

ITEM NO.10 – TEMPERATURE RISE LIMITS**TEMPERATURE RISE –****In accordance with AS/NZS 61439.1:2016, Clause 10.10**

The temperature rise limitation are based upon the allowable rises permitted for the devices connected (wire connectors, cables, circuit breakers, etc.) in order to maintain the proper and safe performance of the entire electrical system, these must be considered.

The Installation condition of circuit-breakers (CB's) differ from the conditions specified by the Standard IEC 60947-2, which are the verification conditions of a circuit-breaker current carrying capacity in free air. The conditions inside the switchboard (wiring, separations, arrangement of the different unit) force the CB's to operate under conditions characterized by the following aspects:

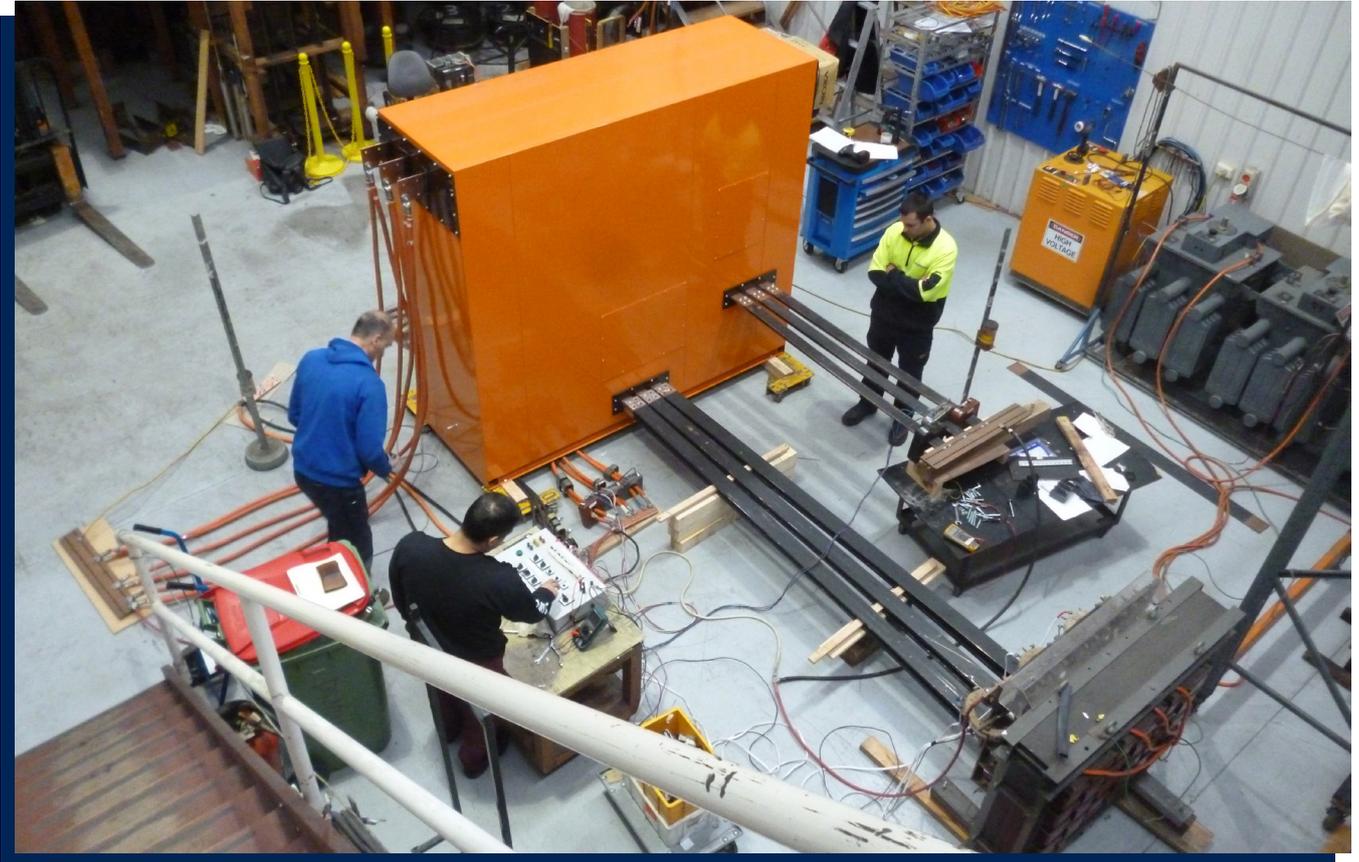
- > With restrictions regarding air circulation.
- > Connected through conductors of size and length stated by the manufacturer.
- > With an air temperature around the circuit-breaker depending on the assembly design and on the device's location, outdoor or indoor services.

With these considerations BE Switchcraft will apply de-rating to MCCB's and ACB's, verify the temperature rise using internal calculator based on AS/NSZ 61439 and IEC 60890 method of temperature-rise verification of low-voltage switchgear and control gear assemblies.

IEC 60890 method of temperature-rise verification of low-voltage switchgear and control gear assemblies, conditions for application:

1. The method is applicable to enclosed ASSEMBLIES or partitioned sections of ASSEMBLIES without forced ventilation.
2. Method it is applicable for enclosure of sheet steel, aluminium and cast iron.
3. Intended to determine the temperature rise of the air inside the enclosure.
4. The air temperature within the enclosure is equal to the ambient air temperature outside the enclosure plus the temperature rise of the air inside the enclosure caused by the power losses of the installed equipment. *Taken from: IEC TR 60890:2014 (Page 7).*

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TEMPERATURE RISE TEST REPORTS

Temperature Rise Test	Report No.	Tested by:
Test Item: Functional Units	50054963 001	TUV Rheinland Australia, High Power Laboratory, Heidelberg Vic
Test Item: Complete Assembly	50063613 001	TUV Rheinland Australia, High Power Laboratory, Heidelberg Vic

All tests based on Test Specification: AS/NZS 61439.1:2016, Clause 10.10.2.3.7c.