Your ErP-ready path to sustained business success

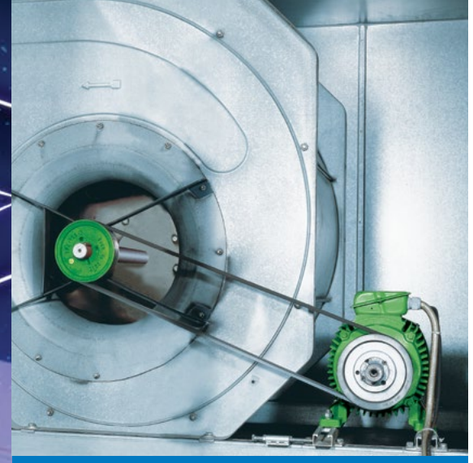
IE3

Embrace energy efficiency today.

Open a world of opportunity tomorrow.

EATON

Powering Business Worldwide



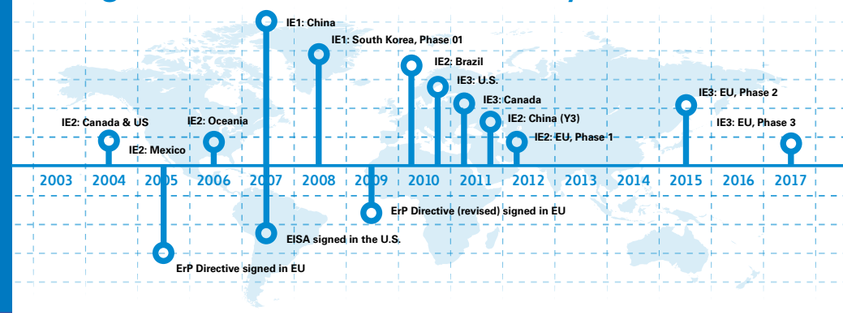
International markets like the U.S. and China are forging ahead using energy efficient motors.

Your customers worldwide expect energy efficient solutions from leading European machine builders.

Offering energy efficient solutions gives you a competitive advantage.

Energy efficiency = business opportunity

Legislative timeline for motor efficiency class transition



Here's how Eaton can provide your competitive advantage

The arrival of the new European Union (EU) ErP (Energy-related Products) Directive affecting electric motors creates a tremendous opportunity.

That's because around two-thirds of any enterprise's electrical power consumption is consumed by electric motors.

By introducing industry-leading levels of energy efficiency and compatibility to motor components, Eaton has given you an immensely strong sales proposition for end-users.

Enjoy the benefits of the ErP Directive by starting, protecting, and controlling the motor with Eaton technology–deliver regulatory compliance, plus substantial energy and cost savings.

World-class reliability, quality and safety levels come as standard.

That all adds up to a powerful way both to win new business and cement long-term customer relationships.

30%

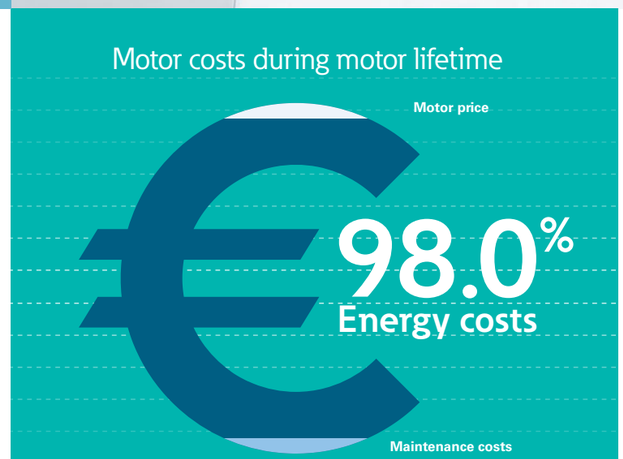
Taking one major European country—Germany—as an example, industry is responsible for 30% of the nation's energy consumption.

