

R360 CabinetController (truck, off-highway, railway)



For large mobile machines cabins for operators are often used. In the environment around the driver's workplace many signals, e.g. from switches, joysticks and signal indicators are generated. To ensure a low-cost connection of these signals to the process controller, they are collected at a central point, preprocessed

and transferred via CANopen.

The CabinetController has been developed for this application. Its flat design enables integration in dashboards and operating panels. To connect the switches, sensors and actuators all important potentials are brought out to the connectors. But the CabinetController is also used in small compact machines. Here the controller is often directly installed in a control cabinet. Therefore a high protection rating and robust housing are not required. All other important data of a mobile controller comply with those of the other controllers from the R360 family.

The core of the controller designed according to the applicable standards for electronics for mobile applications is a modern 40-MHz processor. Monitoring and protection functions enable safe operation even under extreme operating conditions.

By means of the application software, the inputs and outputs can be configured to adapt to the respective application.

Depending on the type of input, a configuration as digital, frequency or analog input with diagnostic function is possible. In addition, the evaluation of positive and negative digital input signals is supported by some of the inputs. The analog inputs enable current or voltage measurement and use as digital input.

The outputs can be operated as digital or PWM output. In addition, the control electronics provide high-current outputs with diagnostic capability and overload protection.

The user can easily integrate all functions in the application program via programming to IEC 61131-3.

R360 CabinetController, CR0303

- Mechanical resistance to extreme shock
- Supply voltage 10 V_{DC} to 32 V_{DC}
- 16-bit micro-controller (C167 40 MHz) for short cycle times
- Increased functional reliability by means of permanent check sum test of the program and the system
- Load-dump resistance
- Monitoring and measurement of the supply voltage and the device temperature
- Wire break and short circuit monitoring for all I/Os
- 2 CAN interfaces with layer 2 and CANopen protocol for program download and communication
- Serial EIA-232 (RS-232) interface for program download and communication
- 8 analog inputs, can also be configured as:
 - Analog input, voltage
 - Analog input, current
 - Digital input
- 8 digital inputs
- 4 digital inputs, can also be configured as:
 - Inputs for negativ signals
- 4 digital inputs, can also be configured as:
 - Frequency inputs
- 8 digital outputs (4 A), can also be configured as:
 - PWM output
- 4 digital outputs (4 A)
- 10 high current digital outputs (10 A)
- Free programming to IEC 61131-3 with the standardised languages function block diagram (FBD), ladder diagram (LD), instruction list (IL), sequential function chart (SFC), structured text (ST)
- CE, e1 type approval, approval for railway applications (EN 50155)

Contact

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Features

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|------------------------------------|--|
| NMT | NMT slave NMT master |
| Error control | Node guarding Life guarding Heartbeat producer |
| Boot-up | Yes |
| Node ID range | From 11 to 127 |
| Node ID | Hardware switch Software switch Proprietary |
| CANopen bit-rates | 20 kbit/s 50 kbit/s 125 kbit/s 250 kbit/s 500 kbit/s 800 kbit/s 1 000 kbit/s |
| Type of bit-rate adjustment | None |
| RPDOs | 512 |
| TPDOs | 512 |
| PDO modes | Event-triggered Triggered by event-timer Synchronous (acyclic) |
| PDO linking | Yes |
| PDO mapping | Dynamic |
| SDO server | 1 |

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|-----------------------------|---|
| SDO client | 1 |
| Emergency producer | No |
| Emergency consumer | 127 messages |
| Sync producer | Yes |
| Sync counter | No |
| Time stamp | No |
| Additional functions | Self-starting device PLCopen/IEC 61131 function blocks |
| CANopen version | CiA 301 V 4.0.2 |
| Frameworks | CiA 302 |
| Device profiles | <p>CiA 405: CANopen interface and device profile for IEC 61131-3 programmable devices</p> <p>CiA 413: CANopen device profile for truck gateways</p> <p>CiA 422: CANopen application profile for municipal systems</p> <p>CiA 444: CANopen device profiles for container-handling machines</p> <p>CiA 401: CANopen device profile for generic I/O modules</p> <p>CiA 436: CANopen application profile for construction machineries</p> <p>CiA 455: CANopen application profile for drilling machines</p> |
| Certified | No |
| Availability | In stock |