eControl nano

Multifunctional and small control unit

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The small control system eControl nano with 3.5" touch display, front-side IP67 and numerous communication interfaces provides multiple applications in industrial environments and supports you targeted and economically at your control tasks.

Key Features

- 3.5" touch display

- 2× CAN interface acc. to ISO 11898

- Microcontroller Cortex M4 and M0

- Integrated microSD slot for up to 32 GB

- Programming in C (HAL is available) or CODESYS V3

- Modular expansion options

- Protection class IP67 on the front side

eControl nano – modular, flexible and robust

The smallest unit of the eControl product family is equipped with a powerful microcontroller with 204 MHz for signal processing and a co-processor which handles the IOs and control processes. eControl nano can be performed conveniently over a 3.5" touch display. The screwable front-installation frame with integrated recirculating seal ensures easy mounting and front-side IP67 protection the necessary protection in harsh environments. On memory side there are 1 MB Flash memory, a remanent memory with 32 KB and a microSD slot for up to 32 GB of additional storage volume integrated.

Numerous interfaces and further functions

The fanless system is equipped with two CAN interfaces according to ISO 11898, one CAN channel is galvanically isolated. Moreover the control unit has an Ethernet, RS232 (TTL) and USB interface, as well as four electrically isolated digital inputs and relay outputs. An integrated temperature sensor, real-time clock and power fail detection are also implemented. The modular principle enables optional adjustments and quick reactions to custom requirements.

Technical Data

CPU	Cortex M4 with 204 MHz and Cortex 40
RAM	up to 16 MB
Memory	1 MB
Expandable storage	microSD card up to 32 GB
TFT-Display	3.5"
Resolution	320×240
Touch	resistive
Ethernet	10/100 Mbit/s
USB	1× USB 2.0
CAN	2× CAN interface acc. to ISO 11898, galv. isolated up to 1 Mbit/s (without 20 Kbit/s and 800 Kbit/s)
Serial interfaces (debug)	1× RS232 (TTL)
Digital inputs	4× DI, 24 V DC / max. 29 V DC; max. input current 2.1–2.6 mA
Relais outputs	4× RO, 230 V AC/ 1 A; max. switching capacity 250 V AC
Real-time clock	integrated (buffered)
Dimensions (l×w×h)	163.5 mm × 117.5 mm × 50 mm
Storage temperature	−20 °C up to +65 °C
Operating temperature	0 °C up to +50 °C
Temperature sensor	integrated
Humidity	20 % up to 95 % non-condensing
Protection class front	IP67
Supply voltage	24 V DC ±20 %
Power fail detection	Measurement of the supply voltage (threshold at 18.6 V)

Pin assignment

Clamp block DI

1	+24 V DC
2	0 V DC
3	0 V digital 1+2
4	Digital input 1
5	Digital input 2
6	0 V digital 3+4
7	Digital input 3
8	Digital input 4

CAN

1	CAN L (low)
2	CAN H (high)
3	CAN shield
4	CAN GND

Clamp block RO

1	Relay 1 maker
2	Relay 1 common contact
3	Relay 2 maker
4	Relay 2 common contact
5	Relay 3 maker
6	Relay 3 common contact
7	Relay 4 maker
8	Relay 4 common contact

Order information

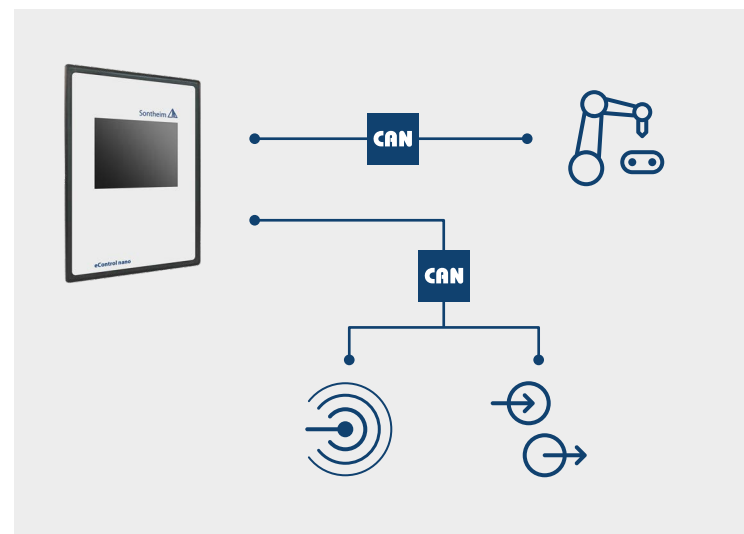|	
V966370200	eControl nano

Programming in C or CODESYS V3 – including HAL and finished graphic libraries

The programming of the controller is done in C (a HAL is available), you benefit from free configuration, parameterization and programming possibilities. With emWin from Seeger, libraries for a graphical user interface (GUI) are already available. Optionaly eControl nano can also be programmed with the runtime system CODESYS V3 according to IEC 31131-3.

As a specialist in automation technology, we offer a variety of robust IO modules in aluminum cases or as slim light versions. The perfect complement to eControl nano is the modular IO module with 32 digital and four analog IOs. Up to six more expansion modules can be added.

Example of an automation application

Controlling, operating and monitoring – eControl nano as a link between control and sensor/actuator level.

Mobile Automation

Industrial Automation

Diagnostics

Connectivity

We are looking forward to your enquiry!

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