

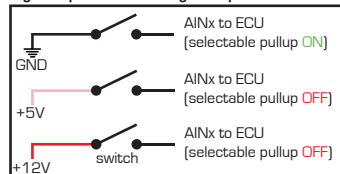
All AIN have selectable pullups.

MaxxECU

Ignition output examples (5V/12V or ground).

Example wiring. All AIN functions are assigned in MTune.

Digital input switch wiring examples



Sensor or Shield GND must **NEVER** be connected to chassis OR engine!

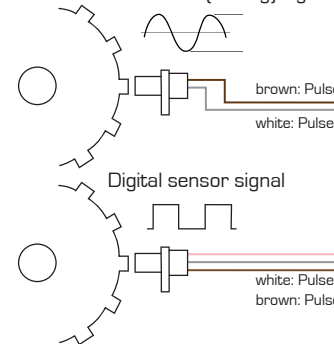
VR-sensor (analog) signal

Switch, speed input, ethanol sensor / BSD / ABS / cam.

Digital sensor signal

Example wiring for trigger signals. All Pulse Input functions are assigned in MTune. Any Pulse inputs may be used for trigger signals. All Pulse inputs support both VR and digital signals.

VR-sensor (analog) signal



Digital supply selectable 5V or 12V
Always verify sensor specifications with the manufacturer before connection.

Engine cylinder head

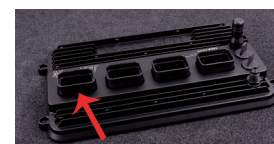
Engine

Battery

15A (Ignition)

15A (ECU)

IGN switch



MaxxECU GEN2 RACE
Connector 1 (MX1)

Available connector kit
Superseal 1.0, key MX1
Product ID: [2416](#)

Throttle Position sensor (TPS)
Coolant Temperature sensor (CLT)
Intake Air Temperature sensor (IAT)
Extra temperature sensor
Extra 0-5V sensor input

Sensor GND
(splice to other sensors)

Shielded wires may be needed to block VR sensor interference.

Cable shields should only be grounded **through the ECU** (which is prewired).

If the sensor lacks a shield, isolate and leave unterminated.

pink: selectable power supply (+5/12V).
Isolate (and turn off supply) if not used.

white: Pulse +
brown: Pulse -

5V SENSOR SUPPLY - [MX1:22]

AIN 1 - [MX1:26]

AIN 2 - [MX1:27]

AIN 3 - [MX1:28]

AIN 4 - [MX1:29]

AIN 5 - [MX1:30]

SENSOR GND - [MX1:14]

DIGITAL/VR 3 (PULSE) - [MX1:23]

DIGITAL/VR 4 (PULSE) - [MX1:24]

PULSE 1 SHIELD [MX1:13]

PULSE 1 + [MX1:10]

PULSE 1 - [MX1:11]

PULSE 1 SUPPLY [MX1:12]

PULSE 2 SHIELD [MX1:21]

PULSE 2 + [MX1:18]

PULSE 2 - [MX1:19]

PULSE 2 SUPPLY [MX1:20]

ENGINE GND - [MX1:9]

CAN L [MX1:15]

CAN H [MX1:16]

IGNITION 1 - [MX1:1]

IGNITION 2 - [MX1:2]

IGNITION 3 - [MX1:3]

IGNITION 4 - [MX1:4]

INJECTOR 1 - [MX1:31]

INJECTOR 2 - [MX1:32]

INJECTOR 3 - [MX1:33]

INJECTOR 4 - [MX1:34]

PULSE 1 SHIELD [MX1:13]

PULSE 1 + [MX1:10]

PULSE 1 - [MX1:11]

PULSE 1 SUPPLY [MX1:12]

PULSE 2 SHIELD [MX1:21]

PULSE 2 + [MX1:18]

PULSE 2 - [MX1:19]

PULSE 2 SUPPLY [MX1:20]

ENGINE GND - [MX1:9]

GP OUT 1 (GND) - [MX1:5]

GP OUT 2 (GND) - [MX1:6]

GP OUT 3 (GND) - [MX1:7]

GP OUT 4 (GND) - [MX1:8]

GP OUT 5 (GND) - [MX1:17]

12V ECU SUPPLY 1 - [MX1:25]

CAN-bus 1. 120Ω termination resistor built-in.

Ignition coil 1

Ignition coil 2

Ignition coil 3

Ignition coil 4

+12v power supply for ignition coils

+12v power supply relays, solenoids etc.

Injector 1

Injector 2

Injector 3

Injector 4

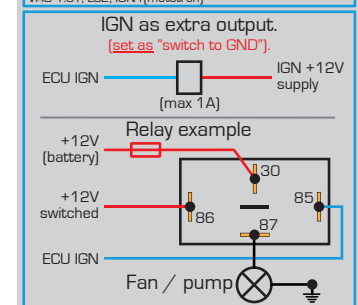
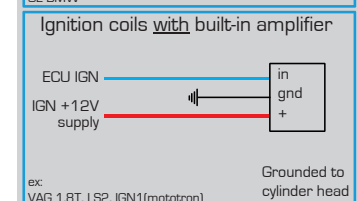
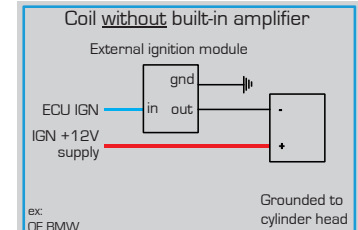
Extra output 1

