

# RIO-47122, COOLING SYSTEM APF SPECTROMETER

## EXTERNAL RIO

Automatic Planet Finder Spectrograph External RIO-47122 Digital Inputs				
BIT	LABEL	SIGNAL	FUNCTION	D-SUB
0	DI0			7
1	DI1			22
2	DI2	CAM_FLOW_OK	COOLANT FLOW INTO GUIDE CAMERA	36
3	DI3	-	-	6
4	DI4	-	-	21
5	DI5	-	-	35
6	DI6	-	-	5
7	DI7	-	-	20
8	DI8	-	-	33
9	DI9	-	-	3
10	DI10	-	-	18
11	DI11	-	-	32
12	DI12	-	-	2
13	DI13	-	-	17
14	DI14	-	-	31
15	DI15	-	-	1

Automatic Planet Finder Spectrograph External RIO-47122 Digital Outputs				
BIT	LABEL	SIGNAL	FUNCTION	D-SUB
0	D00	-	-	44
1	D01	-	-	14
2	D02	-	-	29
3	D03	-	-	43
4	D04	-	-	13
5	D05	-	-	28
6	D06	-	-	42
7	D07	-	-	12
8	D08	-	-	26
9	D09	-	-	40
10	D010	-	-	10
11	D011	-	-	25
12	D012	-	-	39
13	D013	-	-	9
14	D014	-	-	14
15	D015	-	-	38

Automatic Planet Finder Spectrograph External RIO-47122 Analog Inputs				
INPUT	LABEL	SIGNAL	FUNCTION	D-SUB
0	AI0	MAN_TEMP_IN	COOLING MANIFOLD	23
1	AI1	RTD1	EXTERNAL FREE AIR OUTSIDE TOP OF SPECTROGRAPH	5
2	AI2	RTD2	EXTERNAL FREE AIR OUTSIDE BOTTOM OF SPECTROGRAPH	14
3	AI3	RTD3	STRUT FRAME 5 INSIDE SPECTROGRAPH RTD#5	22
4	AI4	RTD4	RTD POLYCOOL INLET TO DEWAR	4
5	AI5	RTD5	FOCUS STAGE BLOCK ON NON MOVING PORTION OF DEWAR	13
6	AI6	-	-	21
7	AI7	EXT_R/H	EXTERNAL R/H SENSOR OMEGA HX302V	3

Automatic Planet Finder Spectrograph External RIO-47122 Analog Outputs				
OUTPUT	LABEL	SIGNAL	FUNCTION	D-SUB
0	A00	BYPASS_CTRL	COOLING MANIFOLD BYPASS PROP. VALVE	18
1	A01	DEWAR_CTRL	CCD DEWAR COOLING LOOP PROP. VALVE	26
2	A02	EXCH_CTRL	HEAT EXCHANGER COOLING LOOP PROP. VALVE	8
3	A03	LAMP_CTRL	CAL LAMPS COOLING LOOP PROP. VALVE	17
4	A04	-	(UNASSIGNED)	25
5	A05	HTR_CTRL	PROPORTIONAL RELAY FOR HEATER	7
6	A06	-	(UNASSIGNED)	16
7	A07	-	(UNASSIGNED)	24

\*\*\*Also update web: [APF/electronics/EL3510.html](http://loel.ucolick.org/manual/Apf/schematics/APF_in_out_sh_7.pdf)  
 \*\*\*Also update EL-3523 and web EL3523

REVISIONS [http://loel.ucolick.org/manual/Apf/schematics/APF\\_in\\_out\\_sh\\_7.pdf](http://loel.ucolick.org/manual/Apf/schematics/APF_in_out_sh_7.pdf)

- 04-07-10 ADDED THIS SHEET
- 04-21-10 ADDED GUIDE CAMERA COOLANT FLOW INPUT TO BIT 12
- 05-24-11 MOVED PROTEUS CHILLER INLET & OUTLET FLOW SWITCH FROM EXTERNAL RIO TO MULTISTACK MONITOR RIO
- 08-29-11 ADDED EXTERNAL FREE AIR SENSORS TO RTD1 & RTD2
- 09-11-12 ADDED RTD, STUT # 5 TO AI3
- 04-09-13 ADDED PROPORTIONAL RELAY TO HEATER ON A05
- 10-25-13 REMOVED RESERVED FOR PROPORTIONAL CONTROLLER A05
- 02-24-14 ADDED RTD TO FOCUSE STAGE & POLYCOOL INLET LINE NEAR DEAWR.

<b>UNIVERSITY OF CALIFORNIA LICK OBSERVATORY</b>		<b>EXTERNAL RIO I/O SIGNAL ASSIGNMENTS APF SPECTROMETER</b>	
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