

## Application Using circuit-breakers in DC networks

Susol circuit-breakers for protection of power distribution with thermal overload and magnetic short-circuit trip units are suitable for usage in DC networks.

The circuit-breakers with electronic overcurrent releases are not suitable for DC networks.

### Circuit-breaker selection criteria

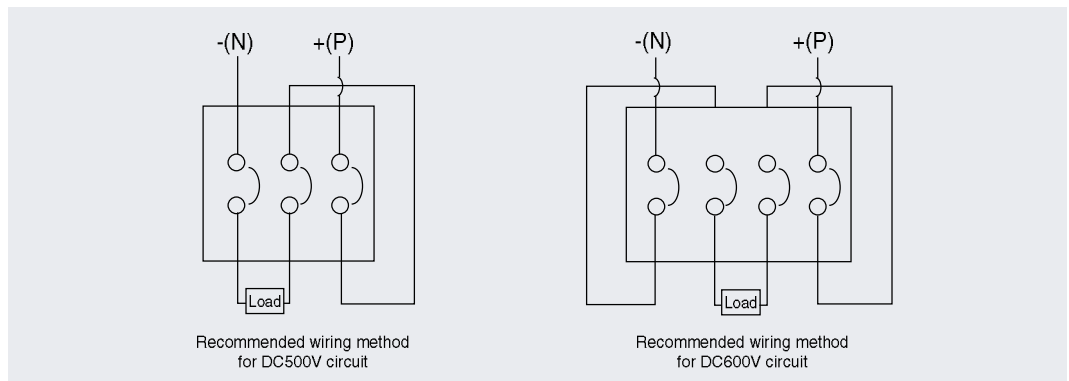
The followings are the most important criteria for selection of suitable circuit breaker for DC networks.

- The rated current determines the rating and size of the circuit-breaker (Equipment)
- The rated voltage determines the number of poles in series necessary for breaking
- The maximum short-circuit current at the connection point determines the breaking capacity

### Setting range of the trip values

- Thermal overload protection: Same setpoints as in 50/60Hz circuits
- Instantaneous short-circuit protection: The response threshold increases by maximum 40%.

The following wiring diagrams are recommended since the current must flow through all current paths in order to conform to the thermal tripping characteristic curve.



	Model	Trip unit	Applicable to DC circuits	Breaking capacity (kA)
Thermal magnetic	TD100N, TD160N	FTU FMU ATU	○	42
	TS100N, TS160N, TS250N TS400N, TS630N TS800N		○	50
	TD100H, TD160H		○	65
	TS100H, TS160H, TS250H TS400H, TS630H TS800H		○	85
	TD100L, TD160L TS100L, TS160L, TS250L TS400L, TS630L TS800L		○	100
	Electronic		TS250, TS630, TS800	ETS, ETM