

**Preventing collisions.
Increasing throughput.
Simplifying integration.**

G20 ZPA Motor Control Module



Your automation, our passion.

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G20 ZPA Motor Control Module: Easy, Reliable Operation

G20 ZPA modules from Pepperl+Fuchs offer simplicity and flexibility. Integrated logic allows the modules to independently control 24 V DC motor rollers in conveyor systems without a higher-level control system. Application-specific settings can be made directly on the modules and operation is simple.

Simple Integration and Commissioning

All settings required for operation can be made using a rotary switch on the back of the module. Eight speeds, five start/stop ramps in combination with the conveying direction, and seven application-specific operating modes can be set quickly and easily. The module's compact design enables space-saving, tool-free mounting directly onto conveyor line support rails—required connection cables are already integrated into the module. This makes connecting the motor rollers and sensors and wiring the module especially easy. The intelligent modules operate using neighborhood detection and are immediately ready for operation once connected.



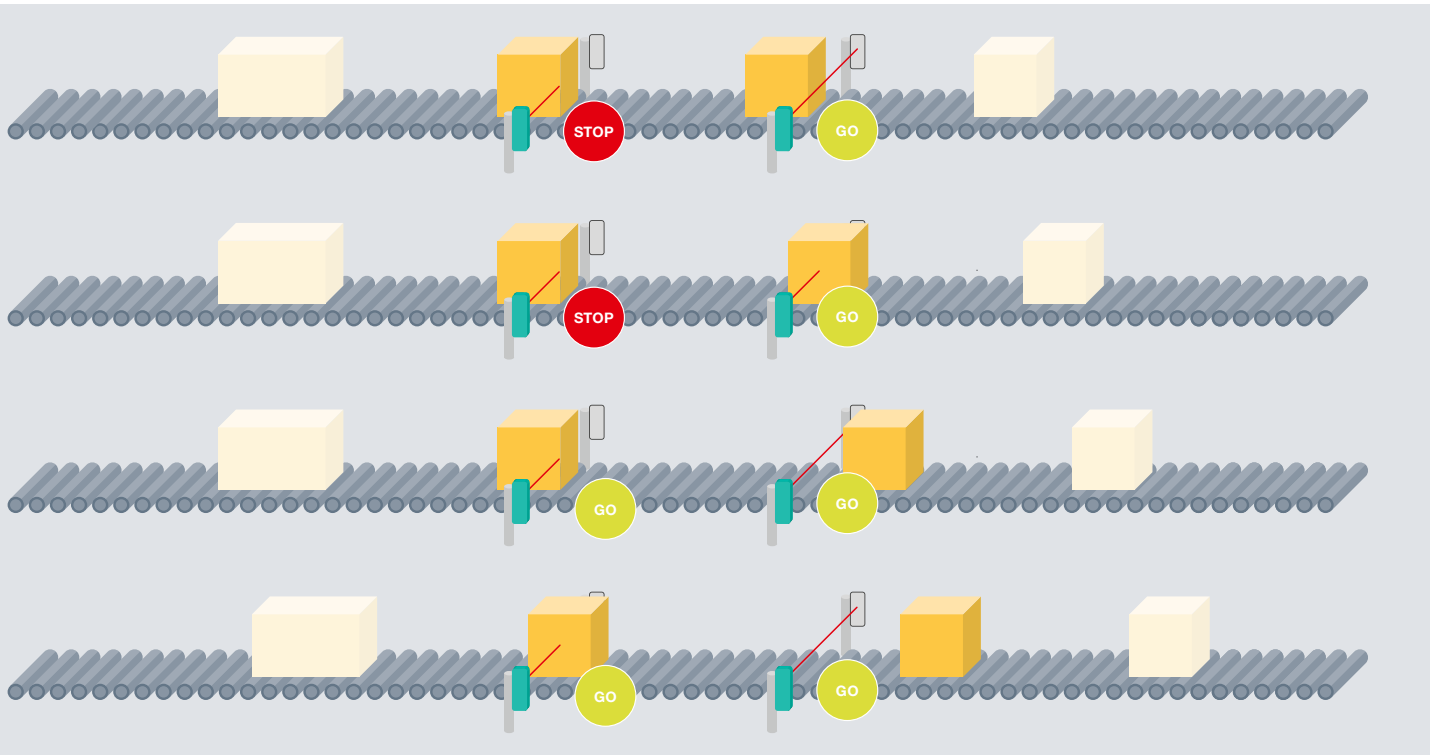
| Technical Data | VAZ-2E2A-G20-ZPA1 |
|--|---|
| Inputs/outputs | 2 inputs (M8 screw) and 2 outputs (M8 snap-on) |
| Compatible motor rollers | Interroll EC310 Rulmeca 135/138 Series |
| Rated voltage | 18 ... 30 V DC |
| Rated operating current | Inputs = 500 mA Outputs = 2 A (max. 5 A < 2 s) |
| Temperature range | -30 °C ... +60 °C |
| Mechanical vibration and shock resistance | 30 g, 11 ms (3 shocks)/ 10 g, 16 ms (1,000 shocks) |
| IP degree of protection | IP65 |
| Cable length | Inputs/outputs = 1 m Zone connection = 1.5 m |
| Dimensions | 130 mm x 53 mm x 27.5 mm |