Extra output 2

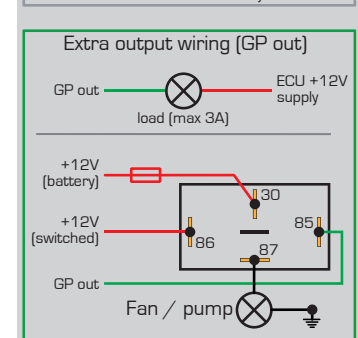
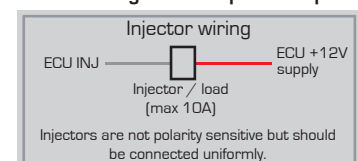
Extra output 3

Extra output 4

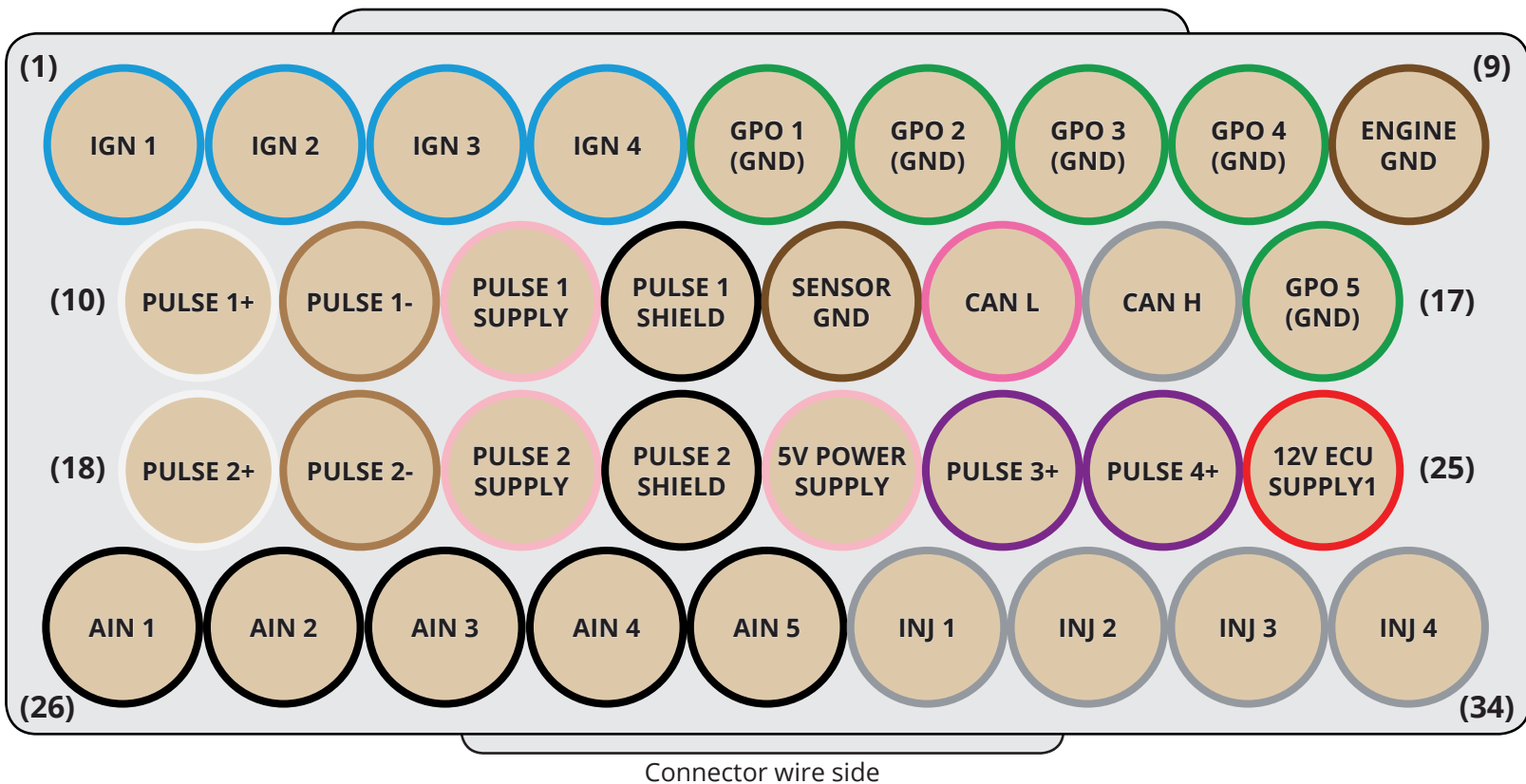
Extra output 5 / TACHO



INJ and GP ground output examples.



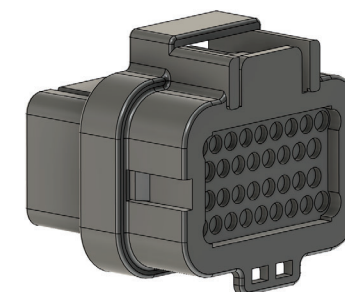
MaxxECU GEN2 RACE (MX1)
2025-10-23
maxxecu.com/support



