Product Manual

ioBLOC

H-Bridge Module



Part Number

100001341

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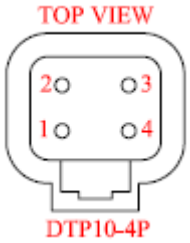
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Features:

- Entirely Solid State
- Short Circuit Protection on Output
- Reverse Battery Protection
- LED Indication of Output Polarity & Faults
- CAN controlled version available.
- IP 67 Rated

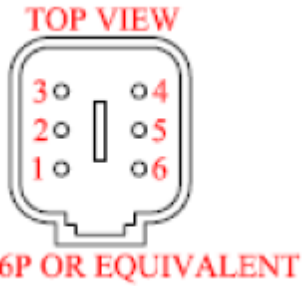
Pinouts & Connections:

Main Power Connector:



Pin	Function	Notes
1	Ground (-Battery)	
2	Side1 Output	One side of H-Bridge Out
3	+Battery	
4	Side2 Output	One side of H-Bridge Out

Mating Connector: DTP06-4S (Deutsch)
Mating Contact: 1062-12-0166 (Deutsch)
Mating Wedgelock: WP4S (Deutsch)



Pin	Function	Notes
1	Speed MSB	Active Low/Grounding Input, See Speed Control Table
2	Speed LSB	Active Low/Grounding Input, See Speed Control Table
3	N/C	
4	N/C	
5	IN1	Active Low/Grounding Input, See Control Logic Table
6	IN2	Active Low/Grounding Input, See Control Logic Table

Mating Connector: DT06-6S (Deutsch)
Mating Contact: 0462-209-16141 (Deutsch)
Mating Wedgelock: W6S (Deutsch)

Electrical Specifications:

Absolute Maximum Ratings:

Parameter	Value	Conditions/Notes
Reverse Voltage	-40VDC	Between +Battery Input and Ground. No Time Limit.
Input Voltage	36VDC	Above this value permanent damage can occur.
Storage Temperature	-55C to 85C	ABS Enclosure may deform above 75C.

Operating Characteristics:

Parameter	Min	Typical	Max	Conditions/Notes
Input Voltage	9VDC	28VDC	32VDC	
On State Resistance	10 mΩ	15 mΩ	20 mΩ	Vin = 12VDC, Ambient Temp = 25C, Solid Deutsch Contacts DTP06-4S. This is the drop from contact to contact internal to unit.
Continuous Current	0 ADC		20ADC	
Short Duration Current	0 ADC		35 ADC	On-time < 10s, Duty Less than 25%
Inrush Current		160 ADC		Max Inrush Before Fault. Time avg. current over 160ADC < 5mS.
Input Low	-0.7VDC		1.2VDC	Internal Pullup will require at least 5mA of current to activate a low input.
Input High	3.5VDC		+Battery	Internal Pullup will bring input voltage to about 4.3VDC.
ESD Protection			+/-15KV	All Inputs/Outputs

Environmental Specifications:

Parameter	Min	Typical	Max	Notes
Operating Temperature	-40C		70C	Ambient temperature immediately surrounding the unit.
Ingress Protection		IP67		

Speed Control Table:

Speed Pin		Slew Function
0	0	No Slew
0	1	1 Sec Slew
1	0	3 Sec Slew
1	1	5 Sec Slew

Note: 0 = Input Grounded, 1 = Input Floating or Tied to +Battery

Control Logic Table:

Control IN		Output State
0	0	Both Outputs Grounded
0	1	Side 1 = +Battery, Side 2 = Ground
1	0	Side 1 = Ground, Side 2 = +Battery
1	1	Both Outputs Grounded

Note: 0 = Input Grounded, 1 = Input Floating or Tied to +Batt

LED Status Table:

Side 1 LED	Side 2 LED	Output State
GREEN	GREEN	Both Outputs Grounded
GREEN	RED	Side 1 = Ground, Side 2 = +Battery
RED	GREEN	Side 1 = +Battery, Side 2 = Ground
RED	RED	Not a permissible state – will not occur.
FLASHING RED	N/A	Side 1 Faulted
N/A	FLASHING RED	Side 2 Faulted

Note: Fault Protection is on the +Battery Output only. Short circuit to +Battery from another source besides H-Bridge output will cause permanent damage to unit.

Note: A fault will try to recover 3 times before locking out.

Note; To reset a Fault the device must be power cycled.

Mechanical Properties:



