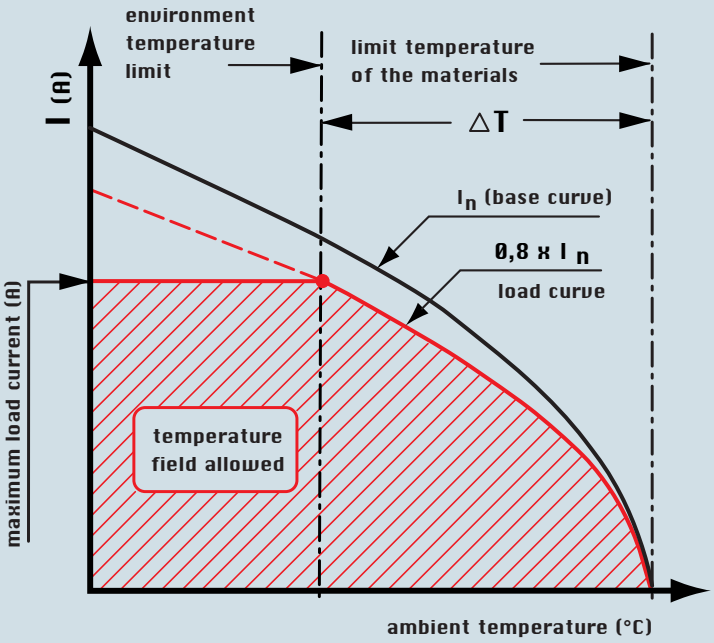
CK series - CKS series

general

load curves

The current carrying capacity possible in the connectors is variable. It reduces with the increase of the number of poles and the temperature of the environment in which the connector is installed and is determined by the thermal properties of the materials used for the contacts and the insulating parts as well as by the type of conductor used.
The current carrying capacity is obtained from the load curves which are constructed according to standard IEC 60512-5-2 for currents circulating simultaneously in all poles.
The limit current curves express current values that determine the achievement of the highest limit temperature of the materials. The choice of the permanent load applicable on the contacts must be made within the field of operation possible delimited by the above curves.
Since the use of the connectors at the limit of the values of their characteristics is not recommended, **the base curve** is derated. The reduction of the load curves to 80% defines the correction curve where both the maximum contact resistance permissible and the inaccuracy of the temperature measurements are sufficiently borne in consideration.
The correction curve represents the **final limit current curve (load curve)** as defined by standard IEC 60512-5-2.
It therefore bears in consideration the difference between the various connectors, as well as errors in the temperature measurements.
All the load curves presented herebelow include the corrections.



Legend:

Maximum load current (A): value for which the connector reaches the limit temperature of the material at the environmental temperature, intersected on the load curve.
Limit temperature of the materials: value determined by the characteristics of the materials used. The sum of the environmental temperature and the increase of the simbolo ΔT temperature caused by the passage of the current must not exceed the limit temperature of the materials.
Environment temperature limit: the environmental conditions must not exceed this value. It may be know and determines the maximum load current, or may be obtained directly from the load curve.
Base curve: set of current and temperature values obtained from laboratory tests and influenced by the connector's characteristics (number of poles, construction shape, thermal conductivity of the materials, etc.) and the section of the conductor used.
Load curve (limit current curve): obtained from the base curve via the safety coefficient.
ΔT (overtemperature): temperature increase produced by a permanent current circulating through all the poles of a connector coupling; difference between the limit temperature of the materials and the environmental temperature obtained on the limit current curve.

curves

diagram CK 03 poles

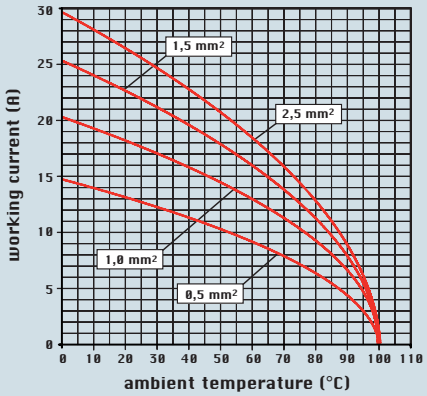


diagram CK 04 poles

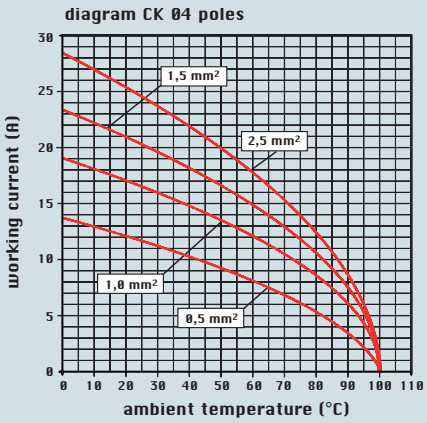


diagram CKS 03 poles

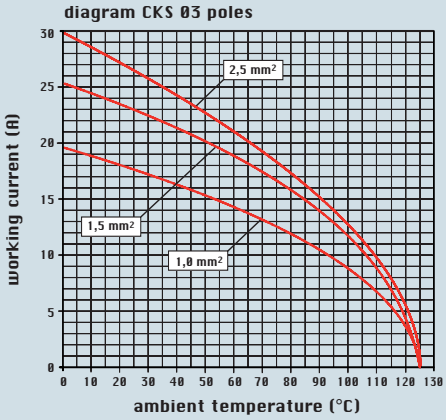


diagram CKS 04 poles