MX1 keying



ECU side



Wire side

Pin	Function	Note
1	IGNITION 1	
2	IGNITION 2	
3	IGNITION 3	
4	IGNITION 4	
5	GP OUT 1 (GND)	
6	GP OUT 2 (GND)	
7	GP OUT 3 (GND)	
8	GP OUT 4 (GND)	
9	ENGINE GND	
10	DIGITAL/VR 1 (PULSE) SIGNAL +	
11	DIGITAL/VR 1 (PULSE) SIGNAL -	
12	DIGITAL/VR 1 (PULSE) POWER SUPPLY	
13	DIGITAL/VR 1 (PULSE) SHIELD	
14	SENSOR GND	
15	CAN L	
16	CAN H	
17	GP OUT 5 / TACHO (GND)	

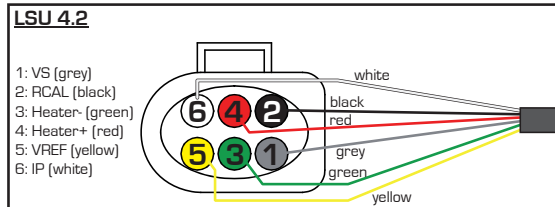
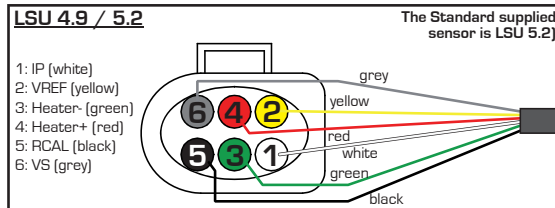
Pin	Function	Note
18	DIGITAL/VR 2 (PULSE) SIGNAL +	
19	DIGITAL/VR 2 (PULSE) SIGNAL -	
20	DIGITAL/VR 2 (PULSE) POWER SUPPLY	
21	DIGITAL/VR 2 (PULSE) SHIELD	
22	5V POWER SUPPLY	
23	DIGITAL/VR 3 (PULSE) SIGNAL +	
24	DIGITAL/VR 4 (PULSE) SIGNAL +	
25	12V ECU SUPPLY 1	
26	AIN 1	
27	AIN 2	
28	AIN 3	
29	AIN 4	
30	AIN 5	
31	INJECTOR 1	
32	INJECTOR 2	
33	INJECTOR 3	
34	INJECTOR 4	

Sensor or Shield GND must **NEVER** be connected to chassis OR engine!

Sensor GND (from connector 1)
5V SUPPLY (from connector 1)

MaxxECU

Extra temperature / 0-5V sensor inputs
- All AIN have selectable pullups.
- Functions are assigned in MTune.



Use only recommended sensors:
LSU 5.2: Bosch 0258 037 010 / 0258 037 022
LSU 4.9: Bosch 0281 004 191 / 0258 017 025
LSU 4.2: Bosch 0258 007 057

