

PM1



Description

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
CAN Bus	CAN 2.0, 1Mbaud, 8 selectable address using configure pins
Status LED	
Size	126 x 44 x 40 mm
Weight	280 g
Case	Machined aluminium, sealed against water and dust ingress

Connector Details

ID	Connector	Loom Side Connector
1	AS007-35PA	AS607-35SA
2	AS216-08SN	AS616-08PN
3	ASHD214-1PN-C16	ASHD614-1SN-C16

Pin Out

Connector	1	
Pin	Name	Function/Notes
1	Ground	
2	CAN Low	
3	CAN High	
4	Config 1	
5	Config 2	
6	Config 3	

Connector	2	
Pin	Name	Function/Notes
1	High side driver 1	
2	High side driver 2	
3	High side driver 3	
4	High side driver 4	
5	High side driver 5	
6	High side driver 6	
7	High side driver 7	
8	High side driver 8	

Connector	3	
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

 bit6 = 1 = Current limit 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 PM1 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 PM1 unit stops receiving valid messages it will switch off all the drive outputs.

Configuration pins and Arbitration Codes

The configuration pins (pins 4, 5 and 6 of AS007-35PA) set the arbitration codes for the PM1 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.

Pin 4	Pin 5	Pin 6	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

