

Safety Guide for Purchasing Electric Motors

Before you purchase Motors, ensure you are purchasing products that meet the Canadian electrical code requirements, apply to product standards and are certified by a recognized certification body. The consequences of not purchasing certified products can create unsafe working conditions, be a legal liability to your company, and result in increased operational downtimes and costs. Motor Manufacturers members of Electro-Federation Canada developed this checklist to assist customers in purchasing safe and reliable motors that meet safety and quality standards.

Before You Buy:

1. Purchase from a trusted source.

Reputable manufacturers and electrical distributors stand by the products they advertise and sell. Their products are made to the highest standards and comply with testing requirements to ensure you purchase a quality, reliable, safe product.

2. Stay Alert: Product Pricing.

Be wary of pricing that is “too good to be true.” While Original Equipment Manufacturers (OEMs) and distributors may offer sales and special promotions, products generally keep their fair market value. A product’s price under market value often indicates that it may not meet the standards, does not comply with the electrical code, or may not be tested and certified.

Inspect your Purchase:

3. Check for the certification mark.

Look for the certification mark and question products that do not have a certification mark from the Standards Council of Canada (SCC) accredited certification body, such as CSA or UL. Look for counterfeit or knock-off certification marks. Here is a list of certification organizations of repute in Canada. <https://www.scc.ca/en/accreditation/approval-marks-electrical-products-safety>



4. Check product standards specifications:

Quality-made and safe electric motors should meet one of the following specific product standards.

Requirement Category	Rating	Product Standard or Regulation	Certification Identification from Recognized Certification Body (CB)	Standard or Regulation Link
Non –Hazloc (Mandatory)	Motor & Generators of any size	C22.2 No. 100	Check for the Canadian Certification Mark *	https://www.csagroup.org/store/product/C22.2%20NO.%20100-14/
Energy Efficiency (Mandatory)	1-500 HP motors - follow ref link	Energy Efficiency Regulations, 2016 (SOR/2016-311) Energy Efficiency Regulations, 2016 (justice.gc.ca)	Check for the Canadian Certification Mark *	https://laws-lois.justice.gc.ca/eng/regulations/SOR-2016-311/index.html
Class I, II Division 2 (Voluntary/ Self-declared) / Zone 2 or 22 (Mandatory)	Motors and Generators of any size	UL1836 or CE Code IEC Equivalent CAN/CSA C22.2 No. 60079-0 and 60079-7)	Check for the Canadian Certification Mark *	https://www.csagroup.org/store/search-results/?search=all~C22.2%20No.%2060079 https://www.shopulstandards.com/Catalog.aspx
Class I, II Division 1 / Zone 1 (Mandatory)	Motors of any size	C22.2 No. 145 / UL674 (IEC equivalent CAN/CSA C22.2 No. 60079-0 and 60079-1)	Check for the Canadian Certification Mark *	https://global.ihs.com/doc_detail.cfm?document_name=CSA%20C22%2E2%20NO%20145&item_s_key=00024310
Field Evaluation (Mandatory)	Motors and generators typically installed on skids or imported without Canadian Certification Mark.	SPE 1000	Check for the Canadian Certification Mark *	https://www.csagroup.org/store/search-results/?search=all~SPE%201000

* <https://www.scc.ca/en/accreditation/approval-marks-electrical-products-safety>

** The certification mark of an SCC-accredited certification body is evidence that representative sample(s) of the product have been tested/evaluated and found in compliance with applicable safety standard(s) as well as the requirements of the certification body involved. The certification marks do not extend to safe application or product installation and end-use. Manufacturers' guidelines along with applicable codes and regulations must be reviewed for the safe application, installation and use of electrical products.