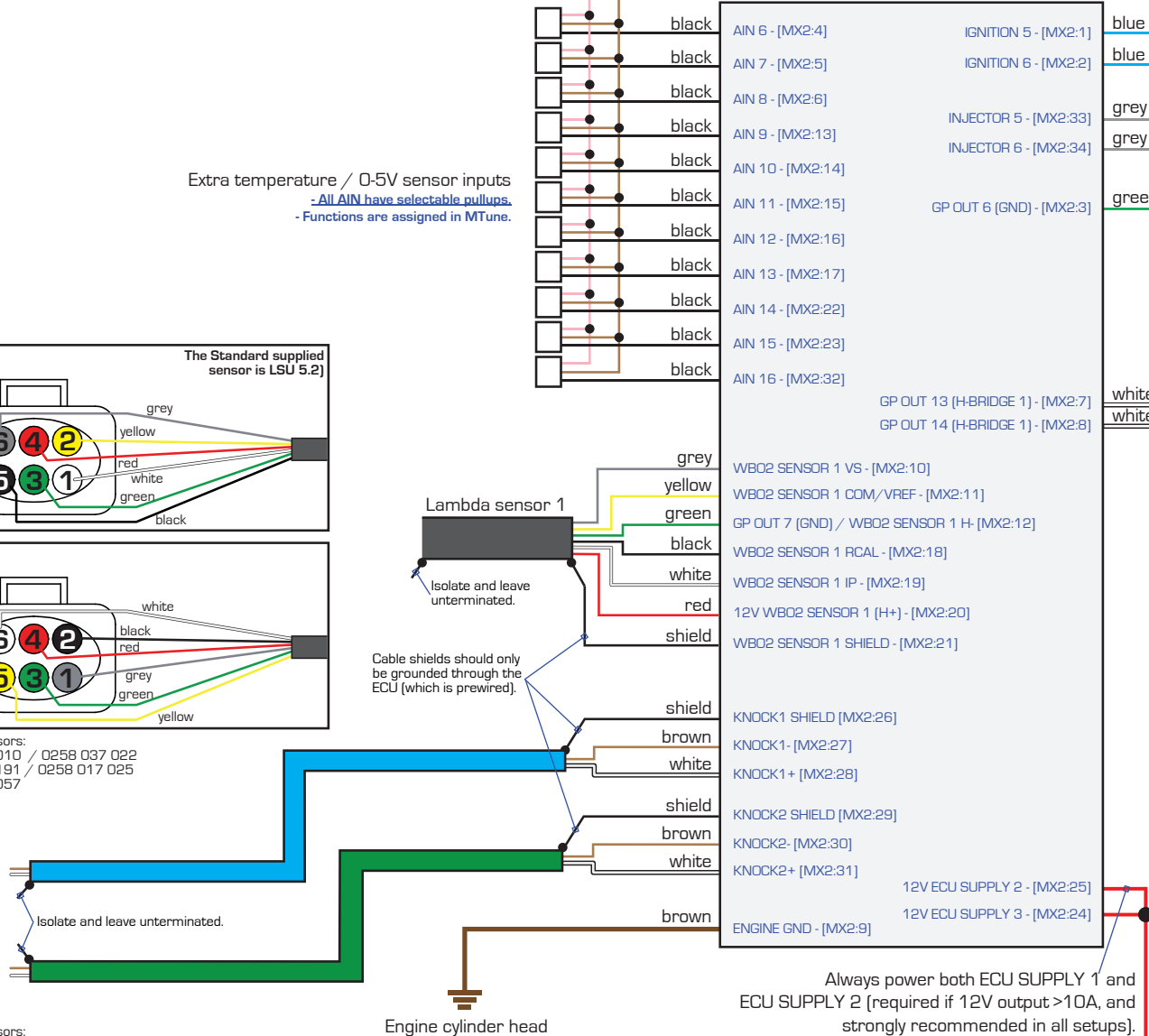
Knock sensor #1



Knock sensor #2



Use only recommended sensors:
Bosch 0261 231 046
(Knock sensor(s) are not polarity sensitive)



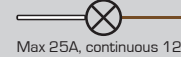
Always power both ECU SUPPLY 1 and ECU SUPPLY 2 (required if 12V output >10A, and strongly recommended in all setups).

Use the same power source as connector 1 (MX1).

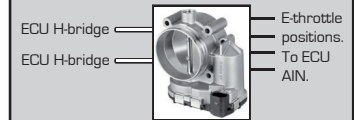
Refer to the wiring diagram for GEN2 connector 1 (MX1) for Ignition, Injector, and GP output connections.

H-bridge output examples

General purpose load

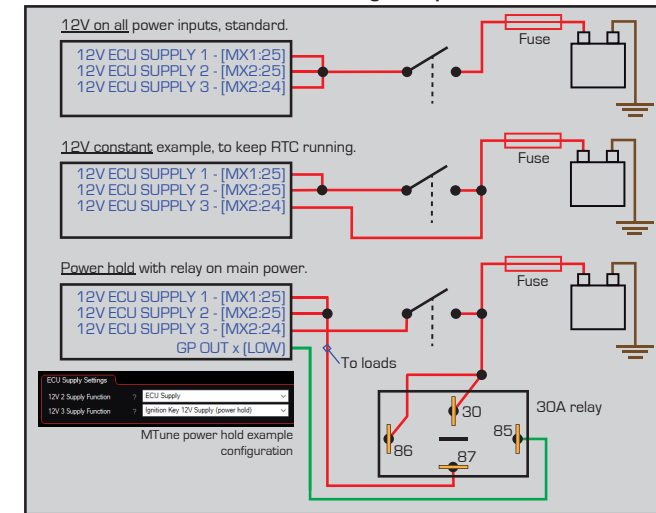


Bidirectional motor control



Outputs 12V when active, and switches to ground when not active.

Power wiring examples



Optional constant 12V SUPPLY 3 (0.6mA) extends clock runtime beyond 2 weeks with ECU off.



MaxxECU GEN2 RACE
Connector 2 (MX2)

