

LIGO Laboratory / LIGO Scientific Collaboration

LIGO-T1200522-v1

Advanced LIGO

November 29, 2012

Feedthrough Panel Dimensional Specification

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Distribution of this document:
LIGO Scientific Collaboration

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1 Introduction

This document specifies the dimensions of a feedthrough panel on an optical table enclosure.

2 Material

The material is aluminum with the front side anodized and the back side chromated. The color is natural.

3 Overall Dimensions

The nominal width, height, and thickness of a panel are:

$$W = N * 25.4 \text{ mm} - 0.4 \text{ mm},$$

$$H = 132 \text{ mm},$$

$$\text{Thickness} = 3 \text{ mm}.$$

with N the width of the panel in the range 1 to 43.

4 Mounting Holes

The mounting holes are at positions:

$$X = 12.5 \text{ mm} + n * 25.4 \text{ mm} \text{ with } n = 0 \text{ and } n = (N - 1), \text{ and}$$

$$Y = 66 \text{ mm} \pm 53.98 \text{ mm}.$$

Mounting holes are typically present only in the first and last columns.

The diameter of the mounting holes is (loose fit #10 thru):

$$\varnothing = 5.13 \text{ mm}$$

The mounting holes are enlarged by a cavity on the front surface, which accommodates a 0.5" washer. The diameter and depth of the cavities are:

$$\varnothing = 19.95 \text{ mm},$$

$$D = 1.27 \text{ mm}.$$

5 Visual Aid

Two horizontal lines are located at

$$Y = 66 \text{ mm} \pm 41.91 \text{ mm},$$

and goes across the entire panel size. The engraving tool is 1.0 mm cutter, and the infill color is pastel orange (RAL 2003).

Labels are written by an 0.4mm engraving tool, the font is a DIN1451, 1-stroke, and the color is gentian blue (RAL 5010).

6 DCC Number

The dcc number should be written at the center bottom of the panel at a height of

$Y = 66 \text{ mm} - 44.72 \text{ mm}$,

using the above font with a height of 2.54 mm and an x-scaling of 1.3.

7 Drawing Origin

A convenient origin for the drawing is at:

$X = 12.5 \text{ mm}$, and

$Y = 66.0 \text{ mm}$.

8 Mounting Hardware

Black-oxide pan head Phillips machine screw, 10-32 thread, 3/8" length
McMaster-Carr 91249A260

Black-oxide flat washer, #10 screw size, 1/2" OD, .03"-.07" thick
McMaster-Carr 97416A115