



**REDLER**  
Technologies

The Heart of Power and Motion

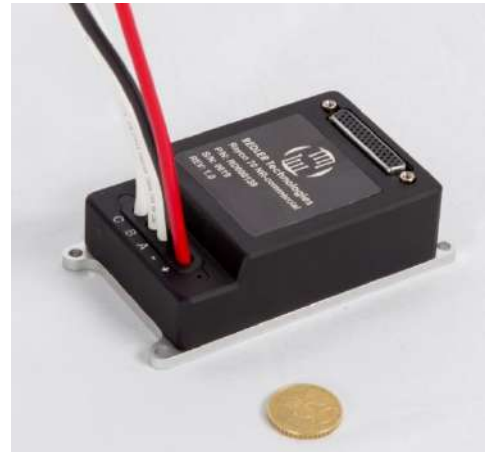
## Rayon 40A-70A motor controller driver - DataSheet

40: Catalog number – RD000141

70: Catalog number – RD000139

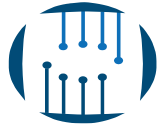
### Specifications:

- Sinusoidal and trapezoid drive.
- Hall, Digital and analog encoder feedback.
- PID closed loop modes: Position (2khz), speed (4khz), current(20khz) and stepper.
- 70A continues current. (50A RMS @25°C TA).
- Communication: Canbus (1Mbps), CANopen (main commands), RS232 or RS422 .
- Analog and / or digital commands.
- Firmware upgrade via RS232.
- Lab-view MMI – Load/Read parameters and live graph monitor.
- Protections: Temperature, voltage, CPU, encoder hall, motor stuck.
- Encoder to Hall on the fly switch-over.
- Comprehensive Error messages.
- Supports SSI>15bit
- 5 digital optically isolated input. 2 digital optically isolated outputs.
- Reliability: high current low Rdson, 100V Power MOSFETs, hardware short protection.
- New effective thermal solution.
- Temperature operation environment -40°C to 71°C.
- Weight & Dimensions - 300gr, 120mm x 67mm x 34mm



### Typical Applications:

- Robotics.
- Automotive.
- Avionics.
- Industrial.



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## Technical specifications:

Function	Parameter	Remarks
<b>CPU and Memory</b>		
CORE	TI -TMS320-28069	32bits DSP
Flash	256 Kbytes	
RAM	100 Kbytes	
CORE Speed	90Mhz	
<b>Motor Interface</b>		
BLDC 3 phases Bridge Drivers	6 100V@180A	TOP drive PWM
Bridge Drivers	IRS21834S	1.4 A turn on 1.8 A turn off
Motor Current	70A Continues	Need suitable heat sink
Hall angel inputs	60°	Open collector/Drain
Output hall devices power	5VDC	@200mA
Encoder Interface-A	Sin/Cos	sinusoidal output signals 1VPP
Encoder Interface-B	Digital RS422	CLK A CLK B Index
Motor Current Sense measurement	2 Channels	0-3V 12bits resolution
Adjustable Motor Current limiter	2 Channels	256 currents levels.
<b>General Purpose Interface</b>		
Digital Input / Output	6 Channels, 4 Input 2 Output	Optically isolated
Analog input (analog command)	1 Channel	±10V or ±5V 12bits resolution
<b>Communication Interface</b>		
CAN BUS	Single CANopen	PWM + Low pass CAN 2.0B 1Mbit/Sec
UART	1 Channels	RS232 or RS422 comm.
<b>Power Supply/Operating temperature</b>		
Voltage	12V to 75V	
Current	50mA +Motor current	Core @ 100Mhz.
Operating Temperature	-40°c +71°c	Optional +85°c
Storage Temperature	-65°c - +150°c	
<b>I/O Connection</b>		
Power Input and Phase output Connector	NorComp 681M5W5103L001	5W5 Pin straight Solder 40A
Signals Input and Digital I/O Connector	Harting 09563517512	Dtype-HD44PIN
Dimensions (without cables)	120mm x 67mm x 34mm	

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