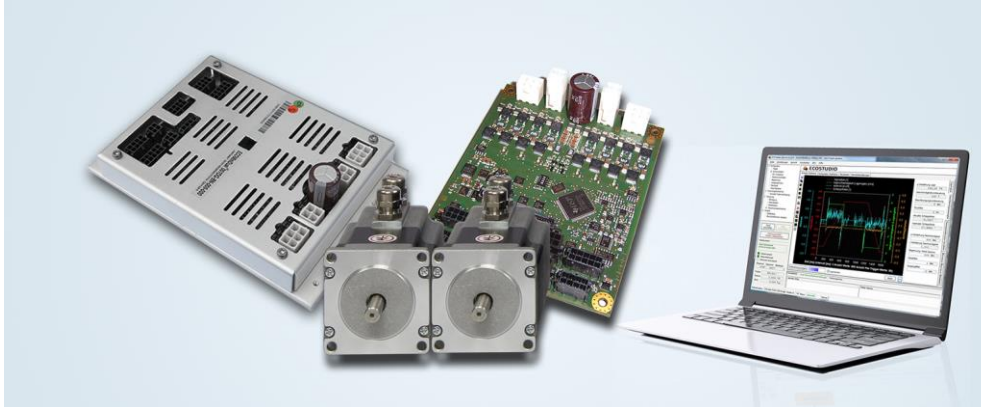


Servo amplifier ECOMiniDual

2-axes device as PCB solution, with optional housing



CANopen



Very compact

Circuit board for direct integration into the machine, optionally with protective housing / EMC housing



Cost-efficient alternative

Implemented sequences replace smaller controllers



Reliable connectivity

CANopen, RS232



Easy commissioning

Intuitive parameterization and commissioning via JAT engineering software ECOSTUDIO®



Numerous I/O

12 digital inputs, 6 digital outputs

Power supply:

24 ... 60 V_{DC}

Control of:

2-phase ECOSTEP® motor with small output, e.g. 17H and 23S series as well as stepper motors

2 Encoder interfaces

Position feedback

Incremental encoder RS422

Interpolating operation via CANopen

Connections via Molex connectors:

Mini-Fit, Micro-Fit

Servo amplifier ECOMiniDual

→ Technical data

DC supply

| | | |
|----------------------|--------------------|-----|
| Rated power supply | [V _{DC}] | 60 |
| Rated installed load | [W] | 260 |

Data of output power stage per axis

| | | |
|-----------------------------------|---------------------|-------------|
| Effective phase current (maximum) | [A _{eff}] | 7,5 (5s) |
| Phase current (maximum) | [A _{DC}] | 5,3 |
| Rated output current | [A _{eff}] | 2,5 |
| Output voltage (maximum) | [V _{DC}] | 60 |
| Rated output voltage | [V _{DC}] | 60 |
| Overvoltage shutdown | [V _{DC}] | 75 |
| Installed load (maximum) | [W] | 600 |
| Rated installed load | [W] | 120 |
| DC link capacity | [μF] | 220 |
| Energy feedback | [Ws] | 0,2 |

Ambient conditions

| | | |
|---|-----------------------|--------------|
| Class | 3K3 acc. to EN 50178 | |
| Storage temperature | [°C] | -10 ... +70 |
| Operation temperature | [°C] | +5 ... +40 |
| Degree of humidity, non-condensing | [% relative humidity] | 95 (maximum) |
| Installation altitude above sea level | [m] | < 1500* |
| Mounting position | Arbitrary | |
| Protection class | IP00** | |
| *) with no power losses | | |
| **) IP20 with optional protective housing | | |

Logic supply

| | | |
|---|-----|----------------|
| Logic supply voltage | [V] | 24 (18 ... 30) |
| Input current at 24 V _{DC} (maximum) | [A] | 0,3* |

*) without external loads like digital I/O or encoders

Digital inputs/outputs

| | | |
|----------------------------------|------|-----------------------------|
| 12 digital control signal inputs | [V] | LOW 0 ... 7, HIGH 12 ... 30 |
| | [mA] | 10 (at 24 V) |
| 6 digital control signal outputs | [V] | 24 |
| | [A] | 0,5 |

