



Delta GDI6 - ECU Pinout
AMPSeal 776231-1 (black)
AMPSeal 776231-5 (blue)
AMPSeal 776231-2 (white)
Terminal Pins 770520-3
PC Comms Connector: DTM-04S

Connector A			
Pin	Name	Description	Notes
1	Battery	Direct Battery Supply (15A fuse)	Direct Battery Power 6-15V
2	Ignition	Ignition Switched Supply (10A fuse)	Ignition Key Input
3	Power Ground 1	Power Ground	Power Ground 1
4	Low Side Output 1	1.5A Open Collector	Port Injector 1 Output
5	Low Side Output 2	1.5A Open Collector	Port Injector 2 Output
6	Low Side Output 3	1.5A Open Collector	Port Injector 3 Output
7	Low Side Output 4	1.5A Open Collector	Port Injector 4 Output
8	Crank/Cam Ground	Digital Ground	Crank/Cam Sensor Ground
9	Crank Input	VR/Hall - Software Selectable	Crank Sensor Input
10	Cam Input 1	VR/Hall - Software Selectable	Cam Sensor 1 Input
11	Coolant Temp Input	3.16K pull-up to VREF	Coolant Temperature Input
12	Air Temp Input	3.16K pull-up to VREF	Air Temperature Input
13	Ignition 1	TTL/Power Ignition Output	Software Configurable Ignition Output
14	Ignition 2	TTL/Power Ignition Output	Software Configurable Ignition Output
15	Ignition 3	TTL/Power Ignition Output	Software Configurable Ignition Output
16	Ignition 4	TTL/Power Ignition Output	Software Configurable Ignition Output
17	Analog Input 1	47k pull-up to VREF	Linear 1 Input
18	Cam Input 2	VR/Hall - Software Selectable	Cam Sensor 2 Input
19	Analog Ground 1	Analog Ground	Analog Ground
20	Lambda 1 Input	Weak bias to 450mV	Narrowband Lambda Sensor 1 Input
21	CAN 1H	120 Ohm Terminated	To PC comms DTM CAN High
22	CAN 1L	120 Ohm Terminated	To PC comms DTM CAN Low
23	Low Side Output 5	1.5A Open Collector	Auxiliary 1 / Port Injector 5 Output
24	Low Side Output 7	1.5A Open Collector w/ recirc diode	Relay 1 / Main Relay Output
25	Low Side Output 8	1.5A Open Collector w/ recirc diode	Relay 2 / Fuel Pump Relay Output
26	Low Side Output 9	1.7A Open Collector w/ recirc diode	PWM 1 Output
27	Low Side Output 10	1.7A Open Collector w/ recirc diode	PWM 2 Output
28	Low Side Output 11	0.75A Open Collector w/ recirc diode	Relay 3 Output
29	Low Side Output 6	1.5A Open Collector	Auxiliary 2 / Port Injector 6 Output
30	Analog Ground 2	Analog Ground	Analog Sensors Ground
31	NTC Input 1	3.16K pull-up to VREF	NTC1 Input
32	Analog Input 2	47k pull-up to VREF	Throttle Position Sensor Input
33	Analog Input 3	47k pull-up to VREF	Manifold Pressure Sensor Input
34	VREF	200mA 5V supply to sensors	5V Reference Sensor Supply
35	Power Ground 2	Power Ground	Power Ground 2

DTM PC Comms Connector	
1	Battery Voltage
2	Ground
3	CAN High
4	CAN Low

Connector B			
Pin	Name	Description	Notes
B1	INJ1+	Injector 1 High Side	GDI Injector High-Side Bank 1
B2	INJ2+	Injector 2 High Side	GDI Injector High-Side Bank 1
B3	INJ3+	Injector 3 High Side	GDI Injector High-Side Bank 1
B4	INJ4+	Injector 4 High Side	GDI Injector High-Side Bank 2
B5	INJ5+	Injector 5 High Side	GDI Injector High-Side Bank 2
B6	INJ6+	Injector 6 High Side	GDI Injector High-Side Bank 2
B7	H Bridge 1 M+	8.6A H-Bridge Output	Throttle Motor Control +
B8	H Bridge 1 M-	8.6A H-Bridge Output	Throttle Motor Control -
B9	H Bridge 2 M+	8.6A H-Bridge Output	High Pressure Pump 1 +
B10	H Bridge 2 M-	8.6A H-Bridge Output	High Pressure Pump 1 -
B11	H Bridge 3 M-	8.6A H-Bridge Output	High Pressure Pump 2 +
B12	H Bridge 3 M-	8.6A H-Bridge Output	High Pressure Pump 2 -
B13	INJ1-	Injector 1 Low Side	GDI Injector #1 Low-Side
B14	INJ2-	Injector 2 Low Side	GDI Injector #2 Low-Side
B15	INJ3-	Injector 3 Low Side	GDI Injector #3 Low-Side
B16	INJ4-	Injector 4 Low Side	GDI Injector #4 Low-Side
B17	INJ5-	Injector 5 Low Side	GDI Injector #5 Low-Side
B18	INJ6-	Injector 6 Low Side	GDI Injector #6 Low-Side
B19	Ignition 5	TTL/Power Ignition Output	Software Configurable Ignition Output
B20	Ignition 6	TTL/Power Ignition Output	Software Configurable Ignition Output
B21	Knock 1 +	Knock 1 Signal Input	Knock Sensor Input
B22	Knock 2 +	Knock 2 Signal Input	Knock Sensor Input
B23	Knock Ground	Digital Ground	Knock Sensors Ground
B24	Lambda 2 Input	Weak bias to 450mV	Narrowband Lambda 2 Input
B25	Analog Input 4	47k pull-up to VREF	Throttle Position Sensor 2 Input
B26	Analog Input 5	47k pull-up to VREF	Pedal Position Sensor 1 Input
B27	Analog Input 6	47k pull-up to VREF	Pedal Position Sensor 2 Input
B28	NTC Input 2	3.16k pull-up to VREF	NTC 2 Input
B29	NTC Input 3	3.16k pull-up to VREF	NTC 3 Input
B30	Analog Input 7	47k pull-up to VREF	Linear 5 Input
B31	Analog Input 8	47k pull-up to VREF	Linear 6 Input
B32	Analog Input 9	47k pull-up to VREF	Linear 7 Input
B33	Analog Input 10	47k pull-up to VREF	Linear 8 Input
B34	CAN 2L	120 Ohm Terminated	CAN bus 2 Low
B35	CAN 2H		CAN bus 2 High

