

31
30
29
28
27

LIGO EEIP
No Electrical Hazard

+18V +15V To WFS Head 2
-18V -15V

LOW

aLIGO WFS Interface

To WFS Head 4
-18V +15V
-15V

LOW

GAIN H
LOW

LIGO D1101906
51200433

26
25

LIGO EEIP
No Electrical Hazard

Preamp Power

Preamp Chamber Interface

Preamp Test Input Relays A B

Whitening Disable A B

Chassis Voltage

Preamp Output Monitor A+ A- B+ B-

OMC DCPD Whitening

LIGO D2200215
52300002

24
23

LIGO EEIP
No Electrical Hazard

Preamp Power

Preamp Chamber Interface

Preamp Test Input Relays A B

Whitening Disable A B

Chassis Voltage

Preamp Output Monitor A+ A- B+ B-

OMC DCPD Whitening

LIGO D2200215
52300003

22
21
20
19

ISC Dual OPD Transimpedance Amplifier
LIGO D1002481

Amplifier 1 +15V -15V

PD Input

Amplifier 2 +15V -15V

LIGO EEIP
No Electrical Hazard

51301500

LIGO EEIP No Electrical Hazard
-18V -15V
+18V +15V
aLIGO WFS Interface
LIGO D1101906
LOW
S1200433

LIGO EEIP No Electrical Hazard
Preamp Power
Preamp Chamber Interface
Preamp Test Input Relays A B
Whitening Disable A B
Chassis Voltage
Preamp Output Monitor
OMC DCPD Whitening
LIGO D2200215
S2300002

LIGO EEIP No Electrical Hazard
Preamp Power
Preamp Chamber Interface
Preamp Test Input Relays A B
Whitening Disable A B
Chassis Voltage
Preamp Output Monitor
OMC DCPD Whitening
LIGO D2200215
S2300002

GC Dual GPD Transimpedance Amplifier
LIGO D100281
Amplifier 1
+5V
-5V
Amplifier 2
+5V
-5V
LIGO EEIP No Electrical Hazard

CAB_H1-ISC 16

LCR1600001-V1
E1900252-v2

Pin 304
3.4k
2.2k

29
28
27
26
25
24
23
22
21
20
19

onitor

A+ pin 1, A- pin 6
B+ pin 2, B- pin 7

Front Panel D2200374-v1

S2300002

Output Monitor

A+ pin 1, A- pin 6
B+ pin 2, B- pin 7

Front Panel D2200374-v1

S2300003

LIGO EEIP

27

26

25

24

23

22

21



WFS Interface

S10

S11

S13

S14

S16

S15

DC IN

DC On/Off

+15V

-15V

From A/DAC From Binary Output Module

To AA/ADC

LIGO D2200

Panel D2200DTS-1

+15V

-15V

DC On/Off

From A/DAC From Binary Output Module

AA/ADC

LIGO D2200

Panel D2200DTS-1

CAB_H1:IS...

