





The sign of reliability



For more than 100 years, ABB has developed a reputation for marketing, designing and manufacturing the most reliable industrial electric motors available. Azima, Inc. confirmed this in their Reliability Rating Report in which they stated that "ABB produces the majority of models scoring highest for reliability in 2018."

When reliability counts, look for the sign of reliability from ABB.

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Safer design faster installation





Easy to remove, quick to install, and highly reliable in the harshest environments, ABB's new Dodge® Safety Mount spherical roller bearing is ideally suited for a variety of demanding industrial applications. This innovative solution combines the advantages you rely on in today's Dodge Imperial bearings with features that improve the safety and productivity of your operation.

Safe, Fast, Reliable.

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Most PLCs will do, but only some will Domore:



The Do-more! BRX PLC series is loaded with hardware and software features that provide an extensive toolbox to satisfy even the most demanding projects.

- · Four form factors to choose from
- Serial/Ethernet comm ports included on most models (with support for Modbus RTU/TCP, ASCII, EtherNet/IP, MQTT and HTTP)
- Built-in discrete, analog and high-speed I/O with advanced motion control
- · Internal RAM and microSD data logging
- Free PLC programming software with over 200 easy-to-use instructions, integrated video help, and a convenient project simulator

Check out what's new:

- NEW! Temperature combination modules combine RTD or thermocouple inputs with current outputs for monitoring and control from the same module!
- NEW! Two high-speed I/O expansion modules (BX-HSIO1 and 2) and a serial communications module (BX-SERIO) have been added, giving BRX PLCs even more motion and communication capabilities
- NEW! High-density 16-channel analog input modules and space-saving combination analog in/out modules
- NEW! JSON PARSE/BUILD instructions, along with the HTTP protocol addition, enable communication between BRX PLCs and data rich web servers
- NEW! The DMX512 protocol allows BRX PLCs, using the BX-SERIO module, to control stage/theater lighting and effects

www.BRXPLC.com











Switch on Over for Value

AutomationDirect has great deals on limit switches!

Low-cost Limit Switches

We have a vast inventory of limit switch options to choose from. You can always trust AutomationDirect for dependable presence sensing solutions at affordable prices!

- Precision Limit Switches
- Compact Limit Switches
- Heavy Duty Metal IEC Limit Switches
- Double Insulated Plastic IEC Limit Switches
- Plastic Compact Limit Switches
- Pneumatic Limit Switches



Eaton NEMA Limit Switches



Heavy Duty Metal IEC Limit Switches



Precision Limit Switches



Research, price, buy at:

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Plastic Compact Limit Switches

Starting at \$15.00

- Compact size with standard 25 mm hole spacing
- 1 N.O. and 1 N.C. contact on all units
- Available with 1m cable or 5-pin M12 quick disconnect (right exit)
- Double insulated plastic housings
- IP67 dustproof/water-resistant



Compact Limit Switches with Halogen-free Cable

Starting at \$24.00

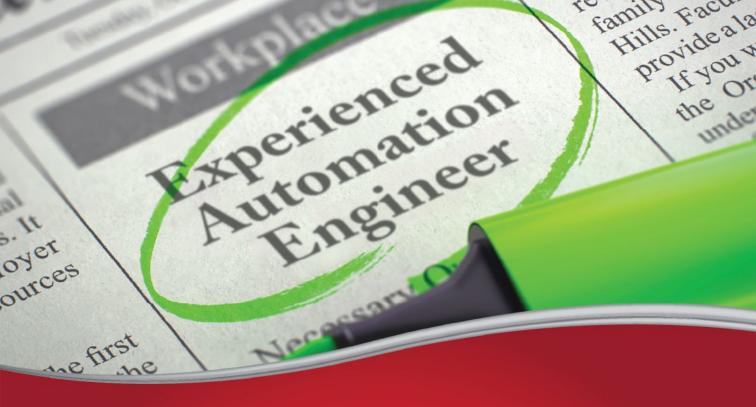
- Compact size with standard 25 mm hole spacing
- 1 N.O. and 1 N.C. contact on all units
- 1m halogen-free cable
- Die-cast metal housings
- IP67 dustproof/water-resistant











Need experience?

