

7.4.3 Electrical Protection

Luminaires are also classified according to the protection they provide against electric shock.

Table 16 shows the luminaire classes in the IEC classification..

Luminaire class	Degree of electrical protection
0	A luminaire having functional insulation, but no double insulation or reinforced insulation throughout, and without provision for earthing. This type of luminaire is not permitted in the UAE.
1	A luminaire having at least functional insulation throughout and provided with an earthing terminal or earthing contact, and, for luminaires designed for connection by means of a flexible cable or cord, provided with either an appliance inlet with earthing contact, or a non-detachable flexible cable or cord with earthing contact and a plug with earthing contact
2	A luminaire with double insulation and/or reinforced insulation throughout and without provision for earthing
3	A luminaire designed for connection to extra-low voltage circuits and which has no circuits, either internal or external which operate at a voltage greater than extra-low safety voltage ⁽¹⁾ .

Table 16
The classification of luminaires according to the degree of electrical protection.

NOTE1 'Extra-Low-Safety-Voltage' means ELV, see Table 17:

IEC voltage range	AC	DC	defining risk
High voltage (supply system)	> 1000 Vrms	> 1500 V	electrical arcing
Low voltage (supply system)	50–1000 Vrms	120–1500 V	electrical shock
Extra-low voltage (supply syst.)	< 50 Vrms	< 120 V	low risk

Table 17
ELV standards