

HV-D150 High-Voltage Differential Probe

Quick Start

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Quick Start (1-page)

Safety (read first)

- High voltage can cause injury or death. Follow your lab safety procedures and work with a qualified person when necessary.
- Inspect insulation, leads, and accessories before each use. Do not use damaged cables, connectors, or housings.
- De-energize the DUT before connecting or disconnecting the probe whenever possible.
- The over-voltage alarm is an indicator only. Do not treat it as a safe operating limit.

At a glance

- Bandwidth: 150 MHz (-3 dB)
- Attenuation: 50X / 500X
- Max differential input (measurement range, V_{peak}): up to $\pm 180 V_{peak}$ (50X, differential input) / up to $\pm 1600 V_{peak}$ (500X, differential input)
- Over-voltage alarm: 1800 V_{peak} nominal (tolerance: 1750–1850 V_{peak})
- CAT (per marking): CAT II 1000 V / CAT III 600 V (each input to earth; supplier-declared)
- Input impedance:
 - Each input to ground: $8 M\Omega$ — $3 pF$
 - Differential: $16 M\Omega$ — $1.5 pF$

60-second setup

1. De-energize the DUT if possible.
2. Set the oscilloscope input and scale per your measurement plan.
3. Select attenuation range (50X or 500X).
4. Connect the probe output to the oscilloscope input.
5. Connect probe inputs to the DUT (minimize loop area).

6. Power the DUT, then verify waveform polarity and scaling.

Range selection

- Use **50X** for smaller signals (measurement range up to up to $\pm 180 V_{peak}$ (50X, differential input)).
- Use **500X** for higher differential voltages (measurement range up to up to $\pm 1600 V_{peak}$ (500X, differential input)).

Measurement-range limit only; not a CAT safety category. CAT rating is independent of 50X/500X selection.

Select the right test clip

- IS-CLP-01 Insulated Wide-Jaw Alligator Clip: larger jaw opening for thicker leads.
- IS-CLP-02 Quick Test Hook Clip: grab narrow points quickly.
- IS-CLP-03 Needle Test Probe Tip: precise contact on pads and points.
- IS-CLP-04 Insulation-Piercing Hook Clip: pierce insulation for temporary checks.
- IS-CLP-05 Safety Hook Clip (4mm): guarded hook connection.

Accessory ratings are supplier-declared; IsoSentry has not independently verified them.

Troubleshooting

- No waveform: verify connections, scope channel enabled, correct probe range.
- Too noisy: shorten leads, twist input wires, reduce loop area.
- Alarm triggers: reduce voltage or switch to 500X; review limits in Safety Guide.

Full docs: isosentry.com/pages/docs