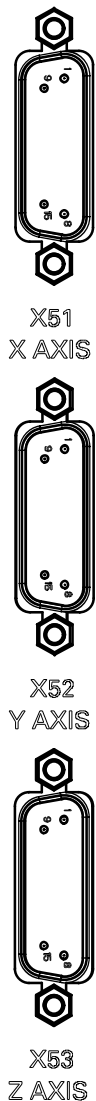


3.3.6 Pulse drive interfaces - X51, X52, X53

Pin assignment

Type Sub-D, 15-pin, male
 Cable Type: drive cable
 Max. length: 10m

Illustration	Pin	Signal	Comment
 <p>X51 X AXIS</p> <p>X52 Y AXIS</p> <p>X53 Z AXIS</p>	1	PULSE+	PULSE, to drive side
	2	DIR+	DIRECTION, to drive side
	3	ENA+	ENABLE, to drive side
	4	BERO	Zero mark, from drive side
	5	+24V	POWER from the pin 1 of X200, +24V output
	6	RST	ALARM RESET, to drive side
	7	M24	Ground
	8	+24V	POWER from the pin 1 of X200, +24V output
	9	PULSE-	NEGATIVE PULSE, to drive side
	10	DIR-	NEGATIVE DIRECTION, to drive side
	11	ENA-	NEGATIVE ENABLE, to drive side
	12	+24V	POWER from the pin 1 of X200, +24V output
	13	M24	Ground
	14	RDY	DRIVE READY, from drive side
	15	ALM	ALARM, from drive side
<p>Note: The +24V and M24 signals at the pulse drive interfaces can only be used when the +24V and M24 signals are connected at the interface X200.</p>			

Connecting

⚠ CAUTION

Do not connect pin 5, pin 8 or pin 12 of X51/52/53 to ground. Otherwise, the CNC controller or the power supply could be damaged!

X51/52/53 does not support hot-plug/unplug.

Note**Filter**

A line filter (rated current: 16 A, protection level: IP20) is required so that the system can pass the CE certification (radiated emission test or conducted emission test). The order number of Siemens recommended filter is **6SN1111-0AA01-1BA1**.

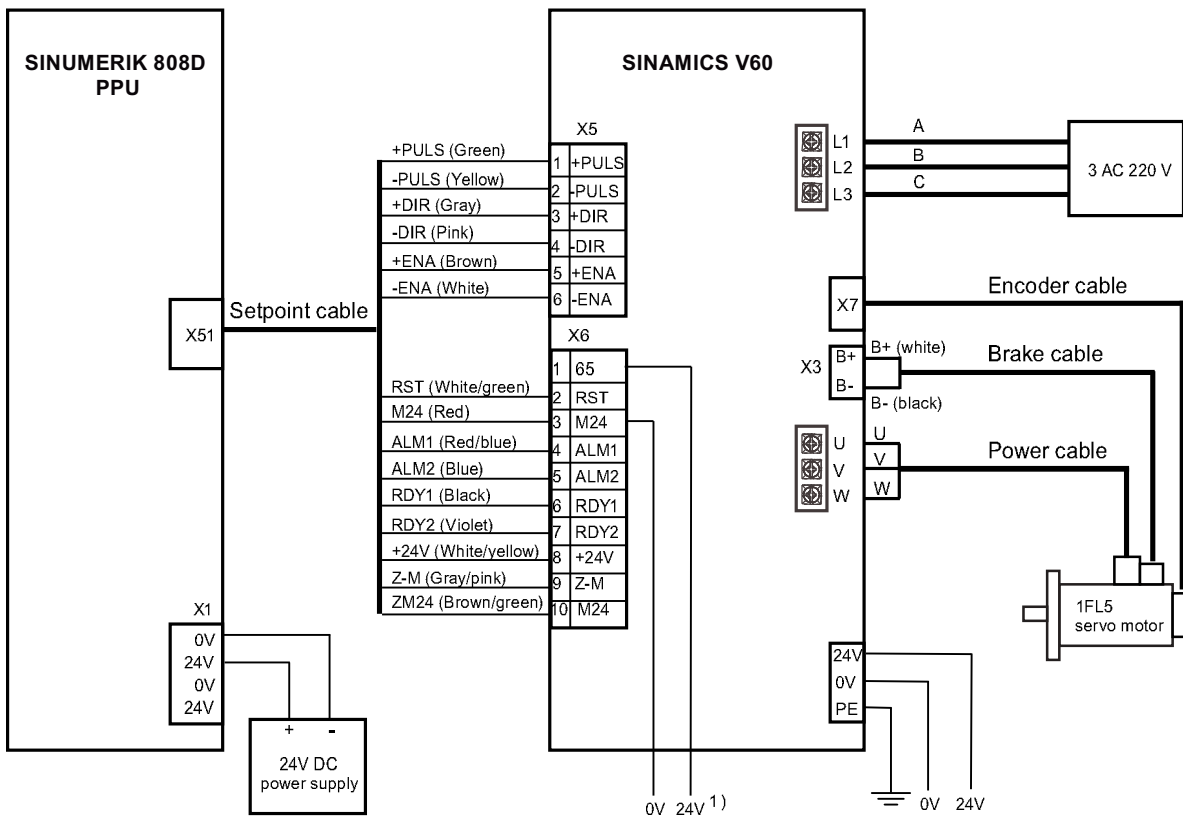
Note**Circuit breaker**

You can install a mains linear breaker (rated current: 15 A for 7 A or 10 A version of the drive and 10 A for 4 A or 6 A version of the drive; rated voltage: 250 VAC) to protect the system.

As mentioned before, the SINUMERIK 808D control system can control three feed axes (X axis, Y axis and Z axis). To do so, you need to connect the control system via the three pulse drive interfaces (X51: X axis, X52: Y axis and X53: Z axis) separately to three SINAMICS V60 drives.

The connection diagram between the SINUMERIK 808D (X51: the X axis) and SINAMICS V60 is shown as follows. You can connect X52 (the Y axis) and X53 (the Z axis) in the same way.

3.3 Connecting the interfaces on the PPU



1) If necessary, you can also serially connect an emergency stop switch between the 65 enable signal and the 24V signal.

The connected motors are SIEMENS 1FL5 servo motors.

For further information about SINAMICS V60 and 1FL5 servo motors, refer to *SINUMERIK 808D Mechanical Installation*, *SINAMICS V60 Getting Started* or *1FL5 Motor Data sheet*.