

## Verification methods according to AS/NZS 61439.1:2016

### ITEM NO.9 – DIELECTRIC PROPERTIES

#### In accordance with AS/NZS 61439.1:2016, Clauses 10.9, 10.9.2 & 10.9.3

BE Switchcraft is in compliance with dielectric properties requirements, Power frequency withstand, and Impulse withstand voltage is verified by testing. Test and values are according to Tables 8, 9 & 10.9.3.2 (see Page 2).

#### IMPULSE WITHSTAND VOLTAGE

Verified by testing, the impulse voltage generator shall be adjusted to the required impulse voltage with the ASSEMBLY connected. The value of the test voltage shall be that specified in 9.1.3.

Auxiliary circuits not connected to main circuits shall be connected to earth.

**Note:** All sensitive electronic components are to be isolated prior to performing dielectric tests to avoid damage to components.



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#### POWER-FREQUENCY WITHSTAND VOLTAGE

**Table 8 — Power-frequency withstand voltage for main circuits (10.9.2)**

Rated insulation voltage $U_i$ (line to line a.c. or d.c.)  V	Dielectric test voltage a.c. r.m.s.  V	Dielectric test voltage <sup>b</sup> d.c.  V
$U_i \leq 60$	1 000	1 415
$60 < U_i \leq 300$	1 500	2 120
$300 < U_i \leq 690$	1 890	2 670
$690 < U_i \leq 800$	2 000	2 830
$800 < U_i \leq 1\,000$	2 200	3 110
$1\,000 < U_i \leq 1\,500$ <sup>a</sup>	-	3 820

<sup>a</sup> For d.c. only.

<sup>b</sup> Test voltages based on 6.1.3.4.1, fifth paragraph, of IEC 60664-1.

**Table 9 — Power-frequency withstand voltage for auxiliary and control circuits (10.9.2)**

Rated insulation voltage $U_i$ (line to line)  V	Dielectric test voltage a.c. r.m.s.  V
$U_i \leq 12$	250
$12 < U_i \leq 60$	500
$60 < U_i$	See Table 8

*This has been taken from AS/NZS 61439.1:2016.*