



Equipment

- RS232 interface
- RS485 interface
- CANopen, or
- Profibus DP
- 10 digital inputs (8 programmable)
- 3 digital outputs (2 programmable)
- Clock/direction interface
- 2 Encoder inputs (incremental)



→ DC Supply

Power supply	V _{DC}	24 ... 70
Recommended fuse for power supply	A	10 (slow)
Logic supply	V _{DC}	24 (18-30)
Recommended fuse for logic supply	A	3 (slow)

→ Data of Power Output Stage

Maximum effective current per phase	A _{RMS}	5.6
Maximum phase current	A _{DC}	8
Rated output current	A _{RMS}	4.2
Maximum output voltage	V _{DC}	70
Rated output voltage	V _{DC}	60
Minimum inductivity of motor winding	mH	0.5
Maximum length of motor cable	m	10
Frequency of output current ripple	kHz	16.4

→ Data of Brake Control

Output voltage (depending on logic supply)	V _{DC}	24
Output voltage reduced	V _{DC}	12
Output current 100 ms/permanent	A	0.8 / 0.5

Functions

- Operation of 2-phase brushless synchronous motors
- Operation of 2-phase synchronous linear motors
- Operation of brushed DC servo motors
- Operation of stepper motors
- Torque, force, speed, and positioning control
- Interpolation via CANopen

→ Control Signals

Digital inputs	V	24
	mA	2
Digital outputs	V	24
	A	0,5
Analogue input		-10 V ... +10 V
		10 bit resolution
Analogue monitor outputs		0 ... 5 V
		8 bit resolution

→ Dimensions and Weights

Dimensions W x H x D	mm	87 x 200 x 50 (without mating connector)
Weight	kg	0.5
Housing	Aluminium passivated, in conformance with RoHS	
Cable clamping and strain relief	metal clamps, max. cable diameter 15 mm	

→ Ambient Conditions

Class	3K3 acc. to EN 50178	
Ambient temperature during operation with rated load	5 ... 40 °C	
Storage temperature	- 10 ... 70 °C	
Degree of humidity (non-condensing)	max. 95% of rel. humidity	
Cooling	mounting on supporting plate	
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	
Applied standards for UL	UL508C	



Basic Functions

- Digital 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 RS232, RS485, CANopen, or Profibus DP
- Scalable analogue input for any setpoint
- Scalable analogue monitors for any actual value
- Intelligent control of a holding brake with automatic voltage reduction
- Limit switch and reference sensor evaluation, various reference point approach modes
- Enabling of output stage and reset of fault conditions via digital inputs
- Readiness for operation message via digital output
- Setting of field bus node address via DIP switch
- Status indication via 4 LEDs

Positioning Control on Field Bus

- Setpoint setting via RS232, RS485, CANopen, or Profibus DP
- Point-to-point control
- Path interpolation via CANopen

Master / Slave Positioning

- Parameterisable electric gearbox
- Master position via encoder signals or CANopen

Positioning with Clock / Direction Setpoint

- Scalable setpoint setting via RS422 for clock / direction signals

Positioning with Digital I/O Interface

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

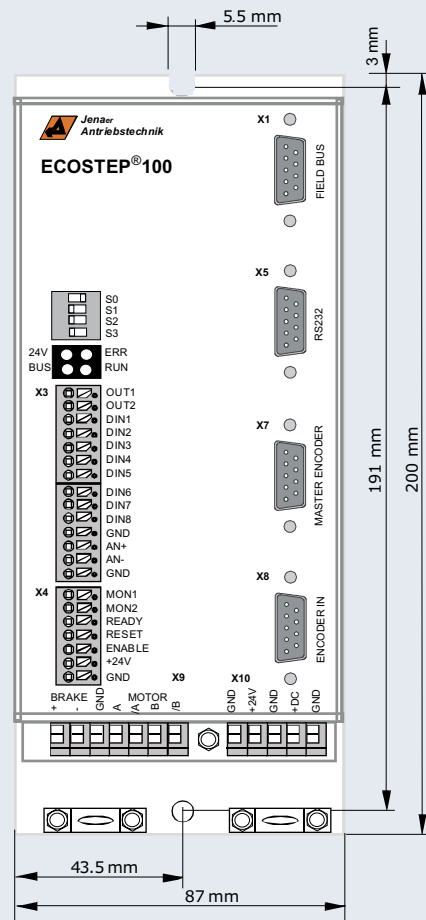
Joystick Operation

- Parameterisable joystick table for speed or position with 256 entries
- Joystick connection to +/-10 V analogue input

