

IEC Utilization Categories

IEC Utilization Categories for Low Voltage Switchgear and Control Gear			
Current	Category	Typical Applications	Relevant IEC Product Standard (3)
AC	AC-1	Non inductive or slightly inductive loads, resistance furnaces, heaters	60947-4
	AC-2	Slip-ring motors: switching off	
	AC-3	Squirrel-cage motors: starting, switching off motors during running most typical industrial application	
	AC-4	Squirrel-cage motors: starting, plugging (1), inching (2)	
	AC-5a	Switching of electric discharge lamps	
	AC-5b	Switching of incandescent lamps	
	AC-6a	Switching of transformers	
	AC-6b	Switching of capacitor banks	
	AC-7a	Slightly inductive load in household appliances: mixers, blenders	
	AC-7b	Motor-loads for household applications: fans, central vacuum	
	AC-8a	Hermetic refrigerant compressor motor control with manual resetting overloads	60947-5
	AC-8b	Hermetic refrigerant compressor motor control with automatic resetting overloads	
	AC-12	Control of resistive loads and solid state loads with opto-coupler isolation	
	AC-13	Control of solid state loads with transformer isolation	60947-3
	AC-14	Control of small electromagnetic loads	
AC-15	Control of AC electromagnetic loads	60947-3	
AC-20	Connecting and disconnecting under no-load conditions		
AC-21	Switching of resistive loads, including moderate loads		
AC-22	Switching of mixed resistive and inductive loads, including moderate overloads		
AC-23	Switching of motor loads or other highly inductive loads		
AC and DC	A	Protection of circuits, with no rated short-time withstand current	60947-2
	B	Protection of circuits, with a rated short-time withstand current	
DC	DC-1	Non-Inductive or slightly inductive loads, resistance furnaces, heaters	60947-4
	DC-3	Shunt-motors, starting, plugging (1), inching (2), dynamic breaking of motors	
	DC-5	Series-motors, starting, plugging (1), inching (2), dynamic breaking of motors	
	DC-6	Switching of incandescent lamps	
	DC-12	Control of resistive loads and solid state loads with opto-coupler isolation	60947-5
	DC-13	Control of DC electromagnetics	
	DC-14	Control of D.C. electromagnetic loads having economy resistors in the circuit	
	DC-20	Connecting and disconnecting under no-load conditions	60947-3
	DC-21	Switching of resistive loads, including moderate overloads	
	DC-22	Switching of mixed resistive and inductive loads, including moderate overloads (i.e. shunt motors)	
DC-23	Switching of highly inductive loads (i.e. series motors)		

(1) *Plugging - Stopping a motor rapidly by reversing the primary power connections.*

(2) *Inching - Energizing a motor repeatedly for short periods to obtain small incremental movements.*

(3) *IEC Standards must be purchased from the International Electrotechnical Commission*