

Table 3 – Limits of temperature and temperature rise for various parts, materials and dielectrics of high-voltage switchgear and controlgear

Nature of the part, of the material and of the dielectric (See points 1, 2 and 3) (See note)	Maximum value	
	Temperature °C	Temperature rise at ambient air temperature not exceeding 40 °C K
1 Contacts (see point 4) Bare-copper or bare-copper alloy – in air – in SF ₆ (sulphur hexafluoride) (see point 5) – in oil Silver-coated or nickel-coated (see point 6) – in air – in SF ₆ (see point 5) – in oil Tin-coated (see point 6) – in air – in SF ₆ (see point 5) – in oil	75 105 80 105 105 90 90 90 90	35 65 40 65 65 50 50 50
2 Connection, bolted or the equivalent (see point 4) Bare-copper, bare-copper alloy or bare-aluminium alloy – in air – in SF ₆ (see point 5) – in oil Silver-coated or nickel-coated see point 6) – in air – in SF ₆ (see point 5) – in oil Tin-coated in air – in SF ₆ (see point 5) – in oil	90 115 100 115 115 100 105 105 100	50 75 60 75 75 60 65 65 60
3 All other contacts or connections made of bare metals or coated with other materials	(see point 7)	(see point 7)
4 Terminals for the connection to external conductors by screws or bolts (see point 8) – bare – silver, nickel or tin-coated – other coatings	90 105 (see point 7)	50 65 (see point 7)
5 Oil for oil switching devices (see points 9 and 10)	90	50
6 Metal parts acting as springs	(see point 11)	(see point 11)
7 Materials used as insulation and metal parts in contact with insulation of the following classes (see point 12) – Y – A – E – B – F – Enamel: oil base synthetic – H – C other insulating material	90 105 120 130 155 100 120 180 (see point 13)	50 65 80 90 115 60 80 140 (see point 13)
8 Any part of metal or of insulating material in contact with oil, except contacts	100	60
9 Accessible parts – expected to be touched in normal operation – which need not to be touched in normal operation	70 80	30 40

NOTE The points referred to in this table are those of 4.4.3.