

FACT SHEET ROBO Tronic type 3

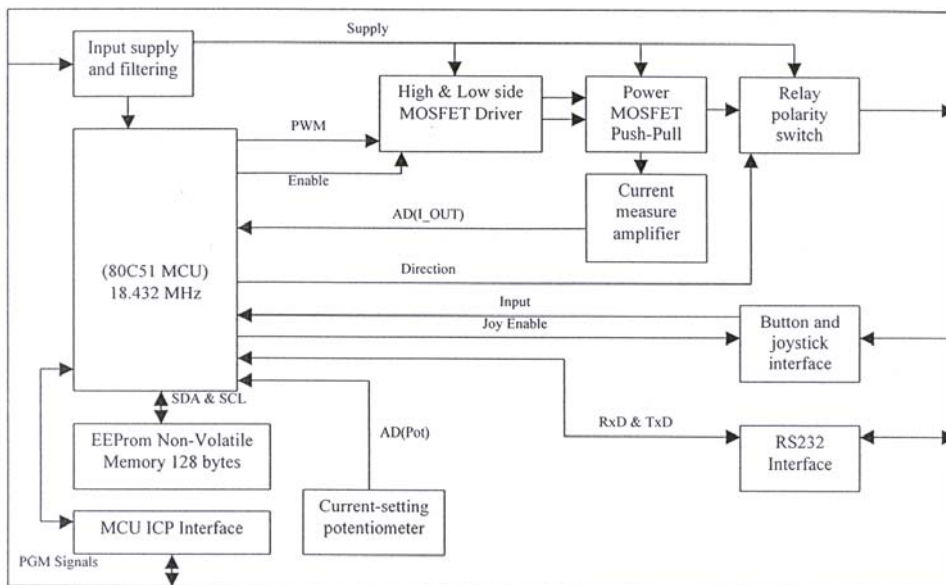
The control unit ROBO Tronic type 3

- is the link between the source of current supply and the permanent magnetic motor
- checks that your motor does what it should do within the scope set by you
- gets its current from a mains power source or battery
- provides secure reversible motor operation

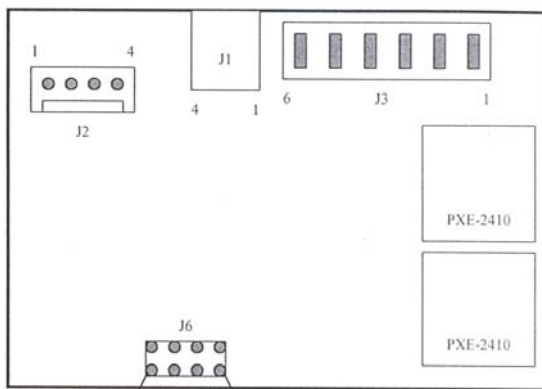
ROBO Tronic type 3 - main functions

- START, ACCELERATION, OPERATION, DECELERATION, STOP in each direction for 24 V DC-motors with max. 25 A operating current
- ON/OFF-control with soft start/soft stop or SPEED CONTROL by e.g. joystick
- ACTIVE braking for controlled motion
- HOLDING BRAKE with short-circuited motor stops (brakes when unit is not powered also)
- PROGRAMMABLE LOADING LIMIT/DIRECTION
- SLEEP MODE for minimal current consumption in battery operation

Block diagram



ROBO Tronic type 3 - connections



- J1 = connector for on/off-switch or joystick
- J2 = connector for external normally closed limit switches
- J3 = connector for input and output voltage
- J6 = connection for programming

Function	Pin	Comments
Joy [+] (Bias)	J1-1	Connection with modular plug 4/4 (in on/off-operation pins 2-4 are used, at speed control pins 1-3).
Joy [S] / Reverse	J1-2	
Joy [-] / Common	J1-3	
Forward	J1-4	
Down limit [+]	J2-1	Connection with female connectors, e.g. AMP SL-156. In operation without external limiting positions 1-2 and 3-4 are connected by means of a clamp.
Down limit [-]	J2-2	
Up limit [-]	J2-3	
Up limit [+]	J2-4	
Motor [-]	J3-1	Connection with 6.3 mm receptacles for blade terminals (adjusted contact block is available). Double supply pins (+ and -) for battery/charging equipment or for further 24V supply.
Motor [+]	J3-2	
Supply [+]	J3-3	
Supply [+]	J3-4	
Supply [-]	J3-5	
Supply [-]	J3-6	

ROBO Tronic type 3

Programmable parameters via terminal program in PC

- THE ACCELERATION and DECELERATION profile for each operating direction. Design as desired in ten level stages each. The maximum "ramp"-time is in all cases appr. 14 s.
- THE MAXIMUM SPEED in each direction.
- LOADING/CURRENT LIMIT in each direction. Can be adjusted between 0 and 25 A. The current limit can also be "mechanically" adjusted by means of an external potentiometer, but then the value in both directions will be the same.
- ON/OFF - OR JOYSTICK OPERATION.

For the programming a special interface cable between computer and control unit is required (connection J6).

Application instructions

ROBO Tronic type 3 is a part of your application with a number of functions facilitating operation and making your construction safer. It is however important that you are acquainted with the qualities and limitations of ROBO Tronic type 3 for optimal and safe use.

Essential factors which have to be clarified

- **Current-/voltage demand**
Check the real current consumption of the motor. During some tenth of a second starting current starts several times higher than operating current at full load. ROBO Tronic type 3 has an internal not changeable short circuit and "starting current" protection of 50 A, which cannot be exceeded. Also note that a mains power source or other source of current should be dimensioned in order to keep the voltage up at the moment of starting.
- **Limit position function**
When using ROBO Tronic type 3 as "limit switch" great care is demanded, as the mechanical and electrical stress temporarily can be very hard, if they are not interacting. Interaction can be achieved e.g. through soft end positions.
- **Suitable applications**
ROBO Tronic type 3 is fundamentally developed for industrial applications and is not intended for applications, where personal injury may arise due to unintentional operating impulses.