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 Beckhoff Breakout Box

 Test Procedure

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of the LIGO Laboratory.

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# Overview

This test procedure applies to the Beckhoff breakout box LIGO-D1200168. This Box splits the cable from the breakout box into a connector to the shutter driver and a connector to the Hartman optical table at the end station.



Upper Heater Segment

9 Pin D Conn

RTD

9 Pin D Conn

Lowe

I

V

T

# Setup

Using connector breakouts check all connections from 37 pin connector input to the 37 pin output and the 15 pin output.

## Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **FROM** |  |  | Optical |  |
| **37 pin Beckhoff** |  | Beckhoff | table |  |
| **to 37 pin Panel** |  | pin # | pin# | Connected |
|  |  | 1 | 1 |   |
|  |  | 2 | 2 |   |
|  |  | 3 | 3 |   |
|  |  | 4 | 4 |   |
|  |  | 5 | 5 |   |
|  |  | 6 | 6 |   |
|  |  | 7 | 7 |   |
|  |  | 8 | 8 |   |
|  |  | 9 | 9 |   |
|  |  | 10 | 10 |   |
|  |  | 11 | 11 |   |
|  |  | 12 | 12 |   |
|  |  | 13 | 13 |   |
|  |  | 14 | 14 |   |
|  |  | 15 | 15 |   |
|  |  | 16 | 16 |   |
|  |  | 17 | 17 |   |
|  |  | 18 | 18 |   |
|  |  | 19 | 19 |   |
|  |  | 20 | 20 |   |
|  |  | 21 | 21 |   |
|  |  | 22 | 22 |   |
|  |  | 23 | 23 |   |
|  |  | 24 | 24 |   |
|  |  | 25 | 25 |   |
|  |  | 26 | 26 |   |
|  |  | 27 | 27 |   |
|  |  | 28 | 28 |   |
|  |  | 29 | 29 |   |
|  |  | 30 | 30 |   |
|  |  | 31 | 31 |   |
|  |  | 32 | 32 |   |
|  |  | 33 | 33 |   |
| **FROM** |  |  | Optical |  |
| **37 pin Beckhoff** |  | Beckhoff | table |  |
| **to 37 pin Panel** |  | pin # | pin# | Connected |
|  |  |  |  |  |
|  |  | 34 | 34 |   |
|  |  | 35 | 35 |   |
|  |  | 36 | 36 |   |
|  |  | 37 | 37 |   |
|  |  |  |  |  |
| **FROM** |  |  |  |  |
|  **37 Pin Beckhoff** |  | to driver | Beckhoff |  |
| **to 15 Pin Shutter** |  | pin # | pin# | Connected |
| **Driver** |  | 1 | 5 |   |
|  |  | 2 | 6 |   |
|  |  | 3 | 7 |   |
|  |  | 4 | 8 |   |
|  |  | 5 | 29 |   |
|  |  | 6 | 31 |   |
|  |  | 7 | 30 |   |
|  |  | 8 | 19 (gnd) |   |
|  |  | 9 | 24 |   |
|  |  | 10 | 25 |   |
|  |  | 11 | 26 |   |
|  |  | 12 | 27 |   |
|  |  | 13 | 10 |   |
|  |  | 14 | 12 |   |
|  |  | 15 | 11 |   |