

Rotary Cam Switches

Technical Information Utilisation Categories

Utilisation Categories

Utilisation categories for Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units according to IEC/EN 60947-3

| Type of Current | Utilisation Category | | Typical applications |
|-----------------|----------------------|----------------------|---|
| | Frequent operation | Occasional operation | |
| AC | AC-15A | AC-15B | Controlling electromagnetic load |
| | AC-20A * | AC-20B * | Making and breaking without load |
| | AC-21A | AC-21B | Switching resistive loads including low overloads |
| | AC-22A | AC-22B | Switching mixed resistive and inductive loads, including low overloads |
| | AC-23A | AC-23B | Switching motors and other highly inductive loads |
| DC | DC-20A * | DC-20B * | Making and breaking without load |
| | DC-21A | DC-21B | Switching resistive loads including low overloads |
| | DC-22A | DC-22B | Switching mixed resistive and inductive loads, including low overloads (e. g. shunt motors) |
| | DC-23A | DC-23B | Switching highly inductive loads (e. g. series motors) |

* The application of these utilisation categories isn't permitted in the USA.

Category AC-23 includes occasional switching of individual motors. The utilisation categories in the above table do not apply to an equipment normally used to start, accelerate and/or stop individual motors. The utilisation categories for such an equipment are dealt with the following table:

| Type of Current | Utilisation Category | Typical applications |
|-----------------|----------------------|---|
| AC | AC-2 | Slip-ring motors: starting, plugging ¹⁾ , switching off |
| | AC-3 | Squirrel-cage motors: starting, switching off running motors |
| | AC-4 | Squirrel-cage motors: starting, plugging ¹⁾ , inching ²⁾ |
| DC | DC-3 | Shunt motors: starting, plugging ¹⁾ , inching ²⁾ , dynamic breaking of d.c. motors |
| | DC-4 | Series motors: starting, plugging ¹⁾ , inching ²⁾ , dynamic breaking of d.c. motors |

¹⁾ Plugging is understood to mean stopping or reversing the motor rapidly by reversing motor primary connections while the motor is running.

²⁾ Inching (jogging) is understood to mean energizing a motor once or repeatedly for short periods to obtain small movements of the driven mechanism.

Note: The switching of rotor circuits, capacitors or tungsten filament/discharge lamps shall be subject to special agreements between manufacturer and user.