Luminaire *protection classes* and earthing a metal chandelier

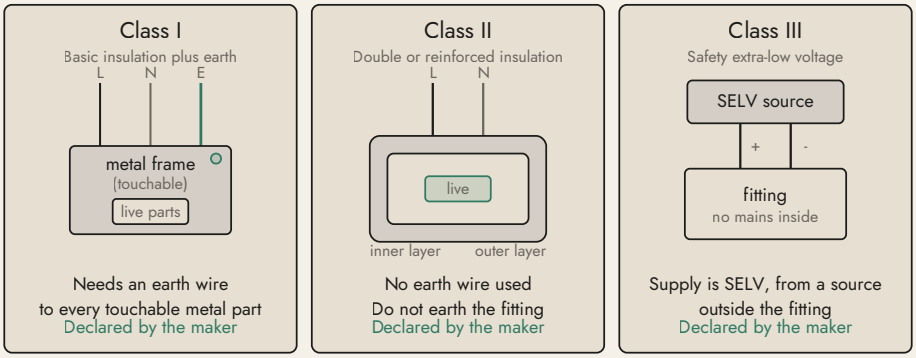
How to read the protection class of a luminaire, where the earth runs in a metal chandelier, and wording to ask for the class per fitting. Principle only: no clause is quoted from the standards.

Compliance guidance. Principle-level guidance. No figure is quoted from BS EN IEC 60598-1, IEC 61140 or BS 7671: the standards were not read, only catalogue listings, a secondary summary of the class definitions and a 2008 trade-body article on an old edition of BS 7671. The class of any fitting is declared by its maker and checked by a competent electrician against the rating plate, declaration of conformity and test report. This is guidance, not electrical advice or a certificate.

AT A GLANCE

Class	How it protects	Earth wire	Typical decorative use	Watch for
Class I	Basic insulation, plus every touchable metal part joined to earth by a protective conductor.	Yes: an earth wire runs from the supply to the fitting.	A metal-framed fitting whose frame can be touched is the classic case (practice).	A broken or missing earth link leaves the frame live if the insulation fails.
Class II	Double or reinforced insulation, so a single fault cannot reach a touchable part.	No. The fitting is not earthed.	Fittings with a fully insulated body or shade, often glass or plastic (practice).	Adding a metal part after the maker has declared the class can change it.
Class III	Supply at safety extra-low voltage (SELV) from a source outside the fitting.	No earth wire.	Low-voltage drop lights and some LED ranges (practice).	Only as safe as the separate source. FELV is not accepted as a substitute.

Definitions summarised from a secondary source and the IEC and BSI listings; the standards were not read. The use column is practice, not a rule. The class is the maker's declaration.



Classes I, II and III side by side. Original drawing by Make Bespoke Studio: a schematic, not a wiring diagram. The definitions are from a secondary summary and the standards were not read.

SPECIFICATION WORDING

CLASS STATED PER FITTING

The supplier states the protection class [Class I / Class II / Class III] of each luminaire type on the drawing, the rating plate and the declaration of conformity, to [BS EN IEC 60598-1 edition]. The three statements agree. Any change to metalwork, stem, canopy, shade or supply after sign-off is notified in writing and the class restated before production.

EARTH ROUTE (CLASS I)

For each Class I luminaire the supplier shows on the shop drawing the route of the protective conductor from the supply connection to every touchable metal part, states whether the chain, rod or stem forms part of that route and how any such connection is made, and confirms in writing that the earth conductor cannot be trapped, cut or relied upon to support the load.

CLASS II CLAIM

Where a luminaire is declared Class II, the supplier confirms the declaration applies to the luminaire as built with finish, stem, canopy and decoration shown on drawing [ref], and that no protective conductor is connected to the body of the luminaire.

INSTALLATION AND HANDOVER

The electrician [name] tests earth continuity of Class I luminaires and records the result on the installation certificate. Rating plate, declaration of conformity and test report are included in the O&M pack.

TERMS USED

Protection class
The way a luminaire guards against electric shock. Class I uses an earth connection, Class II double or reinforced insulation, Class III a safety extra-low voltage supply. The maker declares it.

Earthing (protective conductor)
A conductor, usually green and yellow, that joins touchable metal parts to the earth of the installation so a fault trips the protective device.

Double insulation
Two layers of insulation, or one reinforced layer, so a single fault cannot make a touchable part live. Marked with a square inside a square.

SELV
Safety extra-low voltage: a supply at a voltage low enough to be safe, from a source that is separated from the mains.

STANDARDS AND SOURCES

- BS EN IEC 60598-1: BSI listing, 2021 edition, published 5 Nov 2021, Current (seen 7 Nov 2026). Text not read. A 2024 edition exists: see the conformity sheet.
- IEC 61140:2016: edition 4.0, 7 Jan 2016, stability date 2028. IEC listing read; text not read.
- BS 7671 (IET Wiring Regulations): not read. A 2008 IET article on Section 559 of the 2008 edition was read; confirm every number in the edition in force.
- IET Wiring Matters, Autumn 2008: Section 559 overview, read in full; old edition.

Full guide: https://makebespoke.com/trade/technical/luminaire-protection-classes-and-earthing. Make Bespoke Studio coordinates manufacture through its partner workshops. Figures are guidance only and your specification governs; some may be superseded, so contact the studio to verify.