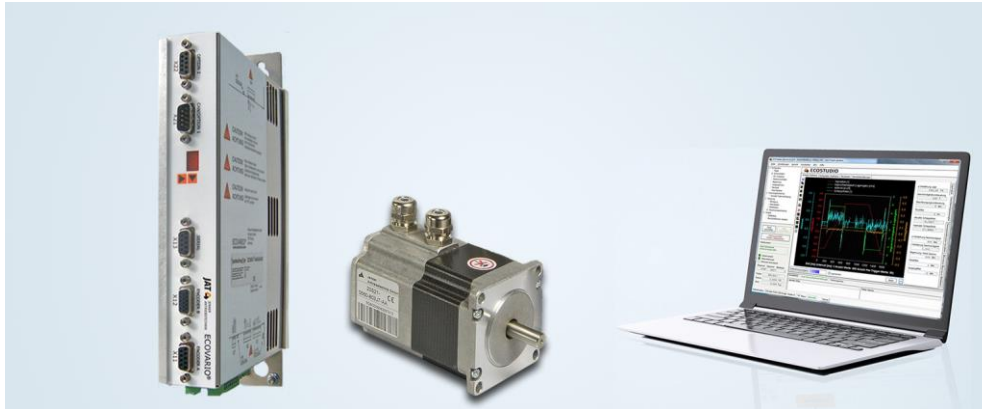


## Servo Amplifier ECOVARIO® 114

The all-rounder in the power range up to 1,2 kW



**CANopen**  
**EtherCAT**  
**PROFI**  
**BUS**

**UL** US  
LISTED



### High connectivity

Multiple interfaces - CANopen, EtherCAT, PROFIBUS, Ethernet, RS485, RS232



### Cost-efficient solution

Implemented sequences replace smaller controllers



### Easy commissioning

Intuitive parameterization and commissioning via JAT engineering software ECOSTUDIO®



### Diverse drive applications

Numerous technology functions for application-specific drive solutions, no time-consuming programming

#### Power supply:

24 ... 60 V<sub>DC</sub> or

20 ... 42 V<sub>AC</sub>

#### Control of:

2- and 3-phase brushless synchronous motors or synchronous linear motors  
DC servo motors with brushes

#### 2 encoder interfaces:

Position feedback via incremental encoder: RS422, SINCOS

Position feedback via absolute encoder: BISS® or HIPERFACE® interface

Concurrent processing of multiple feedback signals

#### Interpolating operation via EtherCAT or CANopen

#### I/O:

8 digital inputs

3 digital outputs

1 analog input

# Servo Amplifier ECOVARIO® 114

→ Technical data

AC supply		
Rated supply voltage	[V <sub>AC</sub> ]	42
Mains frequency	[Hz]	50 ... 60
Rated installed load	[VA]	480
Rated power loss	[W]	40
Rated output voltage (AC)	[V <sub>AC</sub> ]	42

DC supply		
Rated supply voltage	[V <sub>DC</sub> ]	70
Rated installed load	[W]	700
Rated power loss	[W]	50

Power output stage		
Effective phase current (maximum)	[A <sub>eff</sub> ]	14
Phase current (maximum)	[A <sub>DC</sub> ]	20
Rated output current 2-phase motor	[A <sub>eff</sub> ]	5,3
Rated output current 3-phase motor	[A <sub>eff</sub> ]	7,1
Output voltage (maximum)	[V <sub>DC</sub> ]	70
Rated output voltage	[V <sub>DC</sub> ]	60
Overvoltage shutdown	[V <sub>DC</sub> ]	90
Output (maximum)	[kW]	1,2
Rated installed load	[W]	615
DC link capacity	[μF]	1760
Energy feedback	[Ws]	2,8

Standards	
Applied standards for CE	EMC according to EN IEC 61800-3, Electrical safety according to EN 61800-5-1, RoHS according to EN IEC 63000
Applied standards for UL	UL508C

Customs tariff number	
Customs tariff number	85371091

Logic Supply		
Logic supply	[V]	24 ± 10 %
Input current (maximum) @ 24 V <sub>DC</sub>	[A]	0,8*
*) without external loads, e.g. I/O or encoder		

Digital inputs/outputs		
8 digital control signal inputs	[V]	LOW 0...5, HIGH 15...30
	[mA]	5 (@ 24 V)
3 digital control signal outputs	[V]	24
	[A]	0,5

Analog input		
1 analog input	[V]	0 ... + 10
Resolution	[Bit]	10

Dimensions and weight		
Dimensions W x H x D	[mm]	42 x 279 x 167
Weight	[kg]	1,35