Dimensions and weight

| | | |
|--|------|--------------------|
| Dimensions W x H x D (without housing) | [mm] | ca. 120 x 100 x 30 |
| Weight (without housing) | [kg] | 0,105 |
| Dimensions W x H x D (with protective housing) | [mm] | 155 x 104 x 35,5 |
| Weight (with protective housing) | [kg] | 0,5 |
| Dimensions W x H x D (with EMC housing) | [mm] | 146 x 134 x 50 |
| Weight (with EMC housing) | [kg] | 0,85 |

Standards

| | |
|--|---|
| Applied standards for CE certification (only ECOMiniDual 007DC-BN) | EMC according to EN 61800-3, safety according to EN 61800-5-1 |
|--|---|

Customs tariff number

| | |
|-----------------------|----------|
| Customs tariff number | 85371091 |
|-----------------------|----------|

Basic functions

- ✓ Digital current, speed and position control for 2 axes
- ✓ Digital filtering functions to dampen vibrations in the overall system
- ✓ Parameterizable jerk filters optimize the motion profiles and improve the machine's longevity
- ✓ Short circuit, voltage, temperature, encoder, following error and i²t monitoring
- ✓ Intelligent holding brake control of 2 axes with current reduction
- ✓ Evaluation of limit switches and reference sensor, multiple homing modes
- ✓ Motion Control, interpolation via CANopen (t_{sync} = 1 ms)

Applications

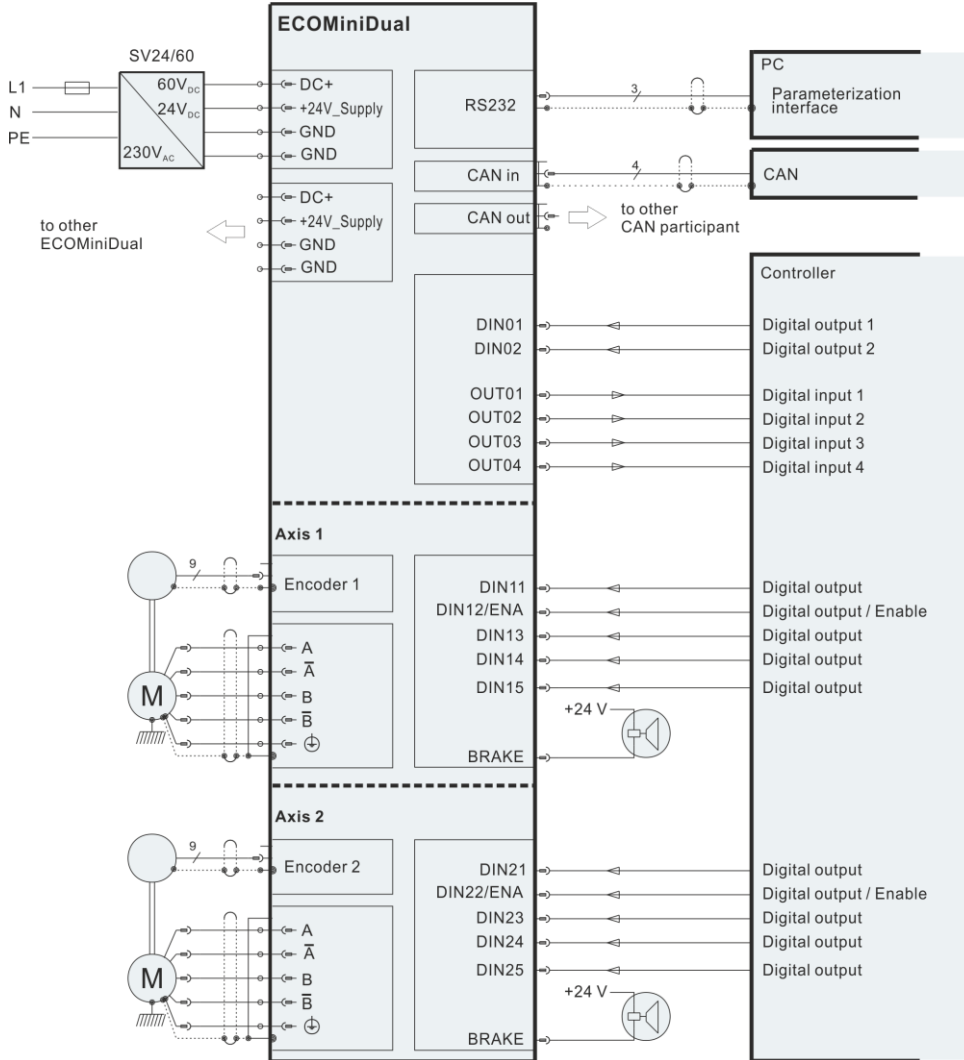
- ✓ 2-axis servo operation (closed loop)
- ✓ 1-axis servo operation with a 2nd monitoring system or master/slave
- ✓ 2-axis stepper operation (open loop)
- ✓ 2-axis stepper operation (Master/Slave)
- ✓ Voice-coil actuator control with linear monitoring system

