MC Power Rider
The Power to Manage and Protect

Power Rider Multi channels Management

Applications and advantages:

- Smart advanced vehicle power management
- Advanced vehicle power management
- Low maintenance cost – 3 layers of prevention
- Reducing support cost – automated recovery mechanism
- Increase Up time for "machine builders" such as CNC, Printing and such
- Mobile robots – smart energy management that allows extended battery usage and protection

Main Features:

- 0-25 Ampere
- 6-48VDC (optional MIL-STD 704A and 1275)
- EPROM file system management
- Communication: CAN BUS (1Mbit- J1939) or RS485
- Remote ON-OFF signal, digital status
- Master-Slave mode
- Read parameters and real time monitoring
- Protections: Over current, i^2t, temperature, voltage, CPU and more
- Fast 350 nSec hardware cutoff protection
- Comprehensive error message
- Reliable:
  - High current, low Rdson, 100V power MOSFETs
  - Hardware fast short circuit protection
- Temperature operation environment -40°c to 85°c

10 Multi channels
smart Circuit Breaker board

Specifications:

Function	Parameter	Remarks
CPU and Memory		
CORE	STM32F051K4U7	32bits DSP
Flash	64 Kbytes	
RAM	8 Kbytes	
CORE Speed	48Mhz	
MOSFET Interface		
Switch Voltage drop	< 0.25 V@25Ampere	
Power MOSFET	3X100V@100A	
Switch Turn ON	500 nSec	
Switch Turn OFF	350 nSec	
Power dissipation 12.5 Ampee	< 0.75W	
Current measurement accuracy	Better than 2%	
General Purpose Interface		
Communication I	CANBUS	CAN 2.0B 1Mbit/Sec
Communication II	RS485	614400 bit/Sec
3GPIO		
Power Supply/Operating Temperature		
Operating voltage	6V to 80V	
Current range	0 to 25 Ampere	
Ambient Operating temperature	-40°C to +85°C	Optional –55˚c to +85˚c
I/O Connection		
Data and control connector	Harwin M80-5L10622MC	Dual row 3pin x 2 rows
Power In Power out	KeyStone-1265	TAB size 6.35 mm x 0.81 mm
Ground	KeyStone-4904	TAB size 4.75 mm x 0.51 mm