OUT1

+15V

-15V

DC On/Off

ISC Dual OP

D1002481

DC On/Off

Board 2

Binary Read Back

Board 1

Binary Read Back

8 Channels

Chassis

To Binary Input Card

28
27
26
25
23

LIGO EEIP
No Electrical Hazard

Preamp Power

On Off
Bias A
Bias B
+15V
-15V

Preamp Chamber Interface



Preamp Test Input Relays

On Off Active On Off
A B

Whitening Disable

On Off Disabled On Off
A B

Chassis Voltage

On Off
+15V
-15V
+18V
-18V
Preamp Voltage

Preamp Output Monitor



OMC DCPD Whitening LIGO D2200215

LIGO EEIP
No Electrical Hazard

Preamp Power

On Off
Bias A
Bias B
+15V
-15V

Preamp Chamber Interface



Preamp Test Input Relays

On Off Active On Off
A B

Whitening Disable

On Off Disabled On Off
A B

Chassis Voltage

On Off
+15V
-15V
+18V
-18V
Preamp Voltage

Preamp Output Monitor



OMC DCPD Whitening LIGO D2200215

145E TYPE CL2 OP. CATV 60C -- 02/16/18



aLIGO WFS Interface

LIGO EEIP
No Electrical Hazard

LOW

+18V
-18V
-15V

LOW

Preamp Chamber Interface

Preamp Test Input Relays

Whitening Disable

Chassis Voltage

Preamp Output Monitor

A+ pin 1, A- pin 6
B+ pin 2, B- pin 7

LIGO EEIP
No Electrical Hazard

Preamp

A

B

A

B

A

B

BAS

Preamp Voltage

A+

A-

B+

D

S2300002

Front Panel D2200374-v1

CAB M1-SC-30
RAND 02/13

OMC

CPD Whitening

LIGO D2200215

Preamp Chamber Interface

Preamp Test Input Relays

Whitening Disable

Chassis Voltage

Preamp Output Monitor

A+ pin 1, A- pin 6
B+ pin 2, B- pin 7

LIGO EEIP
No Electrical Hazard

Preamp Power

A

B

A

B

A

B

BAS

Preamp Voltage

A+

A-

B+

D

S2300003

Front Panel D2200374-v1

LIGO
No Electrical Hazard



Preamp Test Input Relays

Whitening Disable

Active On Off Active On Off Disabled On Off Disabled On Off

A B A B

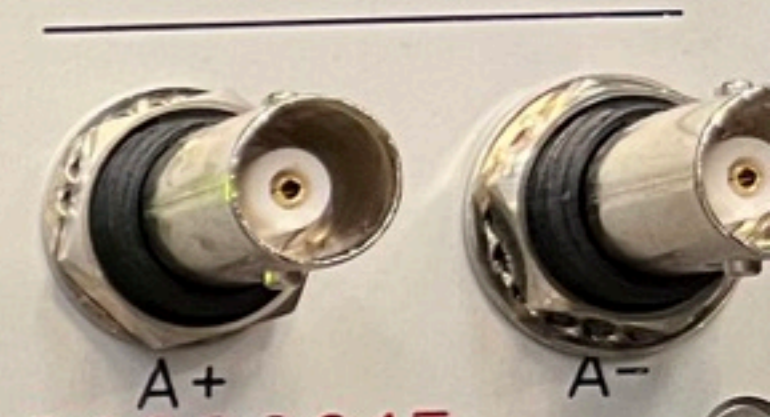
OMC DCPD Whitening

Chassis Voltage

A Reg +15V +15V
B -15V -15V

Input +18V +5V
-18V

BIAS Voltage Preamp Voltage



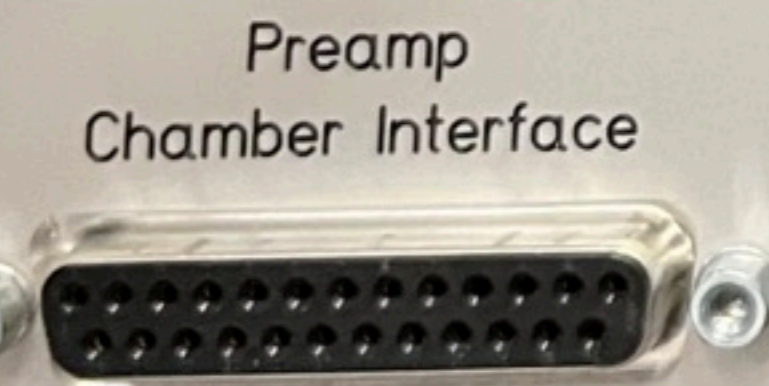
LIGO D2200215

LIGO
No Electrical Hazard

Preamp Power

On Off

Bias A +15V
Bias B -15V



Preamp Test Input Relays

Whitening Disable

Active On Off Active On Off Disabled On Off Disabled On Off

A B A B

OMC DCPD White

Chassis Voltage

A Reg +15V +15V
B -15V -15V

Input +18V +5V
-18V

BIAS Voltage Preamp Voltage



LIGO D2200215

C -- 02/16/18



DC IN

DC On/Off

+5V
-15V

From AI/DAC

From Binary Output Module

To AA/ADC

DC IN

+15V
-5V

DC On/Off

From Binary Output Module

LIC

215

AA/ADC

CAB-MT-15C-426
RND 49/13

GND

+5V

-5V

+5V

-5V