



PM Ctendo SZ – HIPERFACE DSL

PILZ

THE SPIRIT OF SAFETY

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1 Safety instructions

1.1 General safety instructions



WARNING!

Injury due to moving or rotating parts!

Burns due to contact with hot surfaces!

- Only connect the motor while observing the following safety instructions, 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 servo amplifier, even 10 minutes after switching off the supply voltage, due to the residual charge of the link capacitors.
- 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 this 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 servo amplifiers that are not suitable for the motor. Any warranty claims shall be void under these circumstances.

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

2 Connection – Motor housing to 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 as per 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 HIPERFACE DSL power and feedback plug connectors

Single-cable HIPERFACE DSL technology combines the power and feedback connections into one common plug connector.

In motors with forced ventilation, avoid collisions between the motor connection cables and the plug connector of the forced ventilation unit. In the event of a collision, turn the motor plug connectors accordingly.

The following images show the position of the plug connector upon delivery.

PM Ctendo SZ.3x...K – Turning range of the plug connector

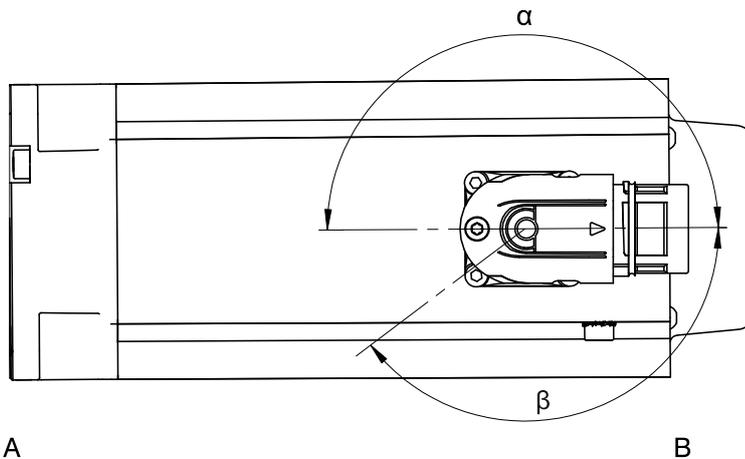


Fig. 1: PM Ctendo SZ.3x...K – Turning range of the plug connector

A Attachment or output side of the motor B Rear side of the motor

PM Ctendo SZ.4x...K – SZ.7x...K – Turning range of the plug connector

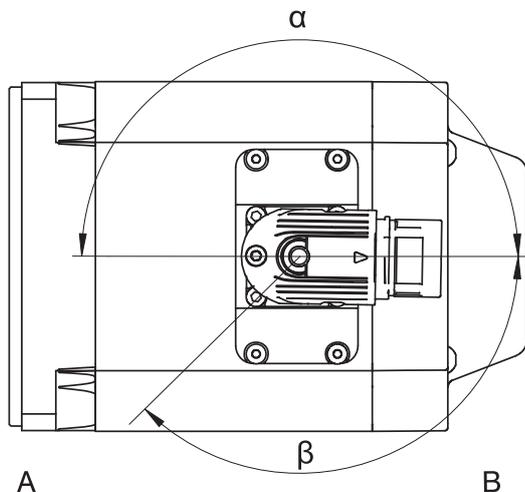


Fig. 2: PM Ctendo SZ.4x...K – SZ.7x...K – Turning range of the plug connector

A Attachment or output side of the motor B Rear side of the motor

Features – Plug connectors

Type	Size	Connection	Turning range	
			α	β
SZ.3x...K, SZ.4x...K, SZ.5x...K, SZ.71...K, SZ.73...K	con.23	Quick lock	180°	135°
SZ.75...K	con.40	Quick lock	180°	135°

Note

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).

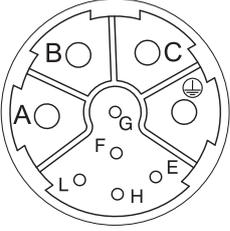
3.1 Terminal assignment – HIPERFACE DSL plug connectors

The following HIPERFACE DSL plug connectors are available for PMCtendo SZ motors (the color information relates to the connecting wires and is only relevant for internal motor wiring).

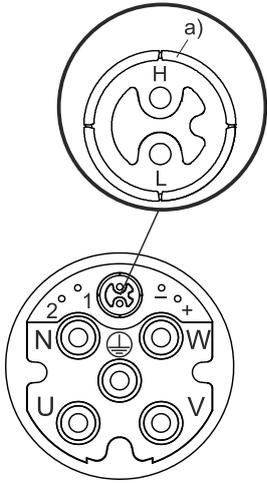
The temperature sensor of the motor is connected to the feedback system internally. The measured values from the temperature sensor are transmitted via the HIPERFACE DSL log of the feedback system.

The size of the plug connector depends on the size of the motor; the terminal assignment changes depending on the connector size.

HIPERFACE DSL – con.23 plug connectors

Connection diagram	Pin	Connection	Color
	A	1U1	black
	B	1V1	blue
	C	1W1	red
	E	DSL- (L)	green
	F	DSL shield	
	G	1BR+ (brake + DC 24 V)	red
	H	DSL+ (H)	grey
	L	1BR- (brake 0 V)	black
	⊕	PE	green-yellow

HIPERFACE DSL – con.40 plug connectors

Connection diagram	Pin	Connection	Color
	U	1U1	black
	V	1V1	blue
	W	1W1	red
	N		
	+	1BR+ (brake + DC 24 V)	red
	-	1BR- (brake 0 V)	black
	1		
	2		
	H	DSL+ (H)	grey
	L	DSL- (L)	green
	⊕	PE	green-yellow
	a) Coaxial shield to which the DSL shield is connected		

4 Appendix

4.1 Trademarks

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