

IN-LSU_BMW-900

BMW HP4/S1000RR Interface



Key Features:

- To work in combination with BMW HP RACE data logger
- Connects directly to the BMW CAN Bus
- 1 A/F input for use with 4.2 probe
- Up to 4 analog input channels
- USB serial interface for set up

Recommended sensors:

- Front suspension SY_KIT_Suspension_HP4-000
- Rear suspension SY_KIT_Suspension_S1000RR_rear-000
- Brake pressure SA-PK100M10-900
- Lambda probe SA-LSU4.2-000

Technical specifications

Electrical characteristics			Mechanical characteristics		
Supply voltage	V	5-20	Housing material	Aluminum	
Current consumption @12V	mA	50	Dimensions	mm ³	57x50x14
Ratio metric sensor supply	mA	40	Weight (Module)	g	210
Sensor Supply +12V	mA	250	Connections		
Analog channels	4		CAN line		
without PullUp	2		length	mm	595
with 4k7 PullUp (switchable)	2		connector	MQS 8PM/8PF	
Input voltage range	V	0-5	Lambda		
A/F input channel	1		length	mm	850
Resolution	A/F	0.01	connector	Bosch 1 928 404 016, 6PF	
Sampling rate (predefined)	Hz	100	Analog input (2x)		
Serial Interface	USB		length	mm	150
Environmental data			connector	JST JWPFF, 8PF	
Protection class:	IP	66	USB		
Ambient operating range	°C	0 to +70	length	mm	500
Humidity	%	5 to 95	connector	Type B socket	
Vibration resistance			KL15 switched power supply supported		
Shock	G	40	Ordering information		
During time period of	ms	10	Art.No. IN-LSU_BMW-900		
Vibration tested @	G	12			
Measured with	Hz	1000			

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Further information

You should adopt the routine outlined below in order to obtain maximum benefit from your HP Race Data Logger. In this context, be sure to read and comply with the instructions in chapter 3 of the user guide that accompanies the HP Race Data Logger software:

1. Update your HP Race Data Logger software via the internet. You should update at regular intervals so that you can make full use of new functions as they are introduced.
2. Update the Data Logger with the right device (including the 2D Extension Box) software for your motorcycle.

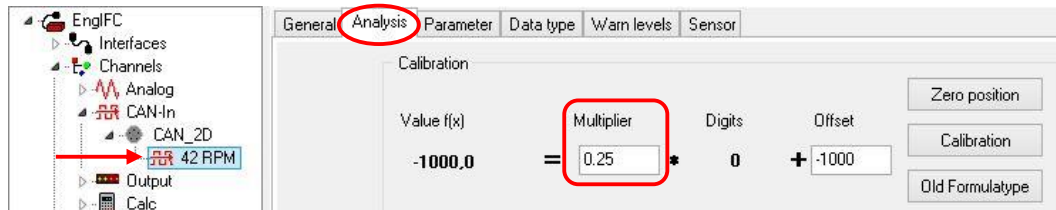
The data logger is now prepared for logging of the lambda probe and/or suspension sensors connected to the 2D Extension Box.

To be able to change the setting of your 2D Extension Box (adapt the setting to your bike, set the suspension sensors to zero) you need the 2D Race software.

1. Please download the software from <http://2d-datarecording.com/en/support/downloads/setups>.
2. Install the software on your PC.
3. Connect the 2D Extension Box to your PC and change the setting. Please refer to the 2D Extension Box manual for a description on how to do this.

It may be necessary to adapt the RPM CAN-In channel of the 2D Extension Box to your bike. Please refer to the settings below:

Select your 2D Extension Box in the system tree and go "Channels", "CAN-In", "CAN_2D" ⇒ "RPM". On tab "Analysis" you may have to change the multiplier of the formula.



