

- A1 - IGNITION 3
- A2 - VVT2 / **MOTOR A**
- A3 - VVT / **MOTOR B**
- A4 - IDLE2
- A5 - IDLE
- A6 - MAP
- A7 - BOOST
- A8 - VREF
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- A10 - ANALOG IN 5 / **PPS1**
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- A13 - INJECTOR3

- B1 - IGNITION 2
- B2 - WBO\_WHITE
- B3 - LAUNCH\_IN
- B4 - FUEL PUMP
- B5 - TABLE SWITCH
- B6 - TPS
- B7 - COOLANT
- B8 - AIR TEMP
- B9 - WBO\_BLACK
- B10 - WBO\_YELLOW
- B11 - WBO\_RED
- B12 - GNDA
- B13 - INJECTOR 2

- C1 - IGNITION 1
- C2 - IGNITION 4
- C3 - ANALOG IN 7 / **TPS2**
- C4 - +12 VOLT
- C5 - GND
- C6 - SENSOR GND
- C7 - WBO\_GREY
- C8 - VR1+
- C9 - VR1- / HALL1
- C10 - Vr2+
- C11 - VR2- / HALL2
- C12 - INJECTOR 4
- C13 - INJECTOR 1

RED = With DBW addon

+12 VOLT : kapcsolt tápfeszültség

GND: test

GNDA: Nagyáramú test (mindegyiket be kell kötni,  
min. 1.5mm<sup>2</sup> kábel!!!)

VREF: referencia feszültség (+5V) szenzorokhoz

SENSOR GND: szenzor test

INJECTOR x : injector kimenet X

IGNITION x : gyújtás kimenet hagyományos vagy  
logikai trafóhoz (kiépítés függő)

IDLE2 : 3A-es kapcsolható kimenet (PWM)

IDLE : 3A-es kapcsolható kimenet (PWM)

VVT2 : 3A-es kapcsolható kimenet (PWM)

VVT : 3A-es kapcsolható kimenet (PWM)

MAP : Map szenzor bemenet (0-5 volt analog)

ANALOG IN x : 0.5 volt analog bemenet

VR1+ : Főtengely VR szenzor + (hall szenzor esetén üresen kell hagyni)

VR1- / HALL1 : Főtengely VR szenzor - / Hall 1

VR2+ : Veztengely VR szenzor + (hall szenzor esetén üresen kell hagyni)

VR2- / HALL2 : Veztengely VR szenzor - / Hall 2

LAUNCH IN : rajtprogram gomb (testre aktív)

TABLE SWITCH : programváltó kapcsoló bemenet (testre aktív)

FUEL PUMP: benzinpumpa relé kimenet

AIR TEMP : levegőhőmérséglet szenzor

COOLANT : vízhőmérséglet szenzor

TPS : fotószelep-poti bemenet

BOOST: 3A kapcsolható kimenet (PWM)

