



Delta GDI4 - ECU Pinout

Connector A: AMPSeal 776164-1

Connector B: AMPSeal 776163-5

Terminal Pins 770520-3

Pin	Short Name	Name	Description	Application
A1	VBATT	Battery	Power Supply input 6-18V	Direct Battery Supply (fuse 15A)
A2	VKEY	Ignition	Ignition Switch input	Ignition Switched Supply (fuse 10A)
A3	P_GND1	Power Ground 1	Power Ground	Power Ground 1
A4	OUT1	Low Side 1	3A Open Collector w/recirc diode	Hot Soak Relay Control
A5	OUT2	Low Side 2	3A Open Collector w/recirc diode	A/C Clutch Relay Control
A6	OUT3	Low Side 3	3A Open Collector w/recirc diode	Purge Valve Control
A7	OUT4	Low Side 4	3A Open Collector w/recirc diode	Lambda Heater Drive
A8	D_GND	Hall Ground	Digital Ground	Crank/Cam Sensors Ground
A9	CRANK	Hall Input	Digital Input	Crank Sensor Input
A10	CAM1	Hall Input	Digital Input	Intake Cam Input
A11	TCOOL	NTC Input	3.16K pull-up to VREF	Coolant Temp Input
A12	TAIR	NTC Input	3.16K pull-up to VREF	Charge Air Temp Input
A13	IGN1	Ignition 1	Logic or Power (hardware selected)	Ignition Coil 1 Output
A14	IGN2	Ignition 2	Logic or Power (hardware selected)	Ignition Coil 2 Output
A15	IGN3	Ignition 3	Logic or Power (hardware selected)	Ignition Coil 3 Output
A16	IGN4	Ignition 4	Logic or Power (hardware selected)	Ignition Coil 4 Output
A17	LINEAR1	Analog Input 1	47k pull-up to VREF	Fuel Rail Pressure Input
A18	CAM2	Hall Input	Digital Input	Exhaust Cam Input
A19	A_GND1	Analog Ground 1	Analog Ground	Temp Sensors Ground
A20	LMBD1	Lambda 1 Input	Weak bias to 450mV	Lambda 1 Input
A21	CAN1H	CAN 1H	120 Ohm Terminated	CAN 1 High
A22	CAN1L	CAN 1L		CAN 1 Low
A23	HALL1	Hall Input 1	Digital Input	MAF Input
A24	OUT5	Low Side 5	3A Open Collector w/recirc diode	Main Relay Output
A25	OUT6	Low Side 6	3A Open Collector w/recirc diode	Thermostat Control Output
A26	OUT7	Low Side 7	3A Open Collector w/recirc diode	Intake Cam PWM Output
A27	OUT8	Low Side 8	3A Open Collector w/recirc diode	Exhaust Cam PWM Output
A28	OUT9	Low Side 9	3A Open Collector w/recirc diode	Fan 1 Relay/PWM Output
A29	OUT10	Low Side 10	3A Open Collector w/recirc diode	Fan 2 Relay/PWM Output
A30	A_GND2	Analog Ground 2	Analog Ground	TPS/MAP/MAF Ground
A31	NTC1	NTC Input 1	3.16K pull-up to VREF	Gear Cut Input
A32	LINEAR2	Analog Input 2	47k pull-up to VREF	Throttle Position Sensor 1 Input
A33	LINEAR3	Analog Input 3	47k pull-up to VREF	MAP Sensor Input
A34	VREF1	VREF 1	5V 500mA sensor supply	5V Sensor Supply 1
A35	P_GND2	Power Ground 2	Power Ground	Power Ground 2
B1	INJ1+	Injector 1 +	Injector 1 High Side	Injector 1 +
B2	INJ2+	Injector 2 +	Injector 2 High Side	Injector 2 +
B3	INJ3+	Injector 3 +	Injector 3 High Side	Injector 3 +
B4	INJ4+	Injector 4 +	Injector 4 High Side	Injector 4 +
B5	HBRIDGE1+	H Bridge M+	5A H-Bridge	Throttle +
B6	HBRIDGE1-	H Bridge M-	5A H-Bridge	Throttle -
B7	HBRIDGE2+	Fuel Pump Drive +	5A H-Bridge	Fuel Pump +
B8	HBRIDGE2-	Fuel Pump Drive -	5A H-Bridge	Fuel Pump -
B9	OUT11	Low Side 11	3A Open Collector w/recirc diode	Wastegate Valve Output
B10	OUT12	Low Side 12	3A Open Collector w/recirc diode	Recirc Valve Output
B11	VREF2	VREF 2	5V 500mA sensor supply	5V Sensor Supply 2
B12	HBRIDGE3+	H Bridge 3 M+	5A H-Bridge	Electronic Turbo Actuator +
B13	INJ1-	Injector 1 -	Injector 1 Low Side	Injector 1 -
B14	INJ2-	Injector 2 -	Injector 2 Low Side	Injector 2 -
B15	INJ3-	Injector 3 -	Injector 3 Low Side	Injector 3 -
B16	INJ4-	Injector 4 -	Injector 4 Low Side	Injector 4 -
B17	HALL3	Hall Input 3	Digital Input	Wheel Speed Input LR
B18	HALL4	Hall Input 4	Digital Input	Wheel Speed Input RR
B19	HALL5	Hall Input 5	Digital Input	Wheel Speed Input LF
B20	HALL6	Hall Input 6	Digital Input	Wheel Speed Input RF
B21	KNOCK1	Knock 1 +	Knock Input	Knock Sensor 1 Input
B22	KNOCK2	Knock 2 +	Knock Input	Knock Sensor 2 Input
B23	K_GND	Knock Ground	Digital Ground	Knock Sensor Ground
B24	HBRIDGE3-	H Bridge 3 M-	5A H-Bridge	Electronic Turbo Actuator -
B25	LINEAR4	Analog Input 4	47k pull-up to VREF	Throttle Position Sensor 2 Input
B26	LINEAR5	Analog Input 5	47k pull-up to VREF	Pedal Position Sensor 1 Input
B27	LINEAR6	Analog Input 6	47k pull-up to VREF	Pedal Position Sensor 2 Input
B28	LINEAR7	Analog Input 7	47k pull-up to VREF	Oil Pressure Sensor Input
B29	LINEAR8	Analog Input 8	47k pull-up to VREF	Fuel Line Pressure Sensor Input
B30	LINEAR9	Analog Input 9	47k pull-up to VREF	Traction Control Pot Input
B31	LINEAR10	Analog Input 10	47k pull-up to VREF	A/C System Pressure Input
B32	LINEAR11	Analog Input 11	47k pull-up to VREF	Boost Pressure Sensor Input
B33	NTC2	NTC Input 2	3.16k pull-up to VREF	Fuel Level Input
B34	CAN2H	CAN 2 H	120 Ohm Terminated	CAN 2 High
B35	CAN2L	CAN 2 L		CAN 2 Low