



Visualisation; Diagnostics

Easy to Configure

Programming IEC 61131-3

Rapid Installation

PMC EZ – EnDat 3

Pilz

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1 Safety notes

1.1 General safety notes



WARNING!

Injury due to moving or rotating parts!

Burns due to contact with hot surfaces!

- Only connect the motor while observing the following safety notes, the associated operating manual and any applicable national, local or system-specific regulations.

1.2 Safety with electrical connections



DANGER!

Electric shock!

Serious injuries due to contact with live parts!

- Carry out all work on a de-energized motor!
- Make sure that the motor shaft is stationary during all work. A rotating rotor can cause high voltages at the connections.
- Disconnect the supply voltage. Be aware that there may still be dangerously high voltages at the drive controller, even up to 15 minutes after switching off the supply voltage, due to the residual charge of the link capacitors. Observe the discharge time specification of the drive controller.
- Cover all open electrical connections, e.g. using protective caps.
- Secure the installation location as per regulations, e.g. using locks or warning signs.

1.3 Preventing connection errors



ATTENTION!

Damage to the motor or motor components due to electrical connection errors!

- Observe the motor nameplate and the connection plan. Contact Technical Support in case of questions.

1.4 Safe functions and EMC of the drive system



ATTENTION!

Damage to the motor or impairment of motor function!


Violation of EMC requirements mandated by law!

While commissioning the motor, the motor may be damaged or compliance with legal EMC requirements may no longer be possible if you use connection cables or drive controllers that are not suitable for the motor. Any warranty claims shall be void under these circumstances.

- Use connection cables or drive controllers from Pilz GmbH & Co. that are appropriate for the motor.

2 Connection of the motor housing to the grounding conductor system

Connect the motor housing to the grounding conductor system of the machine in order to prevent personal injury and faulty triggering of residual current protective devices.

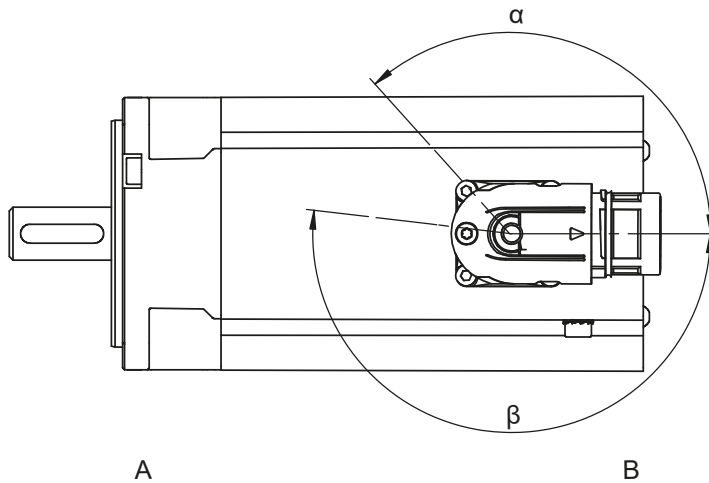
All attachment parts required for the connection of the grounding conductor to the motor housing are delivered with the motor. The grounding screw of the motor is identified with the symbol  in accordance with IEC 60417-DB. The cross-section of the grounding conductor has to be at least as large as the cross-section of the lines in the power connection.

3 Plug connectors (One Cable Solution)

In the One Cable Solution design, the power and encoder lines are connected using a shared plug connector.

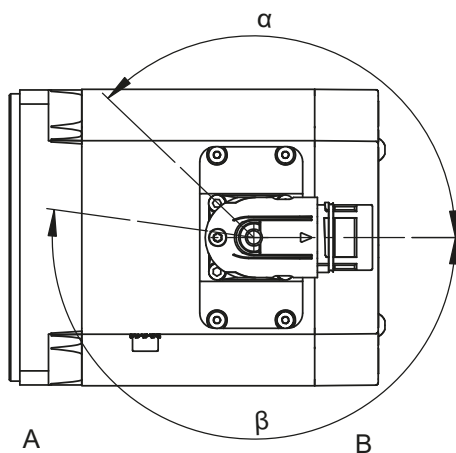
The figures represent the position of the plug connectors upon delivery.

Turning ranges of plug connectors (PMC EZ2 – PMC EZ3 motors)



A	Attachment or output side of the motor	B	Not output side
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Turning ranges of plug connectors (EZ4 – EZ7 motors)



A	Attachment or output side of the motor	B	Not output side
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Plug connector features

Motor type	Size	Connection	Turning range	
			α	β
EZ2 – EZ5, EZ701 – EZ703, EZ705U	con.23	Quick lock	130°	190°

Notes

- ▶ The number after "con." indicates the approximate external thread diameter of the plug connector in mm (for example, con.23 designates a plug connector with an external thread diameter of about 23 mm).

3.1 Terminal assignment for plug connectors (One Cable Solution)

In the One Cable Solution design, the power and encoder lines are connected using a shared plug connector.



The temperature sensor of the motor is connected to the encoder internally. The measured values from the temperature sensor are transmitted via the EnDat 3 protocol of the encoder.

Plug connector size con.23

Connection diagram	Pin	Connection
	A	U phase
	B	V phase
	C	W phase
	E	P_SD -
	F	
	G	Brake +
	H	P_SD +
	L	Brake -
		Grounding conductor

4 Forced ventilation unit

The nominal voltage of the forced ventilation unit is 230 V ± 5%, 50/60 Hz.

Connection diagram	Pin	Connection
	1	L1 (phase)
	2	N (neutral conductor)
	3	
		Grounding conductor

► Support

Technical support is available from Pilz round the clock.

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