ECOSTUDIO® - Easy commissioning

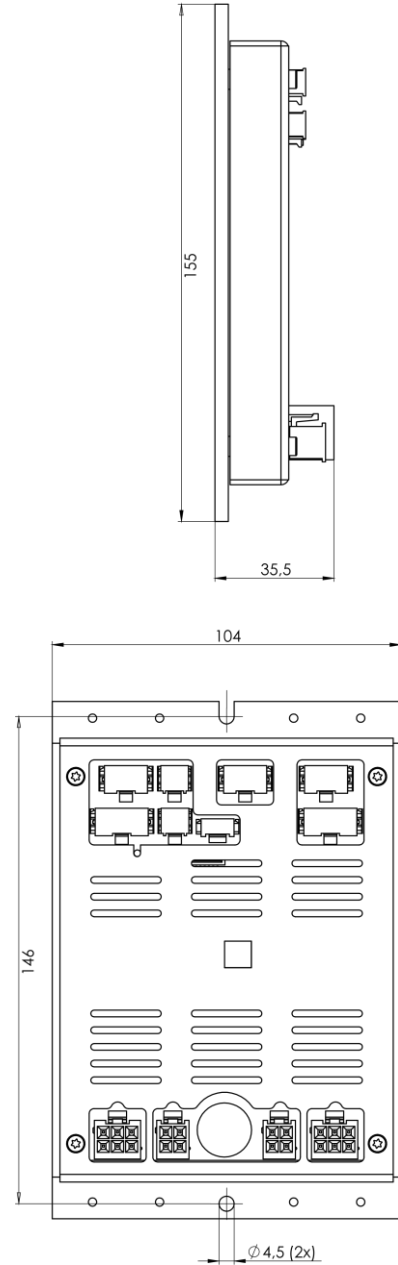
- ✓ Intuitive user interface, parameter setting via wizards
- ✓ Displays actual performance parameters
- ✓ Integrated motor, encoder and axis database
- ✓ Extensive oscilloscope function for analysis and diagnosis
- ✓ Easy graphical sequence programming