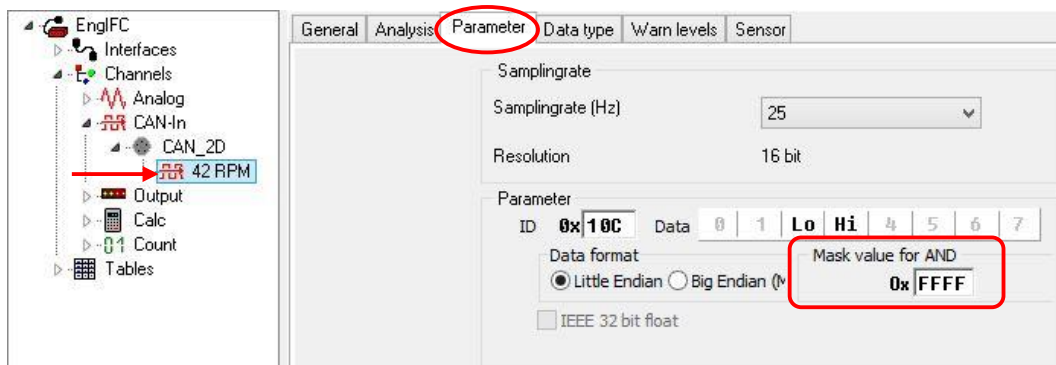
Bike

S1000RR 2015 (K46Mü2), S1000R (K47)
 S1000RR 2009 (K46), S1000RR 2012 (K46Mü), HP4

Multiplier value

5
 0.25

On tab "Parameter" you may have to change the mask of the channel settings.



Bike

S1000RR 2015 (K46Mü2), S1000R (K47)
 S1000RR 2009 (K46), S1000RR 2012 (K46Mü), HP4

Mask value

0FFF
 FFFF

Confirm all your changes with <Apply>.

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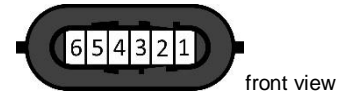
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Connector layout

Connector type

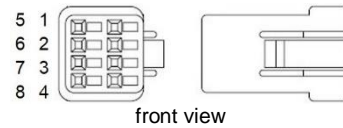
Lambda Probe, Bosch 1 928 404 016, 6PF

Pin	Name	Description	Color
1	IP	Inverting input current amplifier	black
2	UN	Inverting input current control	red
3	VM	Virtual ground current control	green
4	Heater -	Ground heater	brown
5	Heater +	Power heater	orange
6	IA	Non inverting input of pump current amplifier	yellow
		Shield	grey



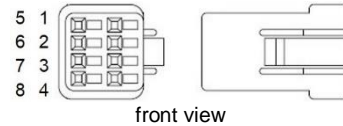
Suspension Input, JST JWPF, 8PF

Pin	Name	Description	Color
1	n.c.	Not connected	
2	5V	Sensor supply 5V	yellow
3	AIN 1	Analog input 1 (Susp front)	brown/white
4	GND	Analog ground	brown
5	n.c.	Not connected	
6	5V	Sensor supply 5V	green
7	AIN 2	Analog input 2 (Susp rear)	black/white
8	GND	Analog ground	blue



Volt 1/2 Input, JST JWPF, 8PF

Pin	Name	Description	Color
1	12V	Sensor supply 12V	red
2	n.c.	Not connected	
3	AIN 1	Analog Input 1 (Volt1)	white
4	GND	Analog ground	black
5	12V	Sensor supply 12V	orange
6	n.c.	Not connected	
7	AIN 2	Analog Input 2 (Volt2)	grey
8	GND	Analog ground	purple



CAN bus, MQS, 8PF/M

Pin	Name	Description	Color
1	n.c.	Not connected	
2	n.c.	Not connected	
3	KL 15	Switched power supply	green
4	GND	Ground	brown
5	CAN-L	CAN Low	white
6	CAN-H	CAN High	black
7	n.c.	Not connected	
8	KL 30	Permanent power supply	red

