M A N U A L

Field current controller
Q3-F

UNITEK Industrie Elektronik GmbH

Hans-Paul-Kaysser-Straße 1
71397 Leutenbach-Nellmersbach

Tel.: 07195 / 92 83 - 0
contact@unitek.eu
www.unitek.eu

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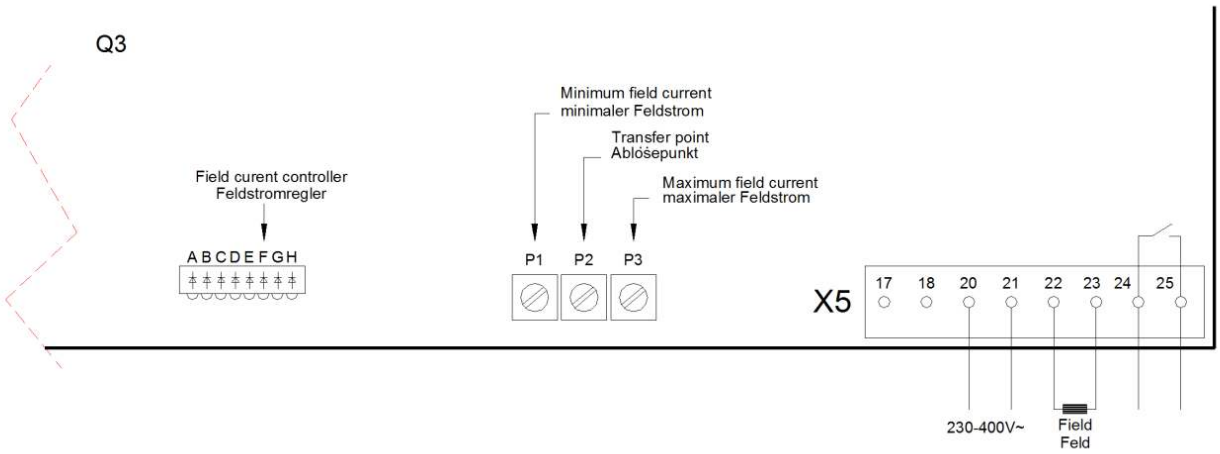
1 General

1.1 Field current supply in thyristor controller Q3

The field current supply in the thyristor controller Q3 can be used as a field current controller or as a field release circuit for combined armature-field control.

The field supply can be supplied separately with 230 V to 400 V at terminals X5:20, X5:21.

The field voltage at terminals X5:23+ and at X5:22- is max. 0.8 x input voltage.
The maximum field current is 10 A (depending on the unit type).
The field current is monitored and the signal relay is energised.
Contact at terminal X5:24 and X5:25 is closed and opens when the field current is lost.



2 Field current controller 0 - 10A

2.1 Potentiometer

Function	Abbreviation	Number
Minimum field current	Imin	P1
Maximum field current	Imax	P3
Right-hand stop	Abl.	P2

2.2 Field current setting

- Field circuit ammeter
- Enable controller, setpoint - zero.
- Potentiometer P2 to the right stop.
- Set the maximum field current with potentiometer P3.
- When the controller is locked, the field current is reduced to approx. 50 %.

3 Field release circuit

3.1 Potentiometer

Function	Abbreviation	Number
Minimum field current	Imin	P1
Maximum field current	Imax	P3
Detachment point	Abl.	P2

3.2 Setting field detachment

- With enable, setpoint zero and motor at standstill, set the maximum field current with potentiometer P3.
- Set potentiometer P2 and potentiometer P1 to the right stop.
- Increase the engine speed until the armature tension is 5 % above the desired release point.
- Turn potentiometer P2 to the left until the armature voltage has dropped to the desired release voltage at constant speed.

  Example:
  -potentiometer P2 right stop.
  -Increase the speed setpoint on the motor controller until the armature voltage reaches 420 V.
  -Turn potentiometer P2 to the left until the armature voltage has dropped to 400 V.
  -The release point is now at 400 V armature voltage.

- Increase the setpoint further and if the desired final speed is not reached, reduce the minimum field current by turning potentiometer P1 counterclockwise.
- When the controller is locked, the field current is reduced to approx. 50 %.