SELV, PELV AND ELECTRICAL SEPARATION

SELV OR PELV. WHICH HAS AN EARTH ON THE SECONDARY?

Guidance Note 3 · p.75 · Tables 2.13, 2.14 and 2.15 . First, what the letters mean:

TERM	STANDS FOR	EARTH
SELV	**Separated** extra-low voltage	On the **primary** side only — **no earth on the secondary**
PELV	**Protected** extra-low voltage	A cpc carries through to the **secondary** side

That is the whole difference.

SELV is separated from earth on the output side; PELV is not. A SELV transformer has more windings on the primary, and the output is no more than **50 V**.

TESTING A SHAVER SOCKET — ELECTRICAL SEPARATION, NOT SELV

Fit a **temporary link** across the conductors on the **supply** side.
Fit a **temporary link** across the conductors on the **separated output** side.

One test lead on the supply side link, the other on the output side link.
Test at **500 V d.c.** — minimum **1.0 MΩ.**

You are proving the supply and the separated circuit are
completely separated from each other — not testing either to earth.

A shaver socket is not SELV.

Its output is a separated circuit at mains-type voltage, not extra-low voltage. **Guidance Note 3** · 2.6.9 · Table 2.15 · p.75 gives the electrical separation test as **500 V d.c.**, minimum **1.0 MΩ**, for a source voltage up to 500 V.

You will mostly meet SELV.

PELV turns up rarely in domestic work.

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