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BC-LAF_Moto2-213

Engine-Interface with 1 channel λ and 6 analog inputs

Connectors

Key Features:

- *Engine Interface with 1ch LAF controller and 6 analog inputs to connect to 2D logger via CAN*
- *Module usable with BOSCH LSU probe 4.2*
- *High signal resolution and accuracy because of linear sensor range*
- *No temperature drift problem because of heater control*
- *Typical application: direct measurement of A/F ratio to optimize engine setting,*
- *Pick up of analog signals from ECU*

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Technical specifications

Electrical caracteristics		
Supply voltage	V	12-20
Power supply heater	V	10-14
Current consumption@12V	mA	75
+ Heater current	A	Max. 2
Channels		
➢ A/F input channel		1
➢ Resolution	A/F	0.01
➢ Sampling rate (predefined)	Hz	100
➢ Analog input channels		4
➢ Sampling rate (predefined)	Hz	100
➢ Input voltage range	V	0 -5
➢ Input filter		
➢ Cut-off frequency (-3dB)	Hz	25
➢ Damping (per decade)	dB	6
➢ Hybrid channels		2
➢ Reserved for future applications		
➢ Digital output channel		1
➢ Reserved for future applications		

Environmental data		
Protection class:	IP	66
Ambient operating range	℃	0 to +70
Humidity	%	5 to 95

Mechanical characteristics		
Aluminium Housing		
Dimensions	mm	95 x 48x 9
Weight(with cables)	g	140
Cable & Connector & Length		
➢ CAN-Line		
➢ cable		Metrofunk 4xAWG24
➢ connector		Binder 712, 5PM
➢ length	mm	300
➢ Power/ECU		
➢ cable		Metrofunk 10xAWG24
➢ connector		Deutsch, ICM200 12PM
➢ length	mm	300
➢ A/F		
➢ cable		Metrofunk 6xAWG22
➢ connector		BOSCH, 6PF
➢ length	mm	800
Vibration resistance		
Shock	G	40
During time periode of	ms	10
Vibration tested @	G	12
Measured with	Hz	1000

Ordering information

For ordering this product use 2D Article number
BC-LAF_MOTO2-211

Calibration formula

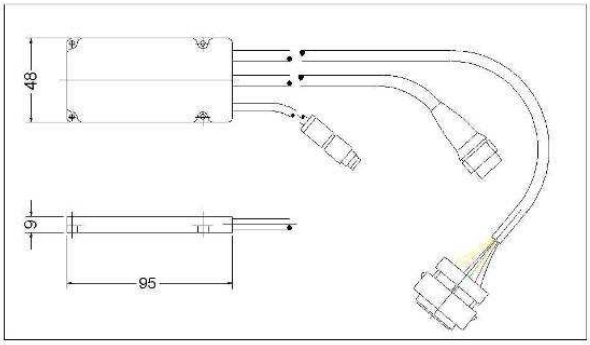
Use the following formula to convert to physical values if you don't use a 2D system:

A/F_{Value} = 0.001*A/Fx

λ_{Value} = A/F_{Value} / 14.57 0 A/Fx_{Digits} / 14570 or A/Fx_{Digits} * 0.00006863418

Heat-Temp = $Tempx_{Digits}$ * 2 + 539.4℃

Dimensions



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Status messages

If the probe is not working correct, the channel shows a status message as follows:

A/F(λ-Value)	Description
0.016	The probe temperature is below 600℃
0.100	Probe is not connected or short circuit to
0.110	Open load (probe is not connected)
0.120	Short circuit to VBat
0.3	In the automatic mode:"no CAN data"
1.0	The probe temperature is below 600℃ after the heat ing period (approx. 20sec)→ measurement is not possible
2.0	The probe is heating during the start
3.0	In the automatic mode the A/F value measuring is off according to the switch value
6.0-30.0	Measurement range

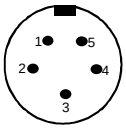
Connector layout

Connector type

CAN-Line **Binder 712, 5PM**

Name	Description	Colour	Pin
CAN H	CAN BUS High	White	1
CAN L	CAN BUS Low	Green	2
GND	Ground	Black	3
n.c.	Not connected		4
Vext	Power	red	5

Connector at module



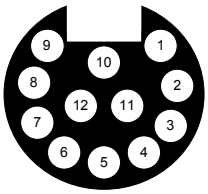
Binder 712, 5PM front view

Mating plug

Binder 712, 5PF front view

ECU IO **JST JWPF, 8PM**

Name	Description	Colour	Pin
Vext	Power supply	Red	1
BGND	Ground	Black	2
AIN 1	Analog Input 1	Brown	3
AIN 2	Analog Input 2	Orange	4
AIN 3	Analog Input 3	Yellow	5
AIN 4	Analog Input 4	Green	6
AIN 5	Analog Input 5	White	7
AIN 6	Analog Input 6	Grey	8
QS	Quickshift Sig. ECU	Purple	9
Vcoil	Power supply coils	Blue	10
TBD	TBD		11
TBD	TBD		12

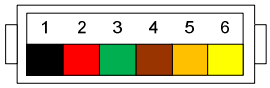


Deutsch ICM200, 12PM front view

Deutsch ICM200, 12PF

LSU Probe **Bosch, 6PF**

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



BOSCH, 6PF front view

BOSCH, 6PM

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