



Equipment



• RS232

• RS485



(under preparation)

Powerful servo amplifier for high dynamic positioning and handling tasks

Functions

- Operation of 3-phase brushless synchronous motors
- Operation of 3-phase synchronous linear motors
- Torque / force, speed and positioning control
- Fast current control (min. 62.5 µs)
- Position feedback via incremental encoder: RS422, SINCOS
- Position feedback via absolute value encoder: BISS® or HIPERFACE® interface
- Simultaneous use of several feedback systems possible
- Safety function „STO“ according to EN61800-5-2
- USB interface for parameterisation via PC
- 2 highspeed capture inputs (RS422)
- Interpolation via EtherCAT or CANopen

Electrical Connection Data		
→ 3-phase AC Supply		
Rated supply voltage	V _{AC}	400
Line frequency	Hz	50 .. 60
Rated installed load	kVA	8.2
Rated power loss	W	280
Rated output voltage (AC)	V _{AC}	390
Rated current	A _{RMS}	12
→ Data of Power Output Stage		
Peak output current	A _{RMS}	16
Max. phase current	A _{DC}	22.5
Rated output current (per phase)	A _{RMS}	8
	A _{DC}	11.25
Max. output voltage	V _{DC}	850
Rated output voltage	V _{DC}	560
Overvoltage switch-off	V _{DC}	850
DC link capacity	µF	470
Returnable energy	Ws	96
→ External Fuses		
AC supply		16 A (characteristic C)
24-V supply		max. 12 A (fast-acting)
External ballast resistor (not for accessory resistors DPRxx-xxx)		t.b.d.

→ Control Signals		
24-V supply (current consumption without output)	V	24 ±10%
	A	0.8
8 digital control signal inputs per axis	V	LOW 0-7, HIGH 12-36
	mA	10 (at 24 V)
3 digital control signal outputs per axis	V	24
	A	0.5
→ Dimensions and Weights		
Dimensions W x H x D	mm	82 x 330 x 225
Weight	kg	4.0

→ Ambient Conditions	
Class	3K3 acc. to EN 50178
Ambient temperature during operation with rated load	0 °C .. 40 °C (storage temperature: - 10 ... 70°C)
Degree of humidity (non-condensing)	max. 95% rel. humidity
Cooling	In a closed cabinet, sufficient circulating air movement must be provided
Installation altitude	max. 1500 m above mean sea level without power reduction
Mounting position	The technical data refer to a vertical mounting position
Protection class	IP20, pollution degree 2
Applied standards for CE	EMC acc. to EN61800-3, safety acc. to EN61800-5-1 For devices with safety function STO acc. to EN61800-5-2: EC machine directive 2006/42/EC



ECOVARIO® 616 - 1-Axis Servo Amplifier

Basic functions

- Digital current, speed, and position control with position, speed and torque limiting
- Digital filter functions effective on resonant loads
- Parameterisable velocity profiles with jerk limiting
- Short-circuit, voltage, temperature, encoder, tracking error, and I²t monitoring
- Parameterisation via EtherCAT, Ethernet, CANopen, USB, RS232, RS485, Profibus DP or Profinet (under preparation)
- Intelligent control of a holding brake with automatic voltage reduction
- Limit switch and reference sensor evaluation, various homing modes
- Enabling of output stage and reset of fault conditions via digital input
- Readiness for operation message via digital output
- Status indication and setting of field bus node address and baud rate on the front via seven-segment display and 2 keys
- Safety function „STO“ according to EN61800-5-2

Positioning control on field bus

- Setpoint setting via EtherCAT, CANopen, Profibus DP, Profinet (under preparation), RS232 or RS485
- Point-to-point control
- Motion Control / Path interpolation via CANopen or EtherCAT

Master/slave positioning

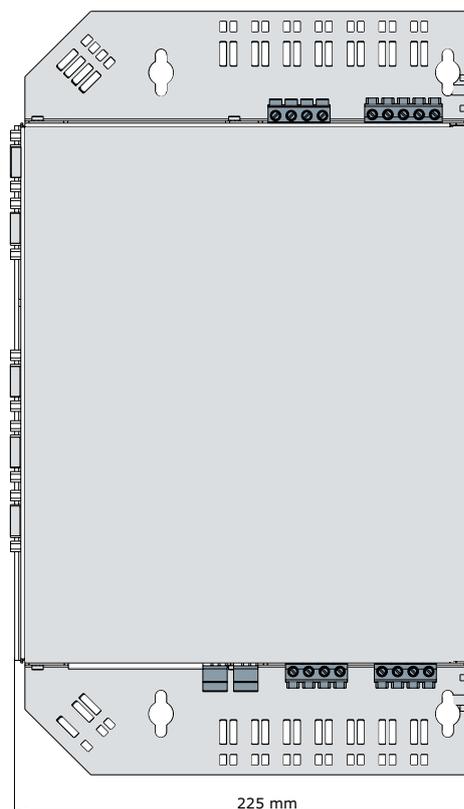
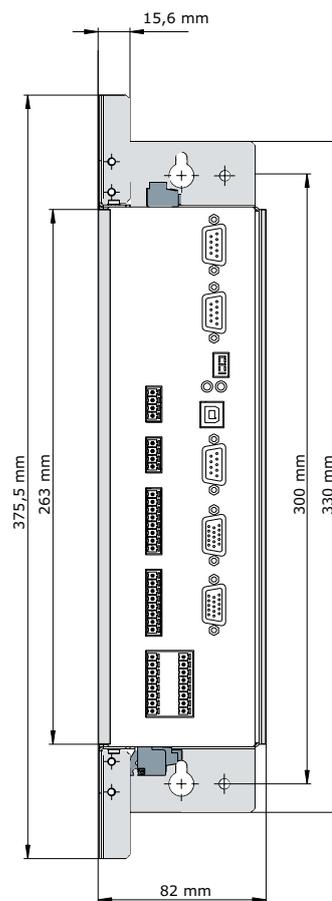
- Parameterisable electric gearbox
- Master position via CANopen