Highlights

- Smooth processes with zero pressure accumulation control module for 24 V DC motor rollers
- Integrated logic enables simple plug-and-play commissioning
- Seven operating modes enable application-specific settings
- Modular, preassembled conveyor segments—power cable installation via piercing technology is the last step
- Simple integration—all required connection cables are integrated into the module
- ZPA analyzer tool provides easy access to module settings and diagnostics

Controlling Material Flow, Optimizing Workflows

Fast lead times, efficient and reliable workflows: demands in the material handling and logistics industry are high. To avoid collisions, intelligent G20 ZPA motor control modules constantly monitor material flow and ensure smooth processes in roller conveyor systems.



A package may only move downstream if the zone that follows is empty. Zone sensors continuously monitor the flow of packages.

Zero Pressure Accumulation: Reliable, Cost-Effective Buffer System

Conveyed products must be monitored to prevent package collision and maintain interruption-free workflows. Zero pressure accumulation (ZPA) ensures that proper spacing is maintained between packages, depending on their size and weight. These intelligent conveyor systems are useful even when manual process steps and individual cycle times are involved.

In addition to preventing package collision, ZPA also reduces energy costs. The conveyor system only powers on when necessary, eliminating the need for buffer conveyors and continuous transport.

Reliable Transport from Zone to Zone

With ZPA, conveyor lines are divided into zones to prevent conveyed products from colliding. If a downstream zone is occupied, a sensor signal prevents the package in the previous zone from moving forward. This ensures a predefined minimum distance between materials. If packages at the end of a line are removed mid-process for manual steps like labeling or attaching a strapping band, all further packages will only travel to the next zone and will maintain a set distance from one another.



Application-Specific Settings Increase Flexibility

Conveyor logic requirements vary from application to application. This logic is determined by the respective operating mode of the G20 ZPA module. For instance, a predefined distance can be established for heavy or fragile materials. Via block release, the spacing between packages can be minimized and throughput increased.

