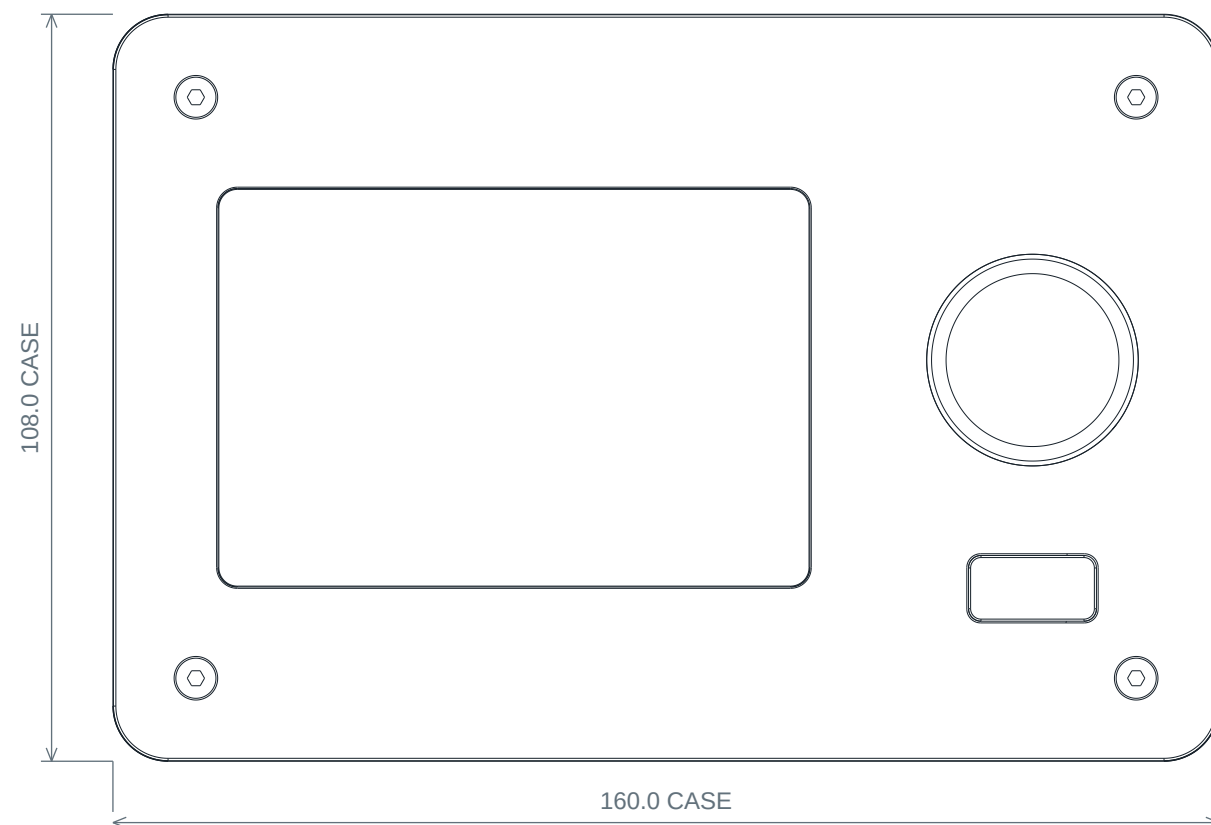
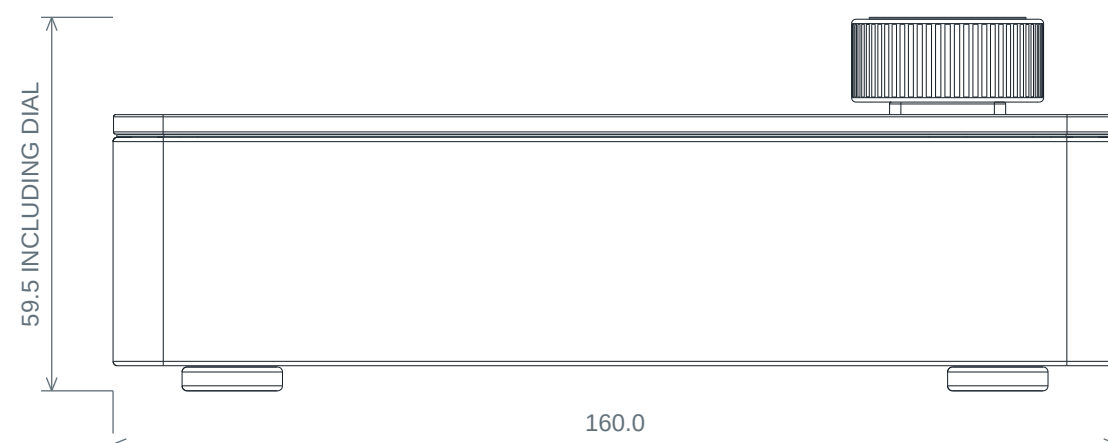


01 TOP / rear connector projections omitted



02 FRONT / assembled



Actual Blender / Cycles visualization

Design envelope: 160.0 x 108.0 mm case footprint.

