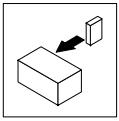
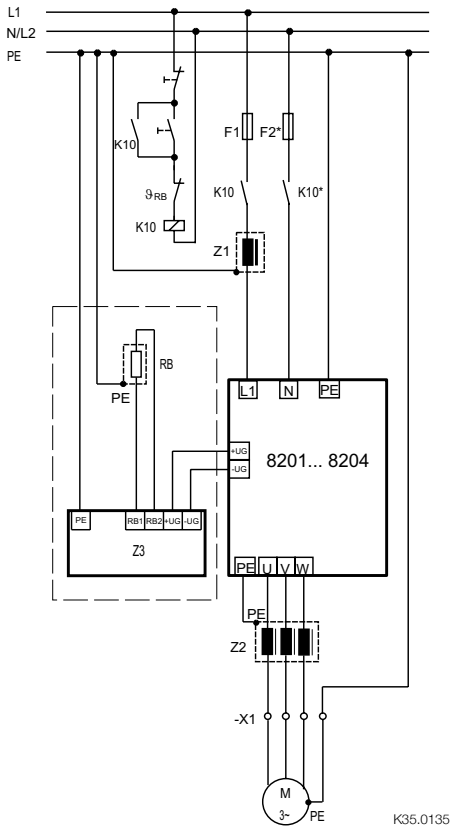


4.2.2.3 Connection diagram



F1	Fuse
F2*	Fuse only for supply with 2AC / PE / 190-260V
K10	Mains contactor
K10*	Mains contactor only for supply with 2AC / PE / 190-260V
Z1	Mains filter/mains choke, see Accessories
Z2	Motor filter/sine filter, see Accessories
Z3	Brake chopper/brake module, see Accessories
RB	Brake resistor, see Accessories
ϑ_{RB}	Temperature monitoring - brake resistor
X1	Terminal strip in control cabinet

8204 operation only with assigned mains choke/mains filter

FIG 4-4 820X power connections

4.2.3 Control connections

4.2.3.1 Control cables

- We recommend the unilateral screening of all cables for analog signals to avoid signal distortion.
- Connect the screens of the control cables as follows:
  - 820X:
    On the front FAST-ON connector.
- If the control cables are interrupted (terminal strips, relays), the screens must be reconnected over the shortest possible distance.
- Connnect the fixing screw of the setpoint potentiometer to PE.

4.2.3.2 Assignment of the control terminals

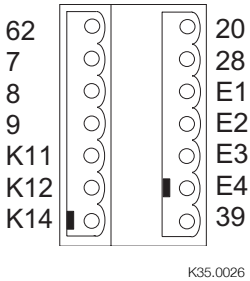
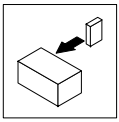


FIG 4-5 Position of the control terminals



	Terminal	Use (Factory setting is printed in bold)	Level	Data
Analog inputs	7	GND 1		
	8	Setpoint input, reference: Terminal 7 **(0 to 10V)**  Jumper 5 - 6 5 - 6 3 - 4 **1 - 2**	0 to 20 mA 4 to 20 mA 0 to 5 V 0 to 10 V	Resolution: 9 bit Linearity fault: ±0.5 % Temperature fault: 0.3 % (0...+40 °C) Input resistance Voltage signal: > 100 kΩ Current signal: 250 Ω
	9	Supply for setpoint potentiometer	5.2V / 6mA	
Analog output	62	Analog output, reference: terminal 7 **(Field frequency)**	0... 6 V / 2 mA	Resolution: 8 bit
Digital inputs	20	Voltage supply for digital inputs 12 V/20 mA		
	28	Controller enable	HIGH	HIGH: 12 V ... 30 V LOW: 0 V ... 3 V
	E4	**CW rotation/ CCW rotation (CW/CCW)**	CW: LOW CCW: HIGH	
	E3	**DC-injection brake**	HIGH	
	E2	**JOG frequencies 20Hz, 30Hz, 40Hz**	Binary code	
	E1			
	39	GND 2 (reference for external voltages)		

	Terminal	Use (Factory setting is printed in bold)	Relay position (switched)	Data
Relay output K1	K 11	Relay output normally-closed contact **(TRIP)**	opened	24 V AC / 3,0 A or 60 V DC / 0.5 A
	K 12	Relay mid-position contact		
	K 14	Relay output normally-open contact **(TRIP)**	closed	

4.2.3.3 Connection diagrams

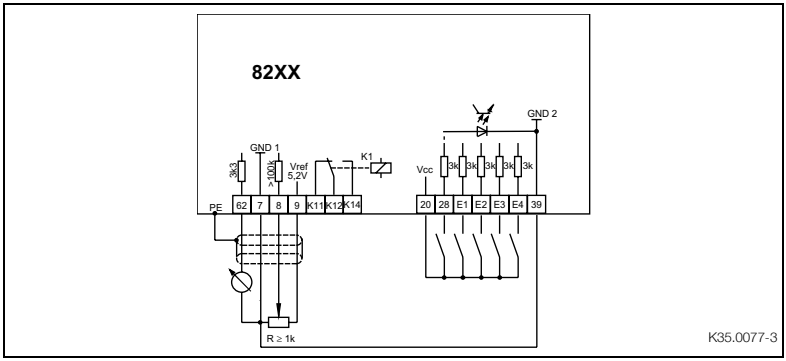


FIG 4-6 Control connections: Supply with internal control voltage

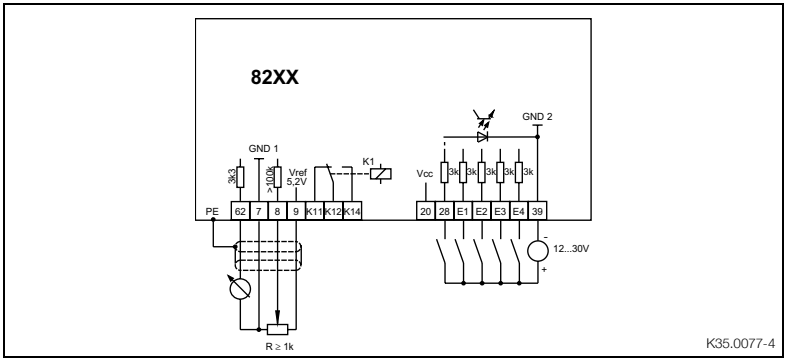


FIG 4-7 Control connections: External voltage supply (+12 V ... +30 V)

GND1 Reference for internal voltages
GND2 Reference for external voltages
GND1 and GND2 have a potential isolation inside the unit.