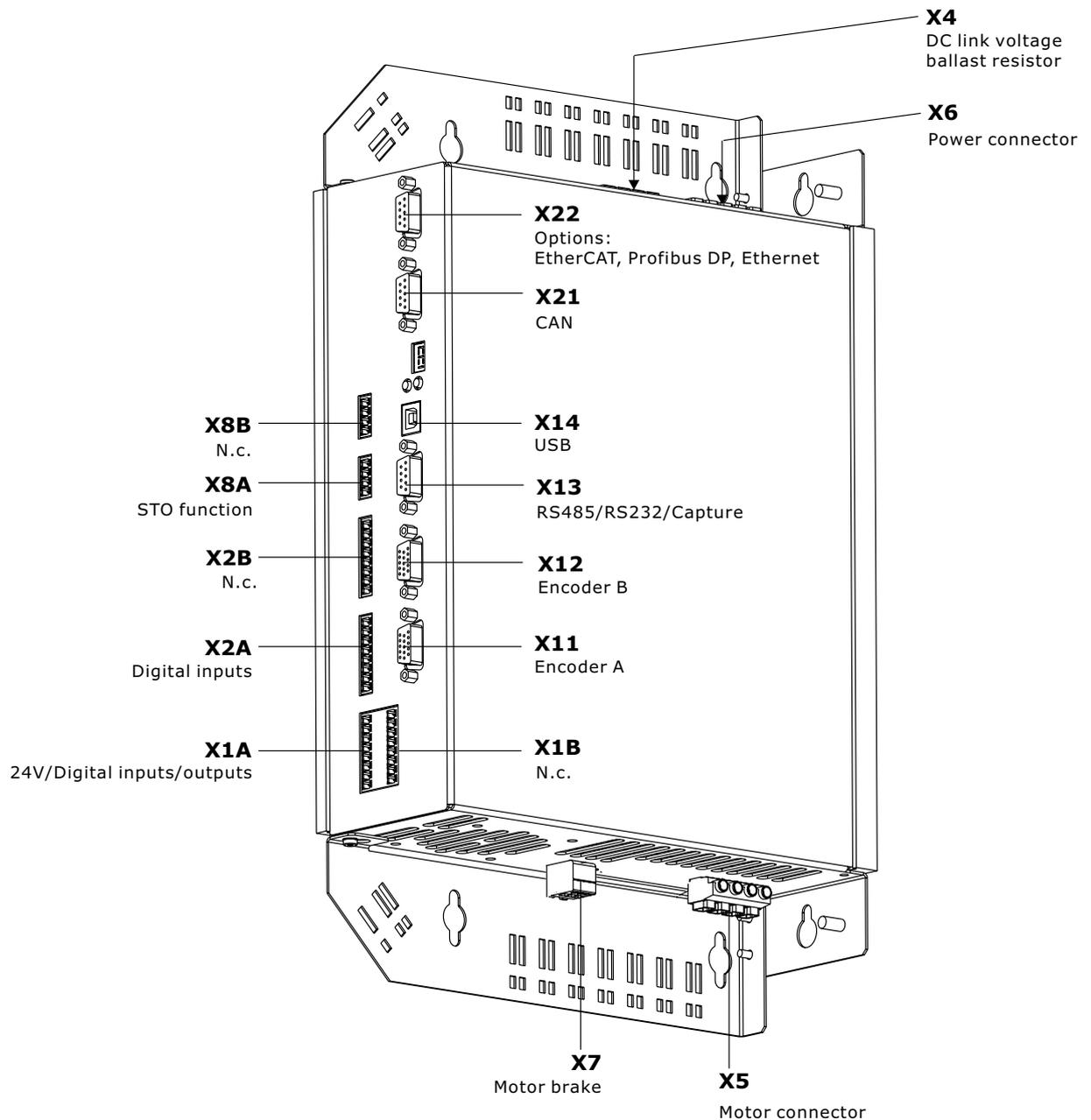
Positioning with clock/direction setpoint

- Scalable setpoint setting via RS422 for clock/direction signals

Positioning control with digital I/O interface

- 256 motion profiles storable
- 8 digital inputs
- 3 digital outputs
- Event-based control concept





→ **Accessories**

→ **Complementary parts**

DHZ10	Shield set
DHK10	Connector set ECOVARIO® 616

→ **External ballast resistors**

DPR40-200	Ballast resistor 40 Ω/200 W (500 W cooled)
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→ **Power supply for control signals**

SV24	Single-phase power supply unit 24 V _{DC} / 5 A
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For details concerning the power supplies please refer to data sheet **11-2**