Speed Setting with Analogue Setpoint

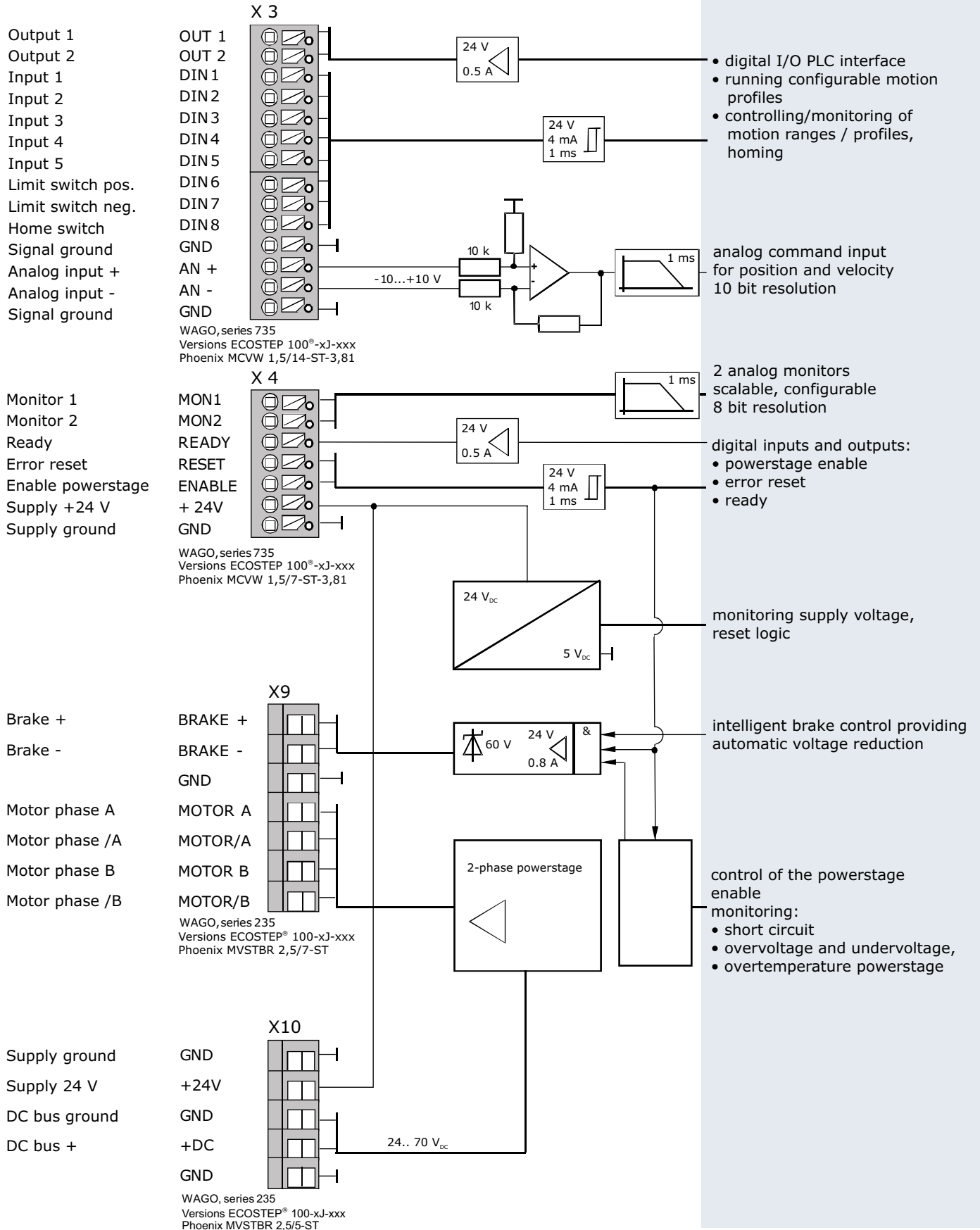
- Scalable speed setpoint via +/-10 V analogue input
- 10 bit resolution

Mechanical Outlines



depth approx. 50 mm (without mating connectors)

Connections



Interfaces

1:1 direct connection
to a PC COM

Pin	Signal at PC
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

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RS 232

D-Sub 9 pin female

Pin	Signal
1	nc
2	CAN_L
3	CAN_GND
4	nc
5	nc
6	GND
7	CAN_H
8	nc
9	CAN_V+

Pin	Signal
1	nc
2	CAN_L
3	CAN_GND
4	nc
5	nc
6	GND
7	CAN_H
8	nc
9	CAN_V+

X 1

FIELD BUS 1

D-Sub 9 pin male

Pin	Signal	Signal
1	nc	nc
2	Rx +	nc
3	Tx +	RxD/TxD-P
4	nc	CNTR-P
5	GND	DGND
6	+5V	VP (+5V)
7	Rx -	nc
8	Tx -	RxD/TxD-N
9	nc	nc

Pin	Signal	Signal
1	nc	nc
2	Rx +	nc
3	Tx +	RxD/TxD-P
4	nc	CNTR-P
5	GND	DGND
6	+5V	VP (+5V)
7	Rx -	nc
8	Tx -	RxD/TxD-N
9	nc	nc

X 1



FIELD BUS 2

D-Sub 9 pin female

Profibus DP

Signal
nc
nc
RxD/TxD-P
CNTR-P
DGND
VP (+5V)
nc
RxD/TxD-N
nc

**Code switch
for Network-ID**
0...15

ERR (red)
RUN (gn)

ERR (red)
RUN (gn)

Pin	Incremental	Clock/direction
1	+5V, max.	200 mA
2	A	Clock
3	B	Direction
4	N	
5		
6	GND	GND
7	/A	/Clock
8	/B	/Direction
9	/N	

Pin	Incremental	Clock/direction
1	+5V, max.	200 mA
2	A	Clock
3	B	Direction
4	N	
5		
6	GND	GND
7	/A	/Clock
8	/B	/Direction
9	/N	

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MASTER ENCODER



D-Sub 9 pin female

Pin	Signal
1	+5V
2	A
3	B
4	N
5	nc
6	GND
7	/A
8	/B
9	/N

Pin	Signal
1	+5V
2	A
3	B
4	N
5	nc
6	GND
7	/A
8	/B
9	/N

X 8

ENCODER IN

D-Sub 9 pin female