Available connector kit

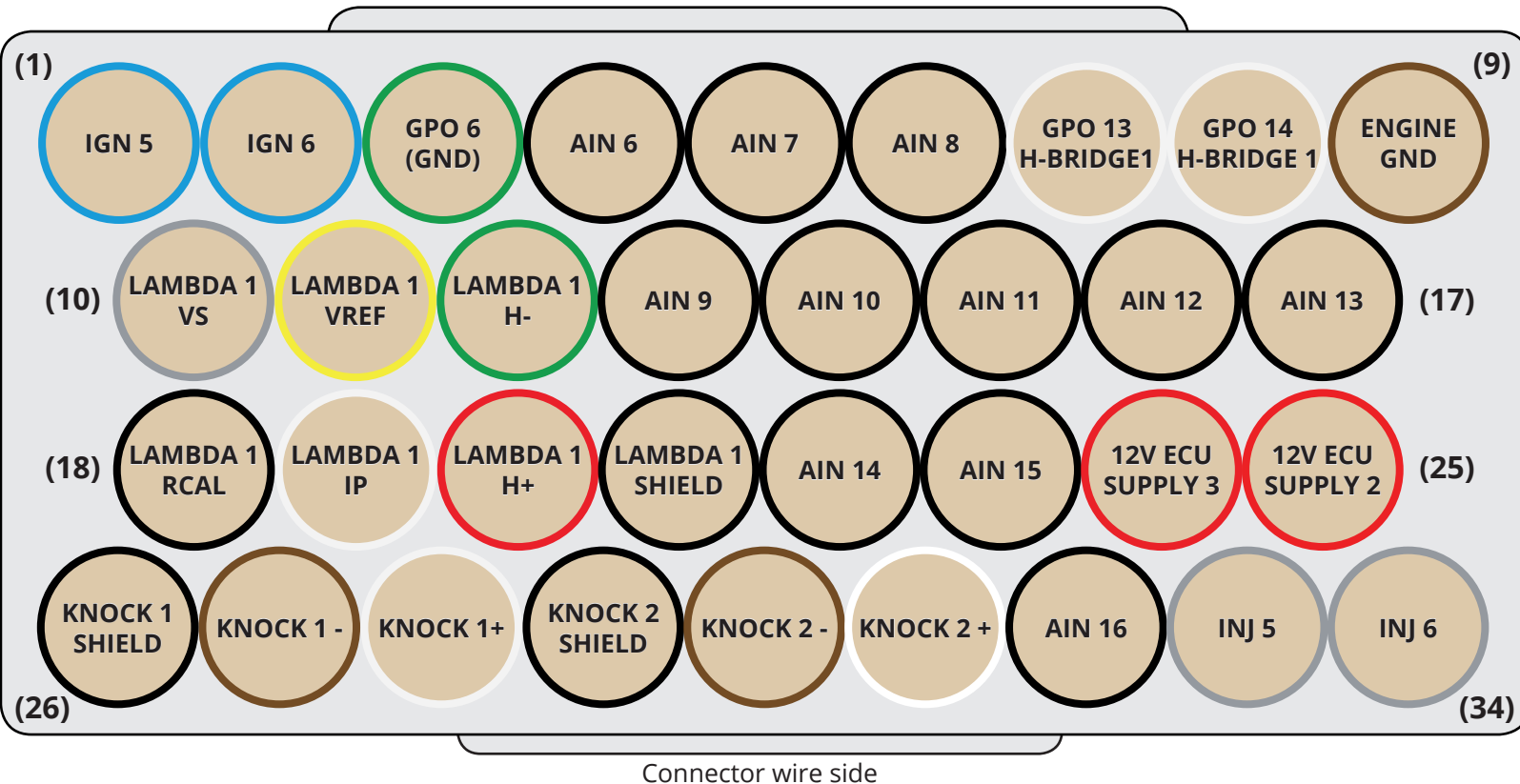
Superseal 1.0, key MX2

Product ID: [2417](#)

MaxxECU GEN2 RACE (MX2)

2025-10-23

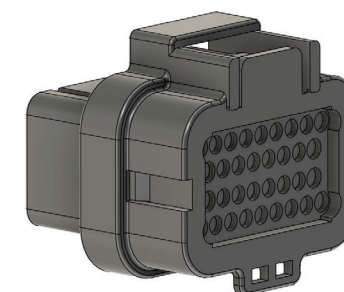
maxxecu.com/support



MX2 keying



ECU side



Wire side

Pin	Function	Note
1	IGNITION 5	
2	IGNITION 6	
3	GP OUT 6 (GND)	
4	AIN 6	
5	AIN 7	
6	AIN 8	
7	GP OUT 13 (H-BRIDGE 1)	
8	GP OUT 14 (H-BRIDGE 1)	
9	ENGINE GND	
10	WBO2 SENSOR 1 VS	
11	WBO2 SENSOR 1 COM/VREF	
12	GP OUT 7 (GND) / WBO2 SENSOR 1 H-	
13	AIN 9	
14	AIN 10	
15	AIN 11	
16	AIN 12	
17	AIN 13	

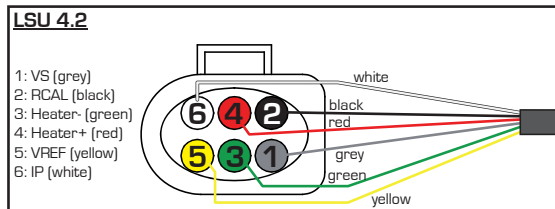
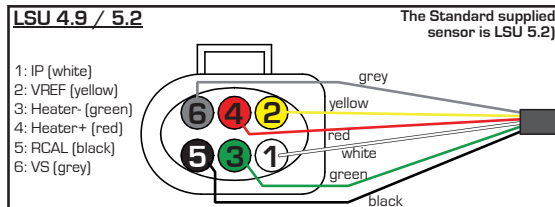
Pin	Function	Note
18	WBO2 SENSOR 1 RCAL	
19	WBO2 SENSOR 1 IP	
20	12V WBO2 SENSOR 1 H+	
21	WBO2 SENSOR 1 SHIELD	
22	AIN 14	
23	AIN 15	
24	12V ECU SUPPLY 3	
25	12V ECU SUPPLY 2	
26	KNOCK 1 SHIELD	
27	KNOCK 1-	
28	KNOCK 1+	
29	KNOCK 2 SHIELD	
30	KNOCK 2-	
31	KNOCK 2+	
32	AIN 16	
33	INJECTOR 5	
34	INJECTOR 6	

Sensor or Shield GND must **NEVER** be connected to chassis OR engine!