90%

More than 90% of this energy is consumed in process heat and mechanical energy.

65%

Electric motors are responsible for around 65% of the total electrical power consumed in industrial production.



Lifecycle costs (excl. installation and disposal costs) of an 11 kW motor with a lifetime of 15 years. Source: Diam-consult, taken from Almeida AT de, Ferreira FJTE, Fong J, Fonseca P, EUP Lot 11 Motors, Final Report, Institute of Systems and Robotics, University of Coimbra, February 2008

More productivity: Less energy and less cost

20%

Energy savings of 20% can be generated by considering a holistic system solution rather than individual components.

The commercial benefits are matched by the environmental savings. Eaton believes that through more efficient electric motors, 11% of greenhouse gases produced by industry can be saved.

Your customers currently spend around 20 times more on running electric motors than they do on buying them.

Together, we can turn those costs into savings, helping to re-energize their business.

Eaton IE3-ready motor starters and drives can be combined with IE3 motors to boost productivity and energy efficiency. These solutions are paying for themselves within three years on average.

With an anticipated lifetime of 15 years, that gives organizations 12 years of savings to reinvest.

That's good for end-users – and a compelling argument for your sales teams.

Solution map

Perhaps uniquely, Eaton has created an ErP-compliant offer for starting, controlling, and protecting more energy efficient electric motors: an ultra-reliable range of IE3-ready contactors, motor-protective circuit breakers and motor starters.

For variable speed applications, we've also introduced a completely new product category with the PowerXL™ DE1 variable speed starter– the simplest way to manage IE2 and IE3 motors and future-proof your operations. For a smooth start, Eaton also offers soft starters and a broad range of variable frequency drives.

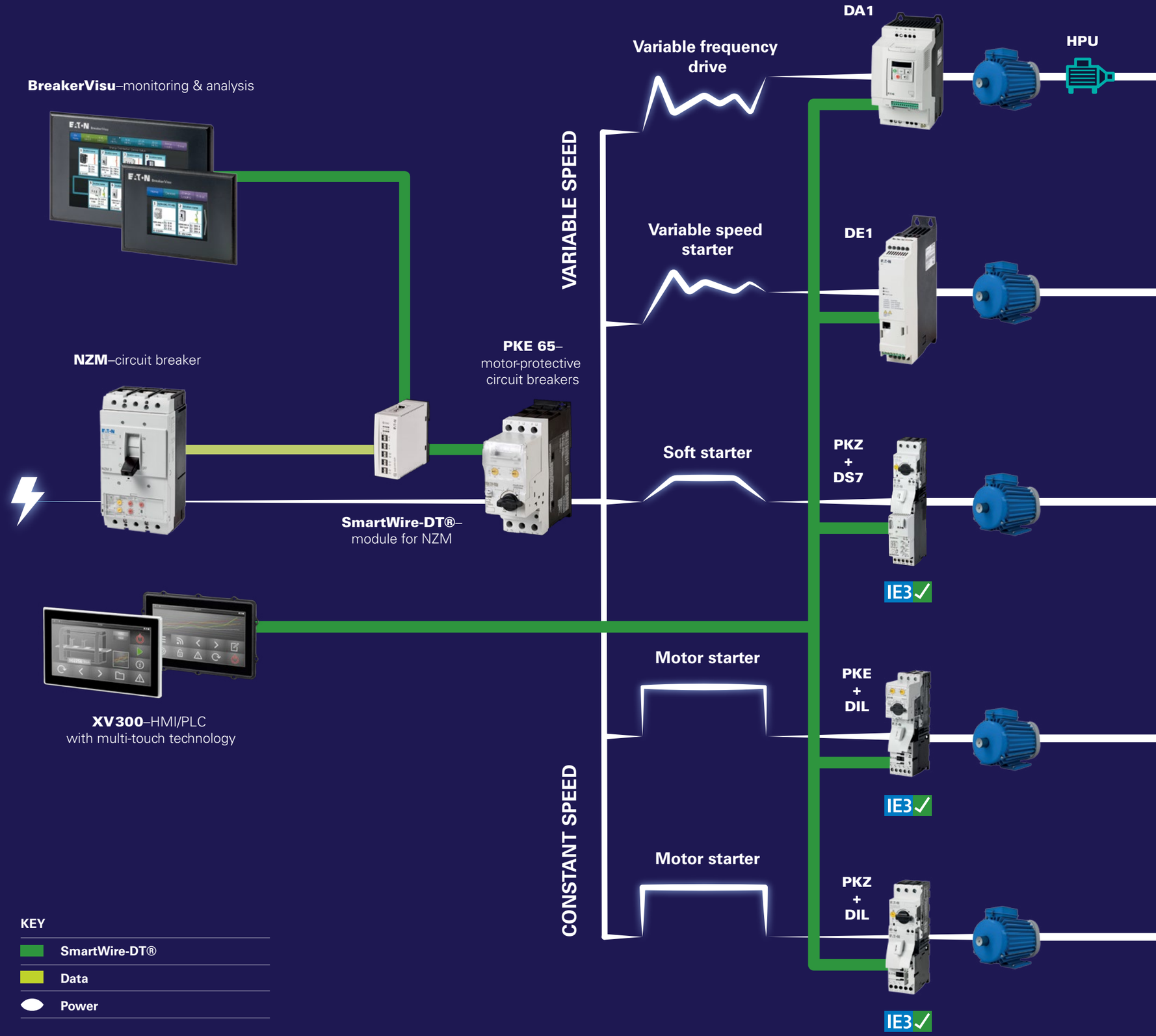
All these solutions can be cleverly combined with Eaton's SmartWire-DT® intelligent wiring system.