Servo amplifier ECOMiniDual

→ Connection diagram

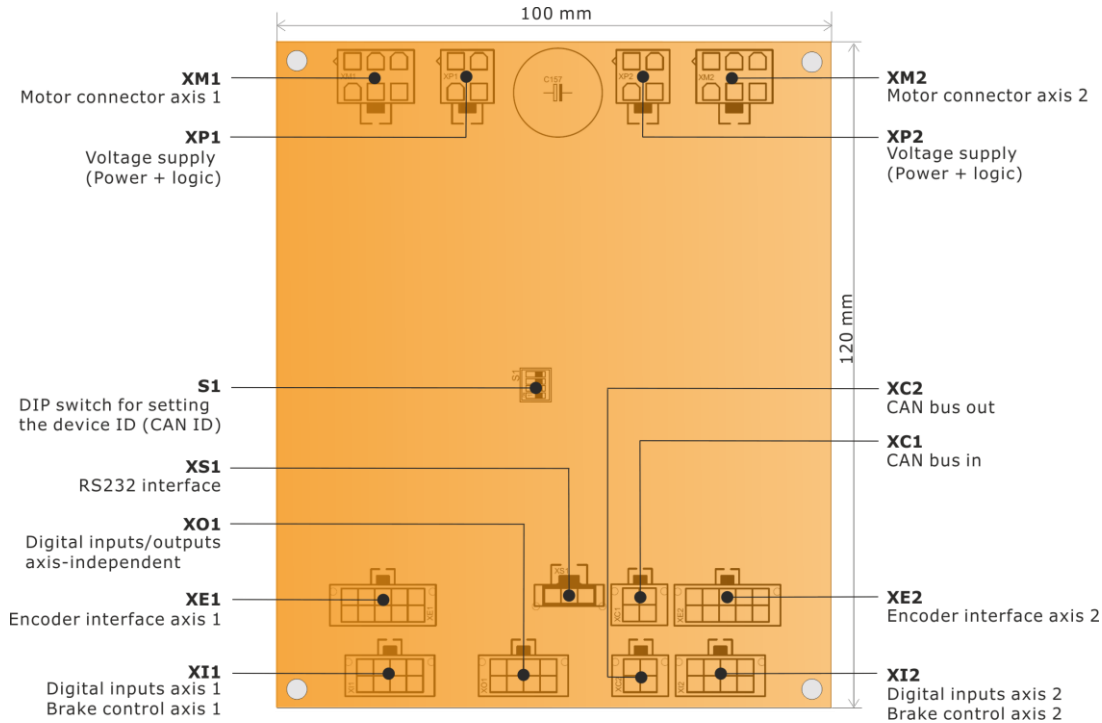


→ Dimensions



Servo amplifier ECOMiniDual

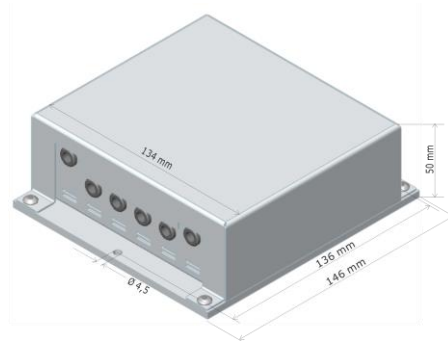
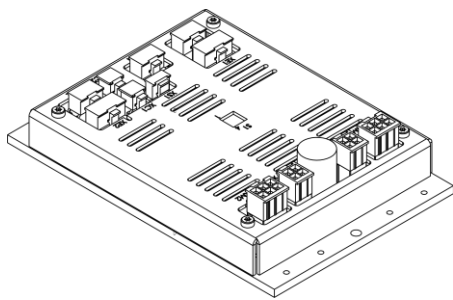
→ Interfaces



→ Options

Order designation of the version **without** protective housing: ECOMiniDual 007DN-BN-xxx-xxx

| Protective housing | EMC housing |
|--|--|
| Order designation: ECOMiniDual 007DG-BN-xxx-xxx | Order designation: ECOMiniDual 007DC-BN-xxx-xxx |
| Provides mechanical safety to the circuit board and other components | Complies with EMC requirements according to EN 61800-3 |



→ Accessories

Accessories for protective housing

| | |
|-------|--|
| VAZ10 | Shield set with strain relief |
| VAZ20 | Mounting bracket for horizontal or vertical installation |

Power supply

| | |
|---------|---|
| SV24 | 1-phase power supply 24 V _{DC} / 5 A |
| SV24/60 | 1-phase power supply 24 V _{DC} / 2 A, 60 V _{DC} / 5 A |
| SV60 | 1-phase power supply 60 V _{DC} / 5 A |

Further details regarding the power supplies can be found in the separate data sheet *Power supplies*.