Case top: 44.0 mm; master dial top: 59.5 mm.

Rear sockets add 2.35 mm to case depth.

Materials indicated: anodized aluminium, steel, glass, elastomer, PCB space claim. Visual finish is illustrative.

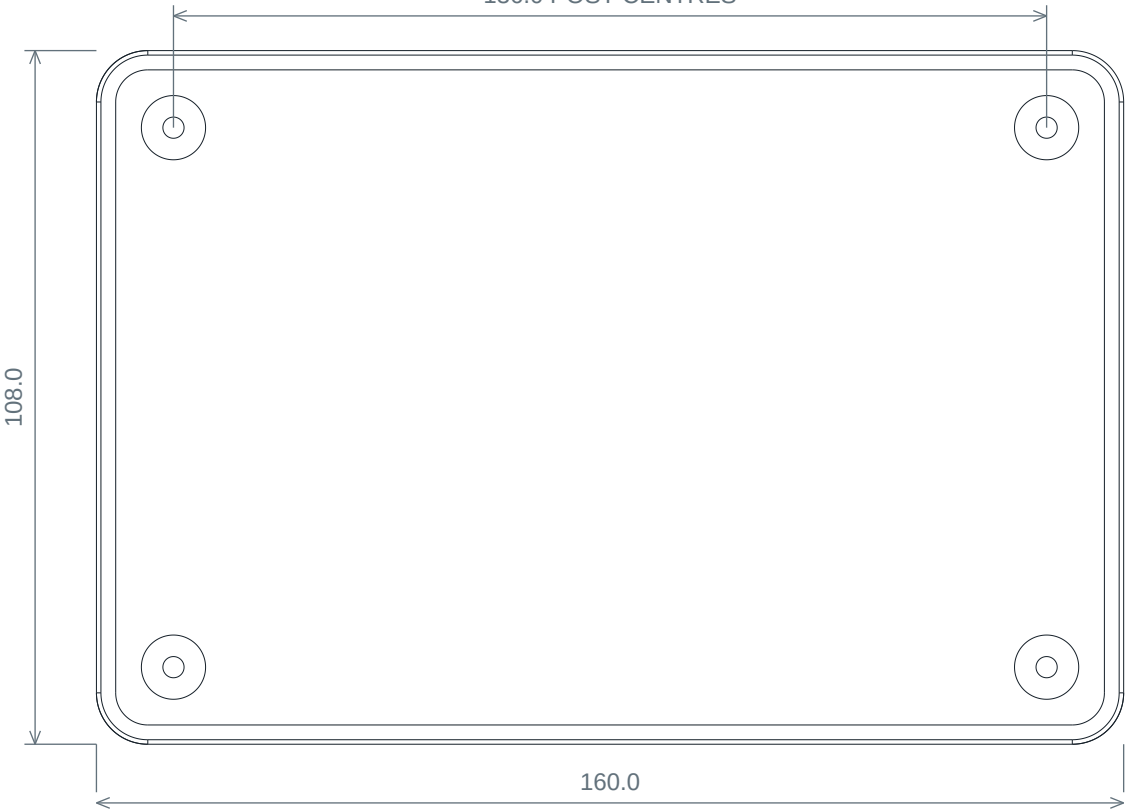
CAD master: 28 separate closed BRep solids.

Editable source: precision_product_model.py (CadQuery).

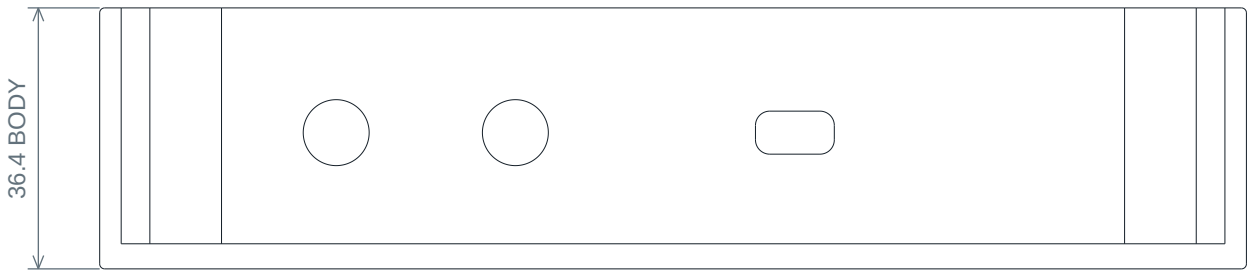
Exchange: p01-assembly.step, one STEP per component.