This simple wiring system reduces wiring costs up to

85%

reduces engineering time and increases design flexibility, increases productivity and uptime, and simplifies maintenance.

It helps to improve the performance and availability of the machine. And it transfers data about energy consumption to the BreakerVisu system where it is visualized and logged.



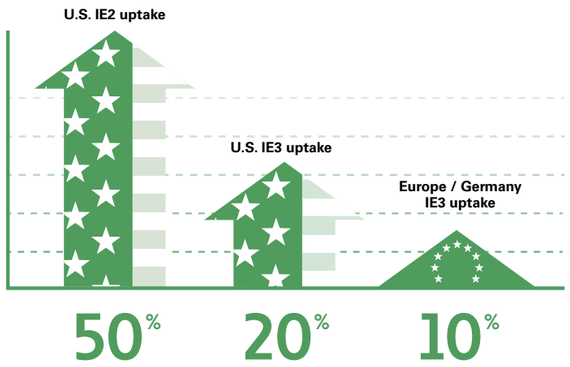
Eaton: Your solutions partner

Eaton's extensive range of ErP-ready solutions turns regulatory obligations into an opportunity to improve energy efficiency and reduce costs.

Our range of IE3-ready motor starters, soft starters, and our variable speed starters and frequency drives standardize compliance, deliver world-class reliability, and remove compatibility issues.

You can find white papers, background information, tools, and product information on: **Eaton.eu/moem-ee**

IE2 + IE3 uptake in the U.S. (since 2004) vs. IE3 uptake in Europe



90% of European businesses could start saving on their energy bill today.

20% IE3 motors account for 20% of the US market.

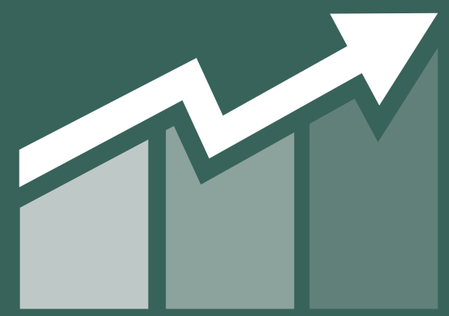
The new PowerXL™ DE1 variable speed starter

combines ease of use and maximum reliability with variable motor speed and improved machine energy efficiency. This new device category is the first to close the gap between conventional motor starters and variable frequency drives and to combine the advantages of both in a single unit.