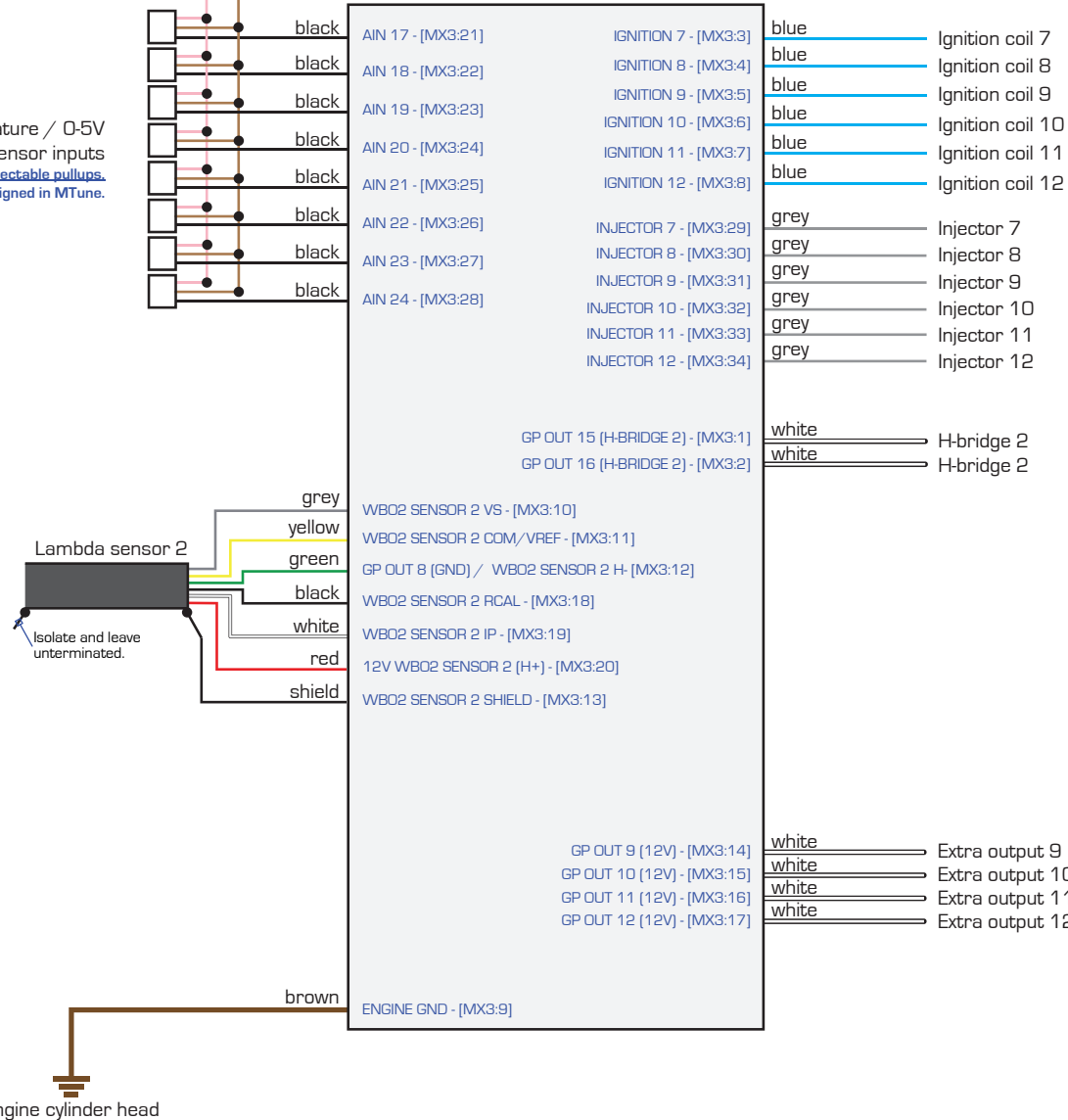
Sensor GND (from connector 1)
5V SUPPLY (from connector 1)

MaxxECU

Extra temperature / 0-5V sensor inputs
- All AIN have selectable pullups.
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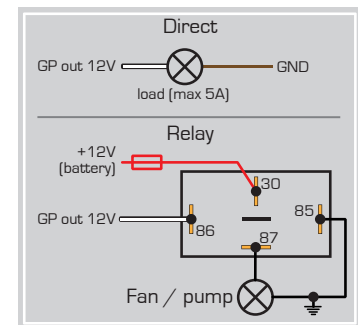
Use only recommended sensors:
LSU 5.2: Bosch 0258 037 010 / 0258 037 022
LSU 4.9: Bosch 0281 004 191 / 0258 017 025
LSU 4.2: Bosch 0258 007 057



Refer to the wiring diagram for GEN2 connector 1 (MX1) for Ignition and Injector connections.

Refer to the wiring diagram for GEN2 connector 2 (MX2) for H-bridge connections.

GP 12V output examples.