No electronics, thermal, EMC, tolerance or manufacturing approval. Generic I/O geometry is not supplier-qualified.

03 BODY / open tray and lid mounting posts
136.0 POST CENTRES



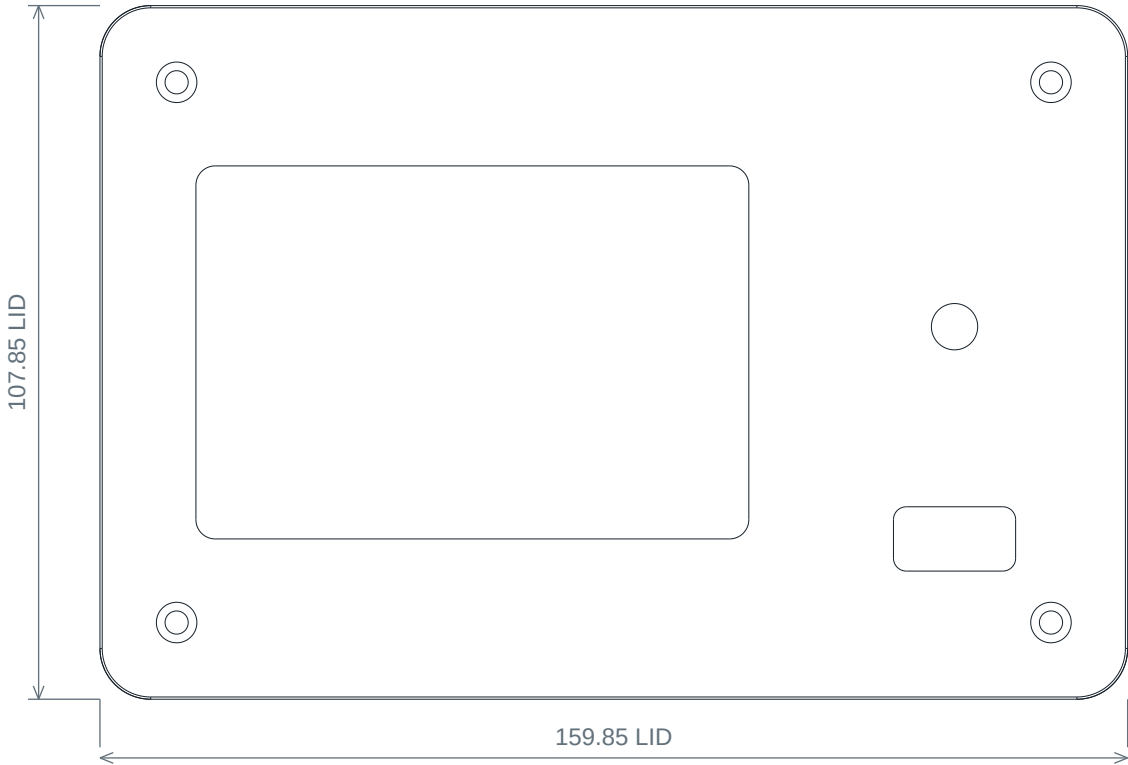
04 BODY / section through Y = 0



Wall 3.0 | Floor 3.5 | Outside plan corner R8.0

Base at Z4.0. Floor top Z7.5. Tray top Z40.4.

05 LID / machined aperture and fasteners



Lid: 3.1 thick. Lower face Z40.9; upper face Z44.0.
Visible body/lid separation 0.5; gasket thickness 0.32.
4 mounting bores: diameter 3.6 through.
Head recess: diameter 6.3 x 1.2 deep from upper face.
Lid post centres: 136.0 x 84.0; bore diameter 3.3.
Display aperture: 86.0 x 58.0, R3.0, centre X-22/Y0.
Glass: 85.6 x 57.6 x 1.6; 0.2 clearance per side.
Encoder shaft clearance diameter 7.2 at X53/Y4.
Dial diameter 30.6; underside shaft socket diameter 6.2.
Threads and electronics simplified. No fit class assigned.