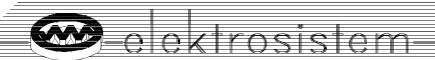
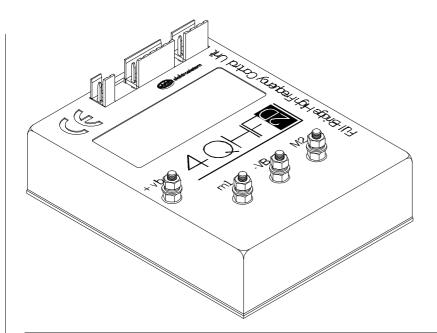
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# 4QHF 2D

# HIGH FREQUENCY ELECTRONIC CONTROL UNIT WITH ENERGY RECOVERY

The bidirectional high frequency electronic control unit with energy recovery and aided by microprocessor type 4QHF 2D has been added to the newest range of products manufactured by ELEKTROSISTEM.

Conceived for permanent magnete motors and realized in compliance with the most recent security provisions for the application on EC-vehicles, it is produced in a wide power range (from 45 A up to 140 A). The acceleration adjusting

device allows the vehicle to gradually and regularly reach the maximum speed. The current limiter enables the operator to adjust the max. current supplied to the motor.

This control unit is provided with a variable regenerative braking that can be adjusted by the operator according to his needs and acts during the vehicle's deceleration, reverse and by pedal release.

#### MAIN TECHNICAL FEATURES

- Control unit aided by microprocessor.
- Operation parameters adjustable through a programming display or by PC.
- Slow starting through adjustable acceleration slope.
- Settable limiter of the max. current supplied to the motor.
- Proportional action thermal limiter.
- Recovery braking system activated during deceleration, by pedal release and in reverse.
- Settable limiter of the max. braking current.
- Control system by a 5K potentiometer connected to 3 wires.
- Control system by a potentiometer connected to 2 wires with adjusting angle on request.
- Total protection against battery polarity inversion thanks to an internal line relay.
- Intervention of the safety block in case of short circuit of the Mos units.
- Intervention of the safety block in case of potentiometer breakdown.
- Intervention of the safety block when, turning the key, the potentiometer is not on 0 and disabling by resetting the potentiometer to 0.

#### TECHNICAL SPECIFICATIONS

- Voltage rating	12-24-36-48V
- Allowed power supply variation	from 85% to 125%
- Operation frequency	16 KHz
- Operation temperature	
- Humidity at 25° C	
- Thermal limiter action	from 70°C to 80°C
- Weight 4QHF 2D 45/60A	350 gr.
- Weight 4QHF 2D 90/140A	

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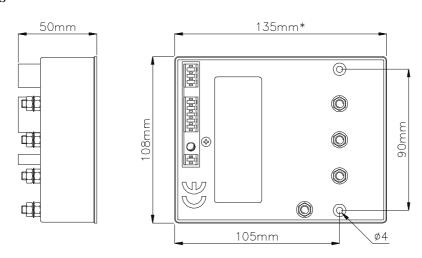


### — MODELS

Size	Starting Current	Current/Min.	Current/Hour**
45 A*	45 A	40 A	18 A
60 A	60 A	55 A	21 A
90 A	90 A	81 A	32 A
140 A	140 A	121 A	48 A

- \* Not available at 48V.
- \*\* In free air conditions.

# DIMENSIONS -



\* 112mm in the 45A and 60A model.

# CONNECTION DIAGRAM