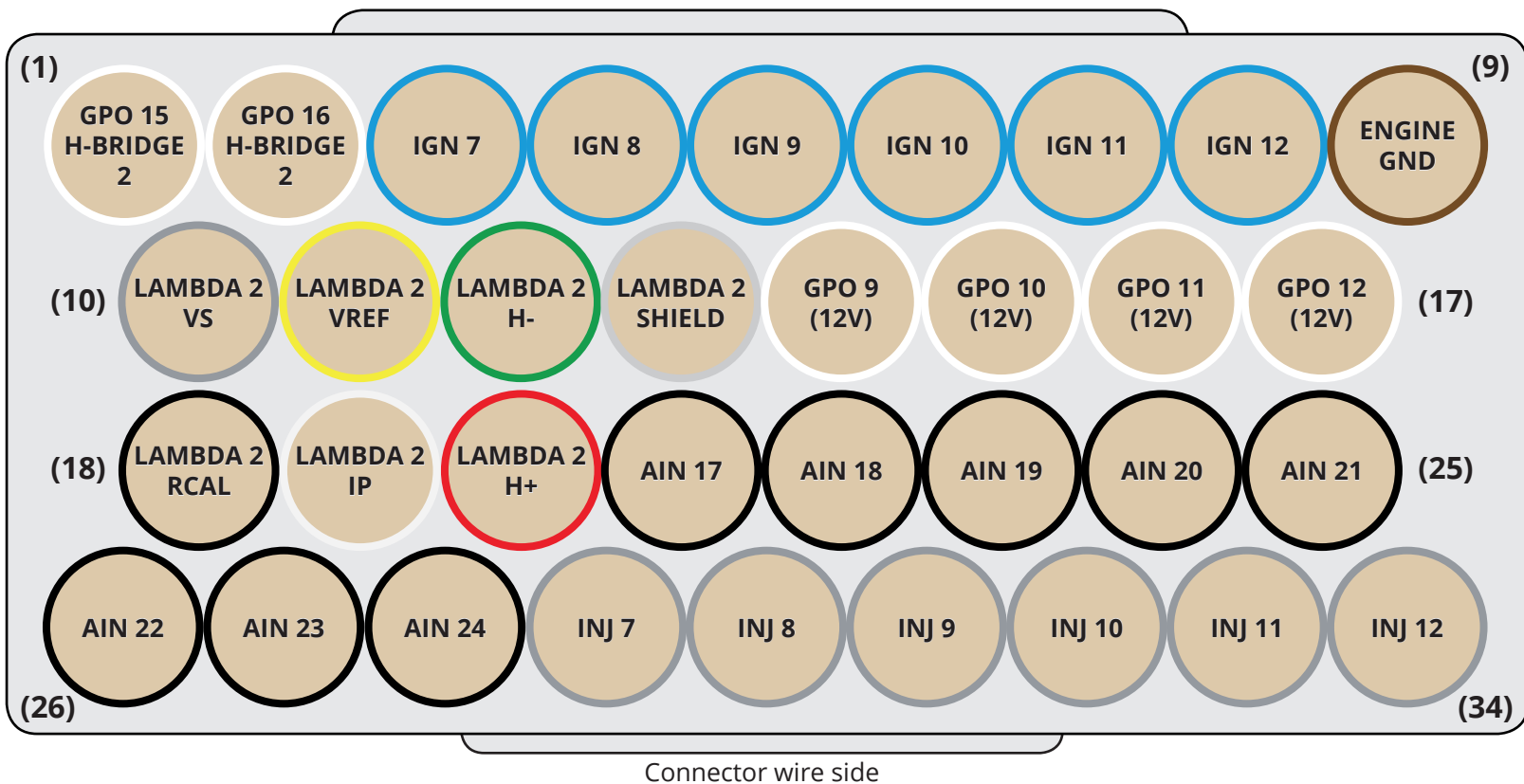
12V1 and 12V2 power inputs required if 12V TOTAL output exceeds 10A. See GEN2 connector 2 (MX2) wiring diagram.



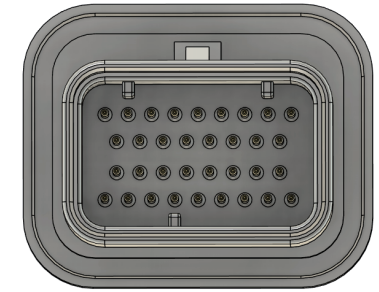
MaxxECU GEN2 RACE
Connector 3 (MX3)

Available connector kit
Superseal 1.0, key MX3
Product ID: [2418](#)

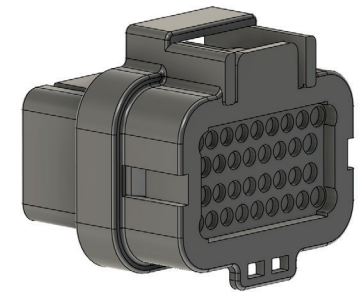
MaxxECU GEN2 RACE (MX3)
2025-10-23
maxxecu.com/support