The DS7 soft starter

is ideal for applications like pumps, fans, and small conveyor belts. It can easily be combined with PKZ or PKE motor-protective circuit breakers. DS7 units not only replace the mechanical contactor, but also add a "soft motor startup" function. Additional advantages include longer service intervals and reduced operating cost.

In Europe, the figure is just **10%**



This suggests massive market potential for those who turn regulatory change into sales opportunities.

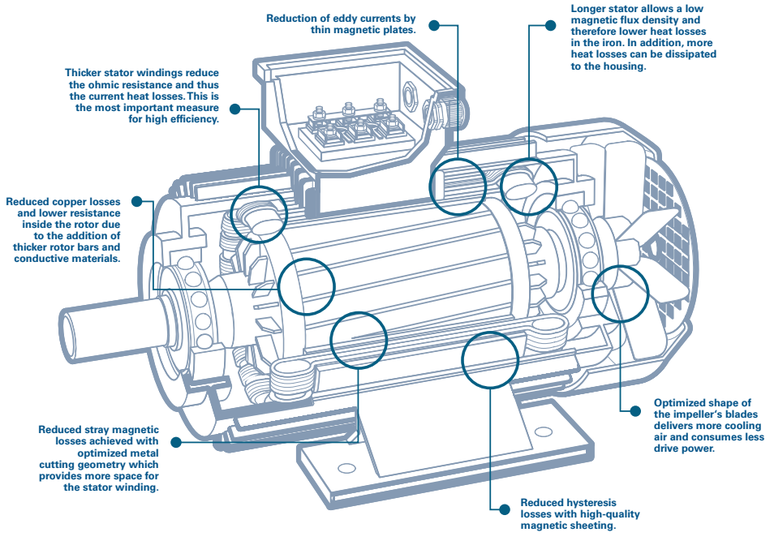
The PowerXL™ DA1 variable frequency drive

is designed for the machine and system building industry. It is characterized by its enormous flexibility in terms of communications protocols, a function block editor (PLC) that makes it possible to configure the drive as necessary for specific applications, and a powerful vector control mode for highly dynamic applications.

The legislative technical background

IE3

Increasingly, manufacturers will have to offer high-efficiency motor components to ensure true IE3-readiness. In the U.S., IE3 motors already have a market share of 20%. China is currently working on new regulations to introduce IE3 motors.



Be on the safe side with tested "IE3-ready" motor starters

Eaton motor starters have been specifically tested for operation with IE3 motors. The results? The higher inrush currents produced by these motors pose no problem for our motor starters, meaning that there is absolutely no risk of having to deal with faster wear and increased maintenance. You can simply continue to use your Eaton motor starters as usual and switch to protect your IE3 motors up to 375kW today.