Problem: You can't recruit or retain experienced motion control engineers.

Solution: If you have new engineers, our solution modules empower them to quickly and easily perform complex automation. No experience needed!

If you're short on engineers, we can provide a complete package, including project planning, software, components, commissioning, and worldwide support.

Either way, we got this!







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2019 CAREER & SALARY STUDY:

Learning about the automation engineer

he Control Engineering 2019
Career & Salary Study took a
deep dive into the earnings of
today's automation engineering
professionals (see the report from May
2019). Below are background information
findings from this study as they relate to
these professionals:

- **1.** Experience: The average automation engineering professional has worked in their industry for 27 years, has worked for their current employer for 16 years, and is 54 years old; only 14% are under the age of 40 and 25% are in their 60s.
- **2.** Education: Fourteen percent of automation engineering professionals have earned an associate's degree as their highest form of education; 47% have achieved their bachelor's degree, 16% have a master's degree, and 3% have a doctoral degree. The top disciplines studied by these professionals are electrical or electronic engineering (49%), controls engineering (25%) and mechanical engineering (25%).
 - **3.** Management role: Automation

engineering professionals reported an average of 374 employees at their location, with 41% claiming fewer than 100, and 17% stating 1,000 or more. Fiftyeight percent of these professionals are responsible for managing or supervising one or more employees; the average number of employees managed/supervised is 10.

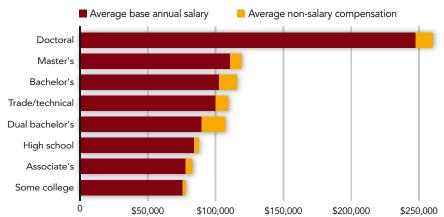
4. Attitude: When asked how they feel about their current job, 48% of automation engineering professionals said they love going to work every day; 40% are content and glad to have a job; 10% find their job tolerable, but are open to new opportunities; and 2% are actively seeking new positions. **ce**

At www.controleng.com/research find more. **Amanda Pelliccione** is the research director at CFE Media and Technology.



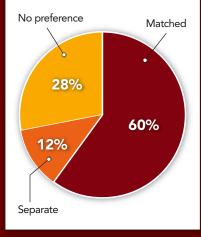
Control Engineering research mentioned on this page are available online. Also see ONLINE TRAINING at www.controleng.com.

Average compensation by highest level of education



With almost half of automation engineering professionals having achieved a bachelor's degree as the highest level of education, those respondents' average total take-home pay in 2018 was \$115,793. Source: Control Engineering

Purchasing servo/ stepper drive products



Six in 10 engineers prefer to purchase servo and/or stepper drive controller products as matched units; 12% prefer them separate. Source: Control Engineering 2019 Motor Drives Study

35% of end users have up to 5 robot (units) operating on site or sites for which they are responsible. Source: Control Engineering 2019 Robotics Study

1 in 5 end users report that their controllers use custom software communications.
Source: Control Engineering 2018
Programmable Controllers Study

47% of end users report receiving a yearly bonus based on their personal performance. Source: Control Engineering 2019 Career & Salary Study

More research

Control Engineering covers several research topics each year.
All reports are available at www.controleng.com/research.

Maximum performance, minimum footprint

The ultra-compact C6030 Industrial PC



www.beckhoff.us/C6030

With the extremely powerful C6030 ultra-compact Industrial PC, Beckhoff covers the range of highly complex, performance-oriented applications with space-saving automation hardware. Whether extensive axis controls, complex HMI applications, extremely short cycle times or large-volume data handling: the computing power of the C6030 can take on almost any automation and visualization task.

- processor: up to Intel® Core™ i7 with four 3.6 GHz cores
- interfaces: 4 Ethernet, 4 USB, 2 DisplayPort
- main memory: up to 32 GB DDR4 RAM

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