WBO xxxxx : Bosch LSU 4.9 lambda szonda

TPS2 : második fojtószelep-poti bemenet

PPS1 : pedál szenzor első bemenet

PPS2 : pedál szenzor kettes bemenet

MOTOR A : Elektromos fotószelep motor +

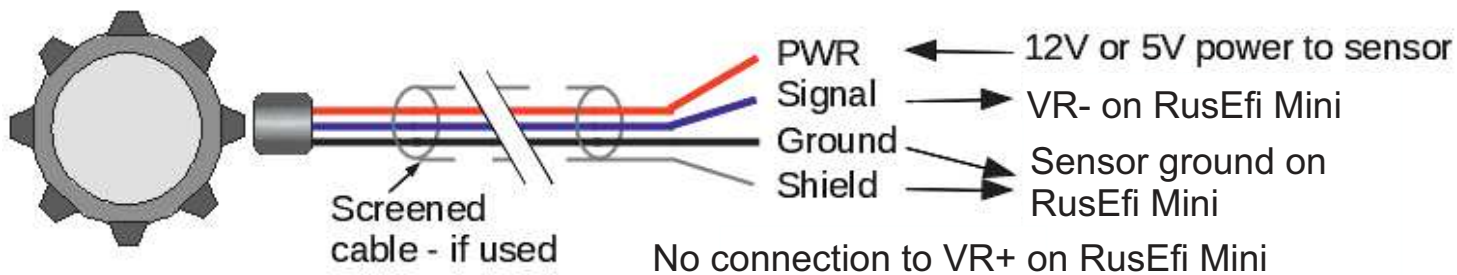
MOTOR B : Elektromos fotószelep motor -

## Bosch LSU 4.9 WBO:



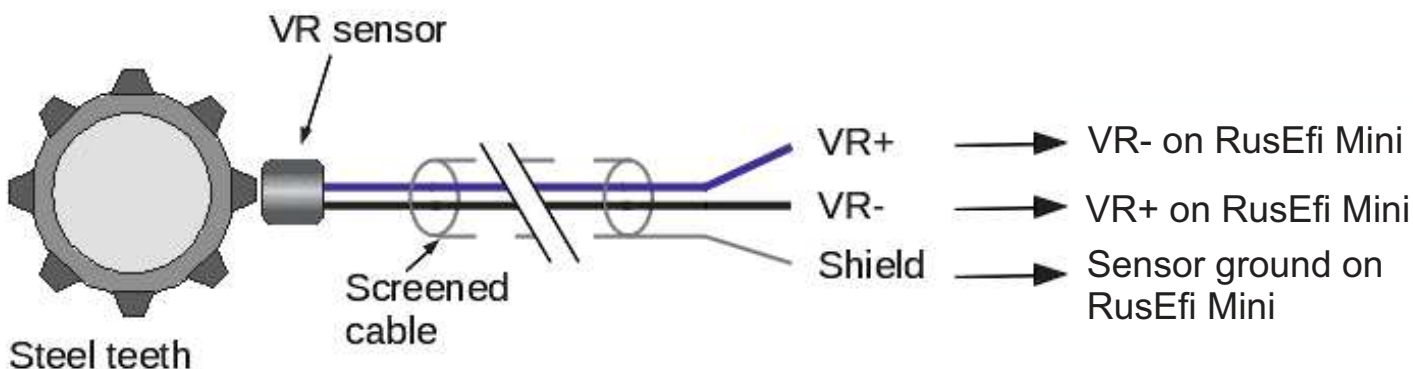
- 1 - RED
- 2 - YELLOW
- 3 - WHITE
- 4 - GREY
- 5 - GREEN
- 6 - BLACK

# HALL szenzor:



HALL pull-up resistors inside the box

# VR szenzor:

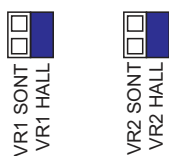


Some installs may find it necessary to install a "shunt" resistor between VR+ and VR- to reduce the signal voltage at higher RPMs. A 1/4W resistor is sufficient and values in the range of 1k to 10k. 10k is recommended for 60-2 wheels.

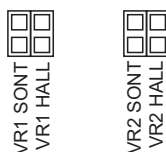
# Jumpers inside the RusEfi Mini:



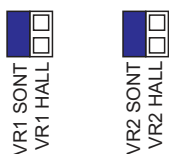
For hall sensor:



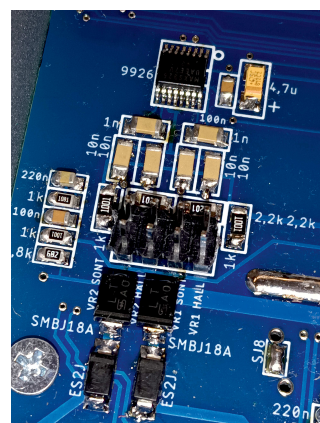
For VR sensor:



For VR sensor with sонт resistor:



The internal sонт resistor is 2,2kohm



<b>Csatlakozó megnevezés</b>	<b>Processzor láb</b>	
Injector 1	PB15	
Injector 2	PB14	
Injector 3	PB12	
Injector 4	PB13	
Ignition 1	PC10	
Ignition 2	PC11	
Ignition 3	PC12	
Ignition 4	PC13	
TACHO OUT	PA15	
IDLE1	PC8	
IDLE2	PC9	
VVT1	PA9	
VVT2	PA8	
BOOST	PC4	
FUEL PUMP	PC5	
CAN RX	PB8	
CAN TX	PB9	
MAP	PA3	
TPS1	PA2	
TPS2	PA6	
PPS1	PA7	
PPS2	PA5	
BATTERY	PA4	
COOLANT	PA1	
AIR TEMP	PA0	
O2	PB0	
BARO	PA5	
VR1	PB7	
VR2	PB6	
TABLE SWITCH	PC2	
LAUNCH_IN	PC3	
DIGITAL_IN3	PC1	
DIGITAL_IN4	PC0	
SPI1 MOSI	PB5	SD CARD
SPI1 MISO	PB4	
SPI1 SCK	PB3	

# DBW Settings:

Electronic Throttle Body

File View Help

Electronic Throttle Body  
<https://rusefi.com/s/etb>

Reset ETB

Disable ETB if engine is stopped	true
Disable ETB Motor	false
H-Bridge #1 function	Throttle 1
H-Bridge #2 function	None
PWM Frequency(Hz)	800
Minimum ETB position(%)	4.00
Maximum ETB position(%)	95
Jam detection integrator max(%)	0
Jam detection timeout period(sec)	0.40
Duty Averaging Length	50
Rate of change Averaging Length	50

ETB H-Bridge Hardware

Two-wire mode	false
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H-Bridge Hardware No1

No1 Direction #1	PB10
No1 Direction #2	NONE
No1 Control	PC7
No1 Disable	PC6

H-Bridge Hardware No2

No2 Direction #1	NONE
No2 Direction #2	NONE
No2 Control	NONE
No2 Disable	NONE

ETB Idle

ETB idle maximum angle(%)	0
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PID settings

pFactor	16.0000
iFactor	100.0000
dFactor	0.1300
pid min	-100
pid max	100
iTermMin	-30
iTermMax	30

PID Autotune

First step: calibrate TPS and hit 'Burn'

Auto Calibrate ETB 1

Auto Calibrate ETB 2

Second step

Start ETB PID Autotune

Stop ETB PID Autotune

Set debug mode below to 'ETB Autotune' to show more detail

Debug mode	ETB Autotune
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Allows disabling the ETB when the engine is stopped. You may not like the power draw or PWM noise from the motor, so this lets you turn it off until it's necessary.

Burn Close