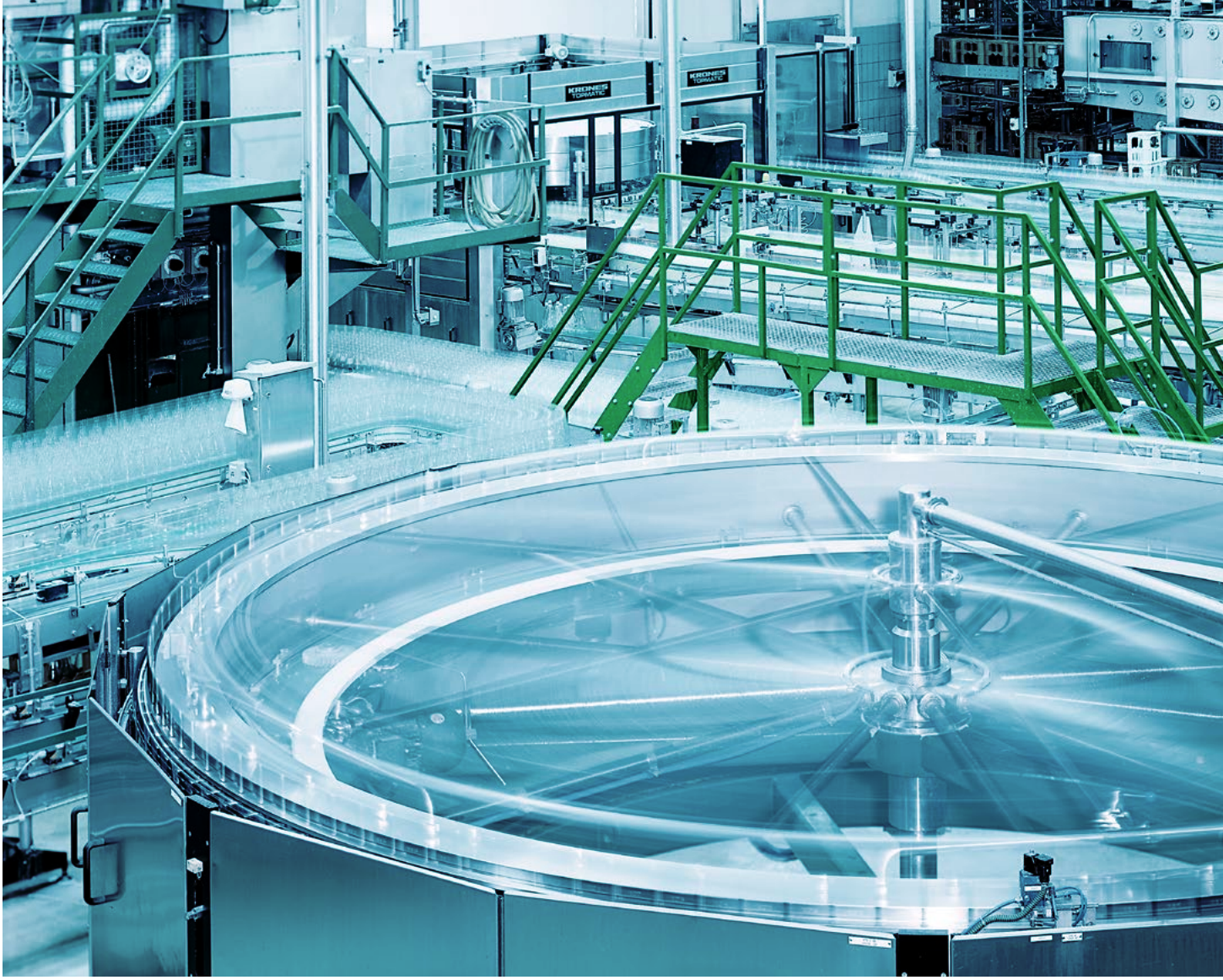
For detailed information, please visit our IE3 page: **Eaton.eu/ie3**

Higher starting currents in IE3 motors mean that corresponding motor controllers like contactors and motor-protective circuit breakers need to be modified.

PKE & PKZ motor starters

The new ErP (Energy-related Products) Directive requires that – from 1 January 2015, motors with a rated output of 7.5–375kW must meet IE3 standards (or IE2 standards while being coupled with a variable speed drive).

From 1 January 2017, this will apply to all motors with a rated output of 0.75–375kW.



Energy efficient
Superior quality
Fully integrated
Reassuringly compliant
Future-proofed

Embrace energy efficiency today.
Open a world of opportunity tomorrow.

Find your Eaton solution partner on ***Eaton.eu/contact.***

Eaton Industries Manufacturing GmbH
EMEA Headquarters
Route de la Longeraie
71110 Morges
Schweiz

4 015081 773893

EATON
Powering Business Worldwide

Form No. BR042001EN
July 2015
Printed in Germany
Article No. 182462

Follow us on social media to get the latest product and support information.