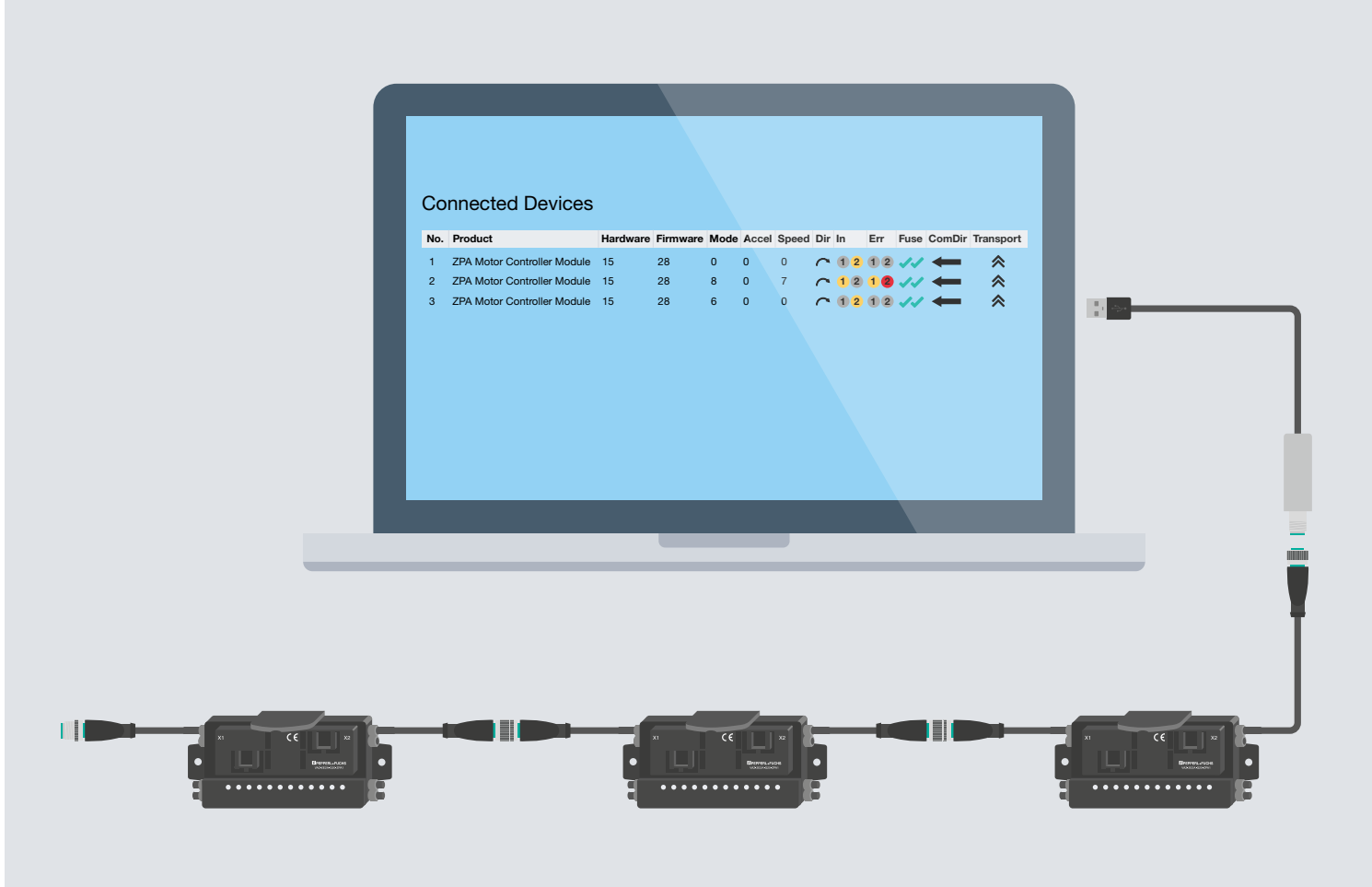
For highly complex applications, the system can be operated via PLC with a separate logic for controlling the modules.

Modular Preassembly Enhances Efficiency

The G20 ZPA module's innovative installation concept allows OEMs to preconfigure modular conveyor segments. Segments can then be assembled into a system on-site with minimal installation effort. After all modules are connected, the power cable is simply snapped into the modules along the conveyor belt via piercing technology and the system is ready for operation. This reduces commissioning time and enables standardized manufacturing processes.

Easy Access to Settings and Diagnostics

Running diagnostics is easy with the ZPA analyzer accessory tool. Connect the analyzer to the last module in a series to see an overview of settings and diagnostic information. This provides access to information about module configuration, operating mode, and input status. Defective modules can also be easily identified.



AS-Interface Modules

Some applications require integration into a preexisting AS-Interface system. Pepperl+Fuchs offers separate G20 series motor roller control modules for this purpose. These models have the same innovative housing and installation as the ZPA modules. In the final installation step, the AS-Interface cable is connected alongside the power cable via piercing technology.

For more information about all models, visit:
www.pepperl-fuchs.com/pf-g20

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