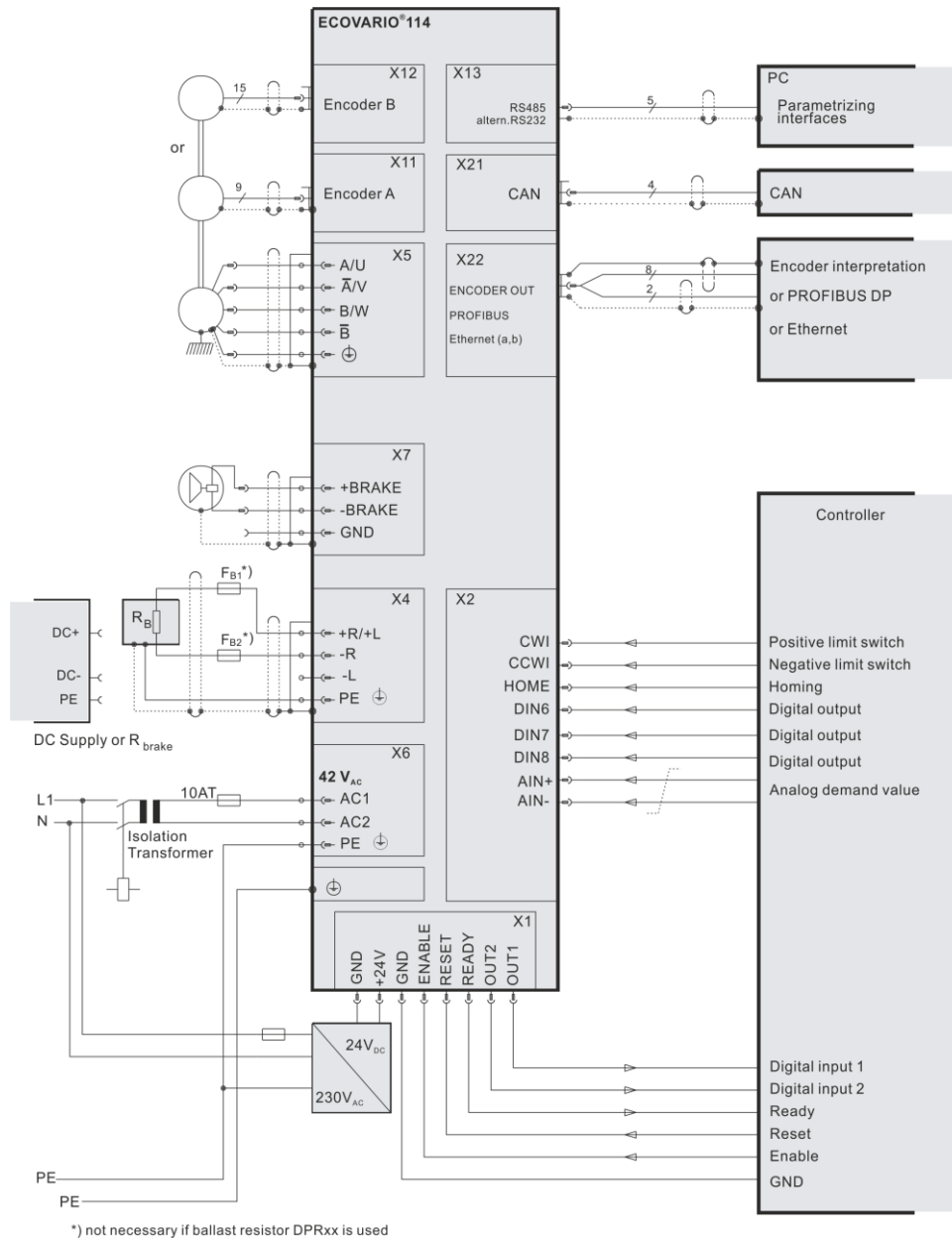
Ambient conditions		
Class	Operation: 3K3 according to EN 61800-2	
	Storage, transport: 1K4 according to EN 61800-2	
Storage temperature	[°C]	-25 ... +55
Ambient temperature during operation	[°C]	+5 ... +40
Degree of humidity, non-condensing	[% rel. F.]	85 (maximum)
Installation altitude above sea level	[m]	< 1500
Mounting position	The technical data refer to a vertical position.	
Protection class	IP20	
Pollution degree	2	
Cooling	In a closed cabinet, sufficient circulating air movement must be provided.	

