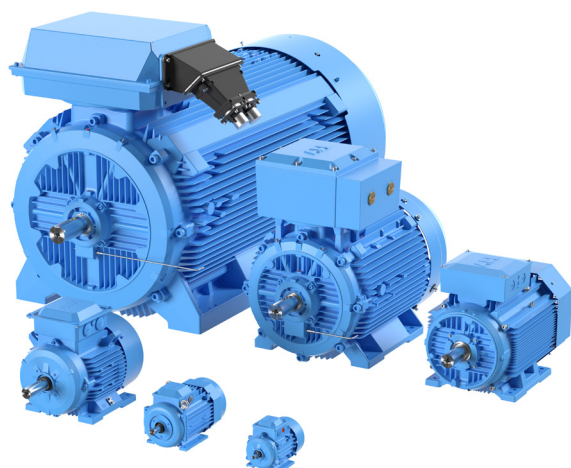


CN MEPS

China national standard GB18613 and CEL007-2021 setting new requirements for low voltage motors



CN MEPS standard GB18613-2020 was released May 29, 2020 to replace GB18613-2012. The implementation will be done June 1, 2021, considering also the registration requirements set by CEL007-2021 that will be published by the China Energy Efficiency Center.

Current standard (valid until 31.5.2021)

Applies to 'normal motors' - single speed, three-phase 50 Hz, 1000 V and below, enclosed self-ventilated, design N, squirrel cage induction motors for continuous duty classes S1 and S3 $\geq 80\%$, general purpose motors or Ex motors.

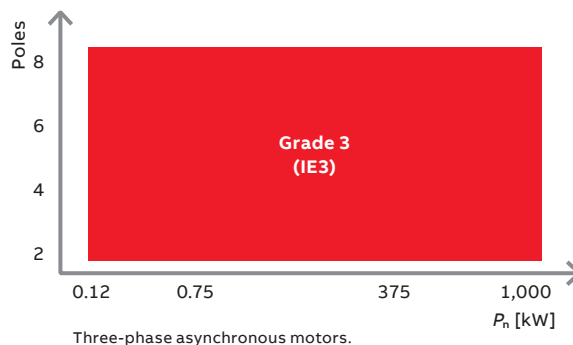
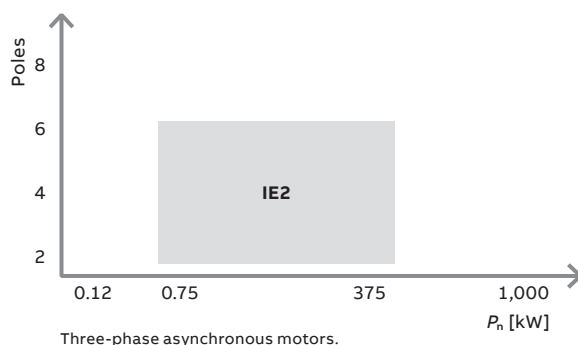
For major exemptions see table next page.

New standard (starting 1.6.2021)

Applies to 'normal motors' - single speed, three-phase 50 Hz, 1000 V and below, enclosed self-ventilated, design N, squirrel cage inductions motors for continuous duty classes S1 and S3 $\geq 80\%$, general purpose or Ex motors and single-phase motors 690 V and below, 50 Hz, 0.01 - 0.37 kW.

GB 18613-2020 standard defines efficiency classes as Grades where the Grade 3 is lowest and equivalent to IE3, Grade 2 equivalent to IE4 and Grade 1 the highest one requiring 20% less losses compared to IE4.

For major exemptions see table next page.



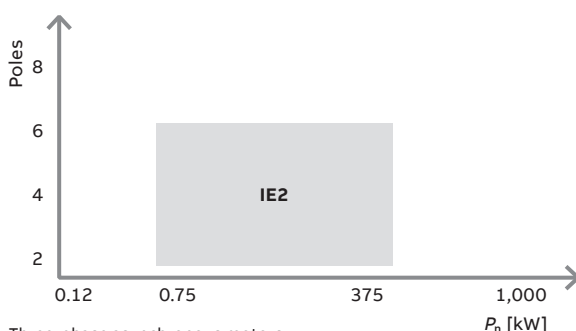
China Energy Label

China Energy Label (CEL) defines rules and scope which need to be registered and marked with China Energy Label.

Current (valid until 31.5.2021)

Applies to 'normal motors' (= single speed, three-phase 50 Hz, below 1000 V, enclosed self-ventilated, design N, squirrel cage induction motor for continuous duty classes S1 and S3 ≥80%, general purpose and Ex-motors.

For major exemptions see table below.

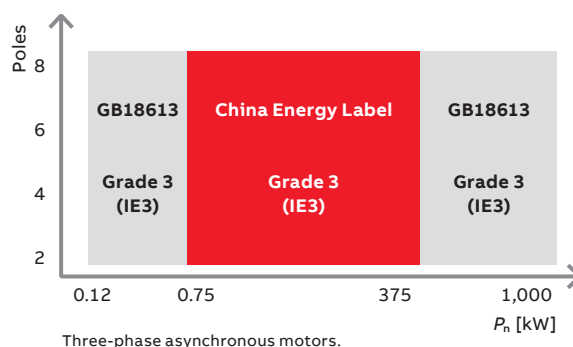


New (starting 1.6.2021)*

Applies to 'normal motors' (= single speed, three-phase 50 Hz, below 1000 V, totally enclosed fan cooled, design N, squirrel cage induction motor for continuous duty classes S1 and S3 ≥80%, general purpose and Ex-motors.

For major exemptions see table below.

* New CEL scope and rules in this page are interpretation to the current CEL submit-for-approval version. The official file is estimated to be released in March-April 2021. Further review, update and communication will be done subsequently.



How standard and China Energy Label are evolving

		Year and minimum efficiency requirements (2012 onward)	
Induction motor ≤ 1000 V		2012-31.05.2021	01.06.2021
≥ 0.12 ... < 0.75 kW	3-phase, 2/4/6 pole	Excluded	IE3
	3-phase, 8 pole	Excluded	IE3
≥ 0.75 ... ≤ 375 kW	3-phase, 2/4/6 pole	IE2	IE3 and China Energy Label
	3-phase, 8 pole	Excluded	IE3 and China Energy Label
> 375 ... ≤ 1,000 kW	3-phase, 2/4/6 pole	Excluded	IE3
	3-phase, 8 pole	Excluded	IE3
Ex motors (Ex mining, Ex tD, Ex nA, Ex d and Ex de, Ex e)	3-phase, 2/4/6 pole	IE2	IE3 and China Energy Label
	3-phase, 8 pole	Excluded	IE3 and China Energy Label
≥ 10 W ... ≤ 370 kW	1-phase	Excluded	IE3
VSD only motors (SynRM, HDP)		Excluded	Excluded
Motors specifically designed for VSD operation, traction or electric vehicles		Excluded	Excluded
Motors completely integrated with mechanical equipment		Excluded	Excluded
Motors with integrated VSD		Excluded	Excluded
Totally enclosed air over motors (TEAO, IC418)		Excluded	Excluded
Totally enclosed non-ventilated motors (TENV, IC410)		Excluded	Excluded
Submersible motors		Excluded	Excluded
Above 1000 m sea level		Excluded	Excluded
Ambient air below -15°C or above 40°C		Excluded	Excluded
Smoke extraction motors (temperature class 250°C and above)		Excluded	Excluded
Water cooled motors		Excluded	Excluded
Multi-speed motors		Excluded	Excluded

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