PM3

CAN controlled power distribution module, capable of working in a matrix of units

Specifications

Parameter	Value
8 Outputs	Switched 12V at max, continuous 20A per channel
Total Maximum Rating	160A (8 simultaneously active channels)
CAN Bus	CAN 2.0, 1Mbaud, 8 selectable addresses using configure pins
Status LED	Solid when powered up and CAN OK, Flashing when CAN is lost
Casing	Sealed Aluminium
Size	103 x 67 x 38 mm
Weight	190 grams

NOTE: Use 2 pins for each output for full current capacity.

Connectors

ID	Connector	Loom/Mating Connector
1	TE SUPERSEAL 6437288-6	TE 3-1437290-7
2	M6 threaded power pin	M6 ring terminal (recommended)

Pin Out

Connector	1	
Pin	**Name**	**Function/Notes**
1	High Side Driver 1	
2		
3	CAN Low	
4	CAN High	
5	Ground	
6	High Side Driver 5	
7		
8	High Side Driver 2	
9		
10	Config 3	
11	Ground	
12	High Side Driver 6	
13		
14	High Side Driver 3	
15		
16	Config 2	
17	*Not Used*	
18	High Side Driver 7	
19		
20	High Side Driver 4	
21		
22	Serial Rx	
23	Serial Tx	
24	Config 1	
25	High Side Driver 8	
26		

Connector	2	
Pin	**Name**	**Function/Notes**
1	12V Power	

CAN Codes

Standard Id: 1Mbit at 100Hz.

Two CAN transmit messages consist of 4 words as follows:

Message 1 is for Drives 1 to 4

Message 2 is for Drives 5 to 8

Each word sends information on the related drive:

High byte bit7 = 1 = Max current exceeded i.e. short circuit (> 100Amps)

bit6 = 1 = Current limit set for the channel is exceeded

bit5 = 1 = Load open circuit

Measured current high 2bits

Low byte Measured current low 8bits

Measured current scalar: 0.1 Amps/bit

The single CAN received message sends the control information to the PM3 unit. Each message consists of 8 bytes. Each byte controls 1 of the 8 output drives. Byte 1 controls drive 1... Byte 8 controls drive 8. If the value is set to 0 then the output is off. A non 0 value sets the current limit for the output at 0.4 Amps/bit.

If the PM3 unit stops receiving valid messages, it will switch off all the drive outputs with a timeout of 500ms.

Configuration pins and Arbitration Codes

The configuration pins (pins 10, 16 and 24) set the arbitration codes for the PM3 unit. The pin should either be left open circuit (O/C) or connected to GND Pin1)

The following table lists the Arbitration codes for the 8 possible configuration settings.

Config 1	Config 2	Config 3	TX Message 1 Code	TX Message 2 Code	RX Message Code
O/C	O/C	O/C	0x610	0x611	0x620
Gnd	O/C	O/C	0x612	0x613	0x621
O/C	Gnd	O/C	0x614	0x615	0x622
Gnd	Gnd	O/C	0x616	0x617	0x623
O/C	O/C	Gnd	0x618	0x619	0x624
Gnd	O/C	Gnd	0x61A	0x61B	0x625
O/C	Gnd	Gnd	0x61C	0x61D	0x626
Gnd	Gnd	Gnd	0x61E	0x61F	0x627

Dimensions