MX3 keying



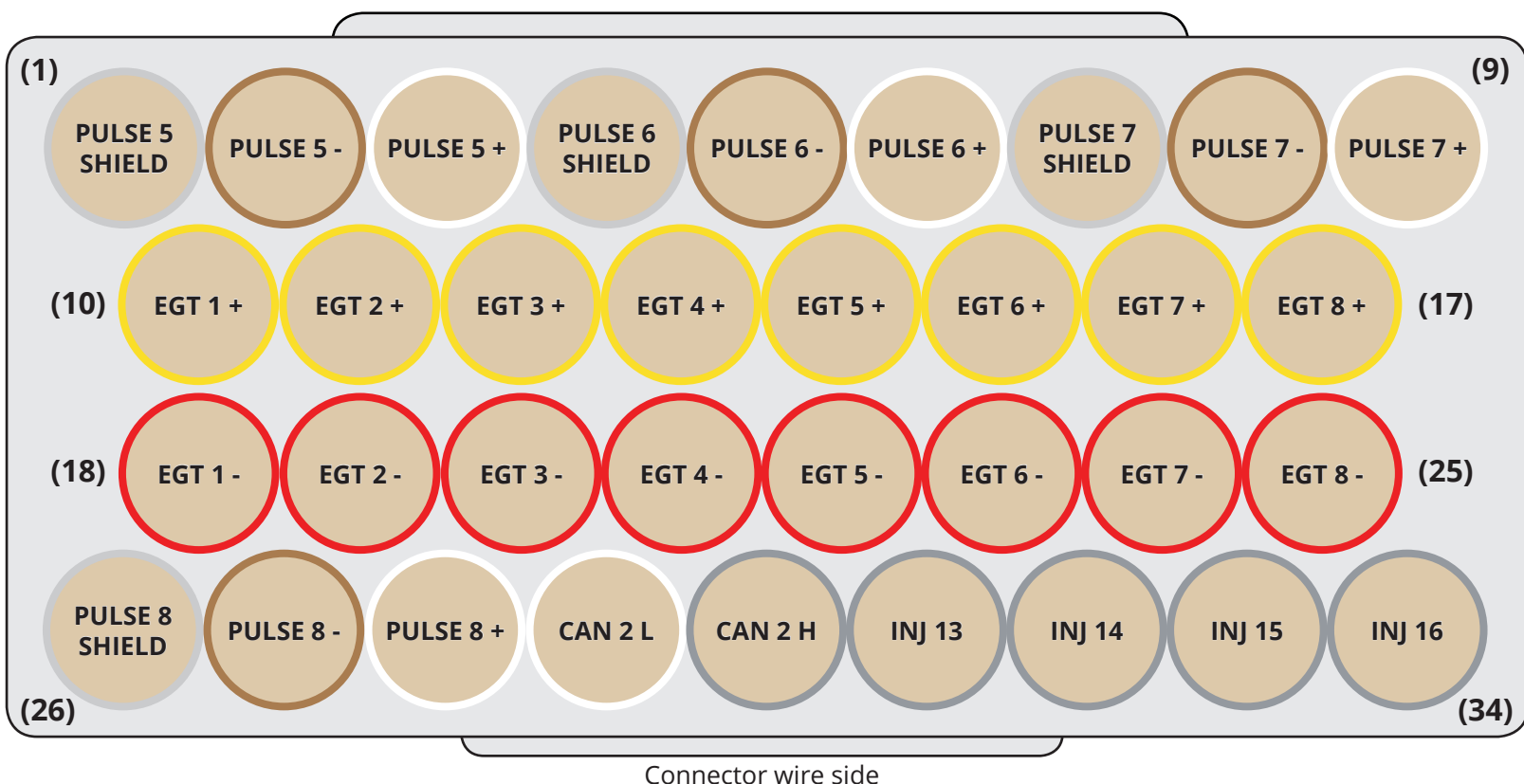
ECU side



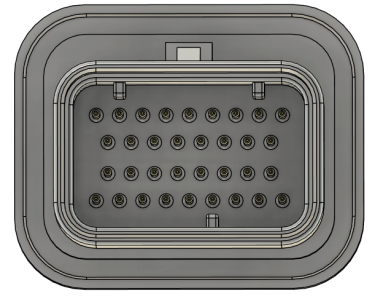
Wire side

Pin	Function	Note
1	GP OUT 15 (H-BRIDGE 2)	
2	GP OUT 16 (H-BRIDGE 2)	
3	IGNITION 7	
4	IGNITION 8	
5	IGNITION 9	
6	IGNITION 10	
7	IGNITION 11	
8	IGNITION 12	
9	ENGINE GND	
10	WBO2 SENSOR 2 VS	
11	WBO2 SENSOR 2 VREF	
12	GP OUT 8 (GND) / WBO2 SENSOR 2 H-	
13	WBO2 SENSOR 2 SHIELD	
14	GP OUT 9 (12V)	
15	GP OUT 10 (12V)	
16	GP OUT 11 (12V)	
17	GP OUT 12 (12V)	

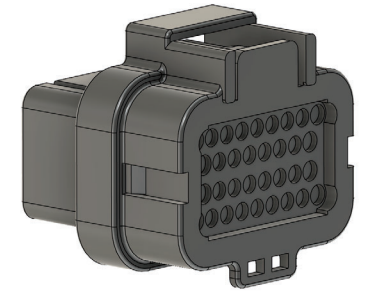
Pin	Function	Note
18	WBO2 SENSOR 2 RCAL	
19	WBO2 SENSOR 2 IP	
20	12V WBO2 SENSOR 2 (H+)	
21	AIN 17	
22	AIN 18	
23	AIN 19	
24	AIN 20	
25	AIN 21	
26	AIN 22	
27	AIN 23	
28	AIN 24	
29	INJECTOR 7	
30	INJECTOR 8	
31	INJECTOR 9	
32	INJECTOR 10	
33	INJECTOR 11	
34	INJECTOR 12	



MX4 keying



ECU side



Wire side

Pin	Function	Note
1	DIGITAL/VR 5 (PULSE) SHIELD	
2	DIGITAL/VR 5 (PULSE) SIGNAL -	
3	DIGITAL/VR 5 (PULSE) SIGNAL +	
4	DIGITAL/VR 6 (PULSE) SHIELD	
5	DIGITAL/VR 6 (PULSE) SIGNAL -	
6	DIGITAL/VR 6 (PULSE) SIGNAL +	
7	DIGITAL/VR 7 (PULSE) SHIELD	
8	DIGITAL/VR 7 (PULSE) SIGNAL -	
9	DIGITAL/VR 7 (PULSE) SIGNAL +	
10	EGT 1 +	
11	EGT 2 +	
12	EGT 3 +	
13	EGT 4 +	
14	EGT 5 +	
15	EGT 6 +	
16	EGT 7 +	
17	EGT 8 +	

Pin	Function	Note
18	EGT 1 -	
19	EGT 2 -	
20	EGT 3 -	
21	EGT 4 -	
22	EGT 5 -	
23	EGT 6 -	
24	EGT 7 -	
25	EGT 8 -	
26	DIGITAL/VR 8 (PULSE) SHIELD	
27	DIGITAL/VR 8 (PULSE) SIGNAL -	
28	DIGITAL/VR 8 (PULSE) SIGNAL +	
29	CAN 2 L	
30	CAN 2 H	
31	INJECTOR 13	
32	INJECTOR 14	
33	INJECTOR 15	
34	INJECTOR 16	