Connector C			
Pin	Name	Description	Notes
C1	Wideband Lambda 1 Heater	1.7A Open collector with recirc diode	Wideband Lambda Sensor 1 Heater
C2	Wideband Lambda 1 Ip		Wideband Lambda Sensor 1 Ip
C3	Wideband Lambda 1 Ia		Wideband Lambda Sensor 1 Ia
C4	Wideband Lambda 1 Vm		Wideband Lambda Sensor 1 Vm
C5	Wideband Lambda 1 Nernst		Wideband Lambda Sensor 1 Un
C6	Cam Input 3	VR/Hall - Software Selectable	Cam Sensor 3 Input
C7	Cam Input 4	VR/Hall - Software Selectable	Cam Sensor 4 Input
C8	LIN		LIN communications
C9	Hall Input1	Hall Effect Input (2k7 Pull-up to 5V)	Left Rear Wheel Speed Input
C10	Hall Input2	Hall Effect Input (2k7 Pull-up to 5V)	Right Rear Wheel Speed Input
C11	Hall Input3	Hall Effect Input (2k7 Pull-up to 5V)	Left Front Wheel Speed Input
C12	Hall Input4	Hall Effect Input (2k7 Pull-up to 5V)	Right Front Wheel Speed Input
C13	Wideband Lambda 2 Heater	1.7A Open collector with recirc diode	Wideband Lambda Sensor 2 Heater
C14	Wideband Lambda 2 Ip		Wideband Lambda Sensor 2 Ip
C15	Wideband Lambda 2 Ia		Wideband Lambda Sensor 2 Ia
C16	Wideband Lambda 2 Vm		Wideband Lambda Sensor 2 Vm
C17	Wideband Lambda 2 Nernst		Wideband Lambda Sensor 2 Un
C18	Low Side Output 12	1.7A Open collector with recirc diode	Auxiliary 3 Output
C19	Low Side Output 13	1.7A Open collector with recirc diode	Auxiliary 4 Output
C20	Bipolar Output 1	2.5A Hi Side/Lo Side Drive	PWM 5 Bipolar output
C21	Bipolar Output 2	2.5A Hi Side/Lo Side Drive	PWM 6 Bipolar output
C22	Bipolar Output 3	2.5A Hi Side/Lo Side Drive	PWM 7 Bipolar output
C23	Bipolar Output 4	2.5A Hi Side/Lo Side Drive	PWM 8 Bipolar output
C24	Low Side Output 14	1.5A Open collector with recirc diode	HEGO Heater 1
C25	Low Side Output 15	1.5A Open collector with recirc diode	HEGO Heater 2
C26	Low Side Output 16	1.5A Open collector with recirc diode	Relay 4 Output
C27	Low Side Output 17	1.5A Open collector with recirc diode	Relay 5 Output
C28	Low Side Output 18	0.75A Open collector with recirc diode	Relay 6 Output
C29	Low Side Output 19	0.75A Open collector with recirc diode	Relay 7 Output
C30	Hall Input 5	Hall Effect Input (2k7 Pull-up to 5V)	SENT Position Sensor Input
C31	Analog Input 11	47k pull-up to VREF	Linear 9 Input
C32	Analog Input 12	47k pull-up to VREF	Linear 10 Input
C33	NTC Input 4	3.16k pull-up to VREF	NTC 4 Input
C34	VREF2	200mA 5V supply to sensors	5V Reference Sensor Supply
C35	Analog Ground 2	Analog Ground	Analog Sensors Ground