

EN Motorsport

Thank you for your purchase of the EN Motorsport M52TU PNP adapter for the ECUMaster Black.

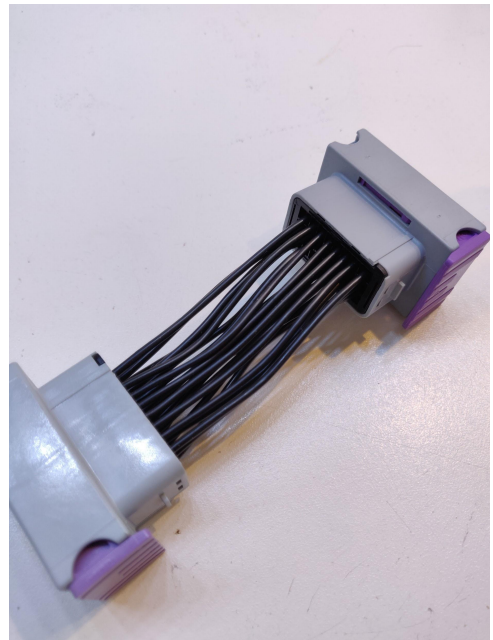
This PNP-adapter replaces the original MS42 ECU. If you own another ECU (MS43 or MS45, refer to the corresponding manuals). Make sure that your car uses the MS42 before continuing. Slight modifications to the plastic container for the OEM ECU is required.

Our recommendation is that you use our manual in conjunction with the official pinout from ecumaster to make sure that your installation is correct.

The pinouts stated in this document is also referring to the official one which is looking into the Black ECU.

Colour coding	
Gul	MUST be used by the ECU
Grön	Is available and can be used
Grå	Extern i/o that is not used by the PNP adapter

Observe! Pinouts stated below are the same as the official ones. I.e they are looking into the Black ECU. Cables are connected to the connectors in a straight manner as seen in the picture to the right. No cables are crossing each other except if you are using some that are labeled with a green colour.



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1. Pinout

Black 39 pin connector		
1 - Ign coil #5	14 - Ign coil #4	27 - GND
2 - EGT in #1	15 - EGT in #2	28 - ECU GND
3 - Knock sensor #1	16 - Knock sensor #2	29 - Sensor GND
4 - Analog in #2	17 - Analog in #3 - Oil temp	30 - Analog in #4
5 - CLT - Water temp	18 - TPS	31 - Analog #1
6 - WBO Vs	19 - WBO Ip	32 - IAT - Intake air temp
7 - Camsync in #2 - Exhaust	20 - VSS - ABS-sensor RR	33 - WBO VGND
8 - Primary trigger - Crank	21 - Camsync in #1 - Intake	34 - +5V output from ECU
9 - Flex Fuel sensor input	22 - WBO Rcal	35 - Analog in #5
10 - Switch #1	23 - Switch #2 - Brake pedal	36 - Switch #3 - Clutch pedal
11 - RS232 TXD	24 - RS232 RXD	37 - Analog in #6
12 - CAN H	25 - CAN L	38 - Sensor GND
13 - Konstant +12V	26 - +5V utgång	39 - Sensor GND

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Explanations Green label	
23 - Switch #2 - Brake pedal	This output provides 12V+ when depressed. This can be connected to analog in. It cannot be used directly in the switch input
36 - Switch #3 - Clutch pedal	This output provides 12V+ when depressed. This can be connected to analog in. It cannot be used directly in the switch input
3 - Knock sensor #1	This can be used when needed. Is often not used when using E85.
16 - Knock sensor #2	This can be used when needed. Is often not used when using E85.

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Gray 24 pin kontakt		
1 - Ign coil #6	9 - Ign coil #3	17- GND
2 - H-bridge #1A	10 - H-bridge #1B	18 - Ignition/KL15 +12V
3 - H-bridge #2A - Fuel pump	11 - H-bridge #2B - AC	19 - WBO Heater
4 - AUX 6 - Electric Fan PWM	12 - AUX 5 - Termostat PWM	20 - AUX 4 - Idle 2
5 - AUX 3 - Idle 1	13 - AUX 2 - VANOS exhaust	21 - AUX 1 - VANOS intake
6 - Injector #4	14 - Injector #5	22 - Injector #6
7 - Injector #1	15 - Injector #2	23 - Injector #3
8 - Ign coil #1	16 - Ign coil #2	24 - GND

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Limitations in the PNP adapter

The following is not connected in the adapter:

Komponent	Kommentar:
EVAP	Tank ventilation. Can be vented to atmosphere
DISA flap in intake	Not recommended in a boosted application. The DISA unit should be replaced and blocked off for minimal risk of damage to the engine.
Original oxygen sensor	Bosch LSU 4.2 eller 4.9 should be used
Air mass meter	Is not used, Use the MAP sensor in the ECU

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Examples of installation

