRATING SLIDE)
96	WA−	DA−	J14−8	A− (ENCODER GRATING SLIDE)
97	WB+	DB+	J14−9	B+ (ENCODER GRATING SLIDE)
98	WB−	DB−	J14−10	B− (ENCODER GRATING SLIDE)
99	WI+	DI+ (AUX)		
100	WI−	DI− (AUX)		
101	+12V	+12V		
102	−12V	−12V		
103	5V	5V		
104	GND	GND		GND TO GND TERMINALS

NOTE: 1. THOUGH NOTED AS X, Y, Z, AND W−AXIS WE HAVE DESIGNATED THESE AS A, B, C, AND D−AXIS
2. TWO−LOOP ENCODING USED ON EACH OF THE GRATING TILT STAGES

ALSO SEE EL−3022, 3058, 3059, 3062, 3063, 3064, 3065, 3066

REVISION

06−19−97 ADDED ANALOG I/O
11−10−97 CORRECTED ANALOG INPUT CONNECTIONS
06−30−00 ADDED NOTES ABOUT AXIS DESIGNATIONS
06−30−00 CHANGED FUNCTION DESIGNATIONS FROM X, Y, Z, W TO A, B, C, D
08−30−01 CHANGED TILT #1 LABELS TO TILT #5
02−26−02 REMOVED REFERENCES TO TILT #5

UNIVERSITY OF CALIFORNIA
LICK OBSERVATORY

SIGNAL ASSIGNMENTS
AMPLIFIER TERMINAL BOARDS, CNTRL 2, AMP A
DEIMOS SPECTROGRAPH

DES'N BY: B. Alcott
ORIGIN DATE: 04−27−95
DRAWN BY:
MODIFY DATE: 02−26−02
PATH: DEIMOS\SIGNALS9
REV. A

DWG. NO. EL−3028
NUM. 1 OF 1