## Basic functions

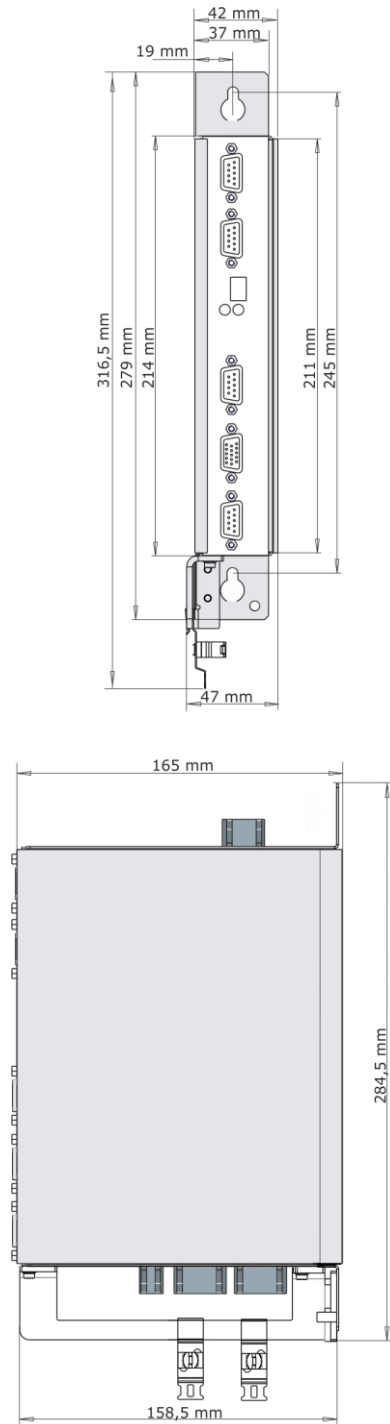
- ✓ Digital current, speed and position control with position, speed and torque limits
  - ✓ Digital filtering functions to dampen vibrations in the overall system
  - ✓ Parameterizable jerk filters optimize the motion profiles and improve the machine's longevity
  - ✓ Short circuit, voltage, temperature, encoder, following error and i<sup>2</sup>t monitoring
  - ✓ Intelligent holding brake control with automatic voltage reduction
  - ✓ Evaluation of limit switches and reference sensor, multiple homing modes
  - ✓ Status display and configuration of fieldbus node address and baud rate via 7 segment display and 2 keys on the device's front side
  - ✓ Internal ballast resistor (continuous power: 10 W), connector for external ballast resistor
- ### 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 ECOVARIO® 114

→ Connection diagram

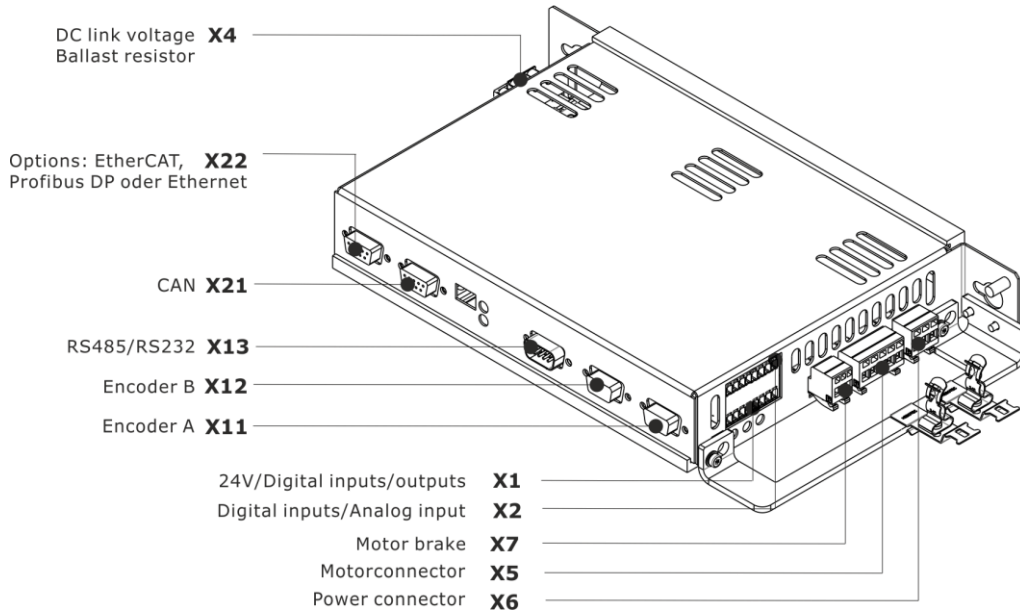


→ Dimensions



# Servo Amplifier ECOVARIO® 114

## → Interfaces



## → Ordering key

### ECOVARIO® 114 RN - wx - yyy - zzz

w		x		yyy	zzz
Field bus		Approval		Firmware number (three digits)	Parameter set number (three digits)
A	CAN + RS485	A	CE, standard design		
B	CAN + RS232	B-I	CE, custom design		
F	CAN + RS485 + PROFibus® DP-V0	J	CE, UL, standard design		
G	CAN + RS232 + PROFibus® DP-V0	K-Z	CE, UL, custom design		
K	CAN + Ethernet + RS485				
L	CAN + Ethernet + RS232				
P	CAN + EtherCAT® + RS485				
Q	CAN + EtherCAT® + RS232				

## → Accessories

### Accessories

DDZ21	Standard shield set (1 shield bracket, 2 EMC shield clamps, 3 cable ties)
DLK10	Mating connector set ECOVARIO® 114

### External ballast resistors

DPR10-100	Ballast resistor 10 Ω/100 W (250 W cooled)
DPR10-200	Ballast resistor 10 Ω/200 W (500 W cooled)

### Power supply

SV24	1-phase power supply 24 V <sub>DC</sub> / 5 A
SV24/60	1-phase power supply 24 V <sub>DC</sub> / 2 A, 60 V <sub>DC</sub> / 5 A
SV60	1-phase power supply 60 V <sub>DC</sub> / 5 A
TE 500-42	1-phase transformer 42 V <sub>AC</sub> / 500 VA

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