8.3.10 Connecting the motor

8.3.10.1 Connectable cable cross-sections

Description

Table 8-12 Conductor cross-sections and tightening torques

Output current	Motor connection	Cable cross-sections	Tightening torque
3 ... 30 A 2 x 3 A ... 2 x 18 A	Plug with screw terminal (6SL3162-2MA00-0AC0)	Finely stranded connection with: 0.75 ... 6 mm² (AWG 19 ... 10)	0.5 - 0.6 Nm (4.4 lbf in)
	Plug with push-in connection (6SL3162-2MB00-0AC0)		-

8.3.10.2 Preparing the motor connection cable

Overview

Motors are connected to a Motor Module using a motor connection cable with a connection plug. We recommend that you use a completely prefabricated MOTION-CONNECT power cable. If you are using a power cable or a MOTION-CONNECT power cable that has not yet been completely prefabricated, then you must first fabricate the motor connection cable.

Requirement

NOTICE

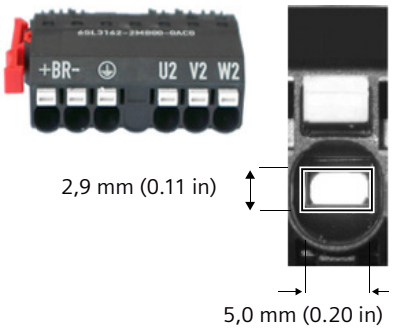
Adherence to core and stripped lengths

If the specified core and stripped lengths are not complied with, single cores can be damaged or shield contact prevented.

- Comply with the specified core and stripped lengths.

It is not possible to self-assemble motor connection cables having a core cross-section of 10 mm². In this case, use pre-assembled MOTION-CONNECT power cables.

Table 8-15 Connection plug with push-in connection (6SL3162-2MB00-0AC0)

Dimensions of the terminal openings	Permissible conductor cross-sections	End sleeve	
			
	0.75 mm² (AWG 19)	✓	✓
	1.5 mm² (AWG 16)	✓	✓
	2.5 mm² (AWG 14)	✓	✓
	4 mm² (AWG 12)	✓[1)]	✓[1)]
	6 mm² (AWG 10)	✓[1)]	✓[1)]

[1)] When crimped, end sleeves must not exceed the maximum dimensions of 2.9 x 5.0 mm (0.11 x 0.20 in).

8.3.10.4 Wiring a connection plug with screw connection

Requirement



⚠ WARNING

Electric shock or fire caused by non-certified plug connection plug in the power circuit

Using a non-certified connection plug can result in overheating, fire and/or electric shock.

- Only use certified connection plugs.

Required tools:

- Slotted screwdriver 0.8 x 4.0 mm

Procedure

Table 8-16 Connection plug with screw connection

6SL3162-2MA00-0AC0	Terminal	Designation	Technical data
	BR+	Holding brake connection	Screw terminal
	BR-		
	⏚	Motor PE/ground connection	
	U2	Motor connection	
	V2		
	W2		

8.6 Accessories

8.6.1 Order data connection plug

Note

Using identical plug connector variants for Double Motor Modules

Two identical connectors must be used on Double Motor Modules (both push-in connectors or both screw connectors). Otherwise, they will not able to be inserted.

Motors are connected to Motor Modules using a connection plug. The connection plug must be separately ordered for power cables that are not pre-assembled. The following variants are available:

Connection plug		
Connector variant	**Article number**	**Description**
	6SL3162-2MA00-0AC0	Plug for Motor Modules 3 A - 30 A Type: Screw terminal Connection type: Screw terminals
	6SL3162-2MB00-0AC0	Plug for Motor Modules 3 A - 30 A Type: Push-in type with latching actuators Connection type: Spring-loaded terminals

Connection plugs 6SL3162-2M□00-0AC0 as well as the connection plugs used to fabricate MOTION-CONNECT are type-tested together with the Motor Modules. Compliance with the regulations laid down in the EC Declaration of Conformity is only ensured in conjunction with these connection plugs.

cULus approval has been issued for connection plugs 6SL3162-2M□00-0AC0 as well for the connection plugs used to fabricate MOTION-CONNECT.

The technical function can only be guaranteed in conjunction with the specified connection plugs.