

ECU
REMAPPING

CARS/TRUCKS/TRACTORS
MODULES

MOTORBIKES
MODULES

POWER BENCH
TESTERS

RAPID
BIKE

SMART

INSTALLING INSTRUCTIONS

1 – Applicability (KIT K27-SMR-006)

Make:	Aprilia	
Model:	RSV4 1100	21-24
	Tuono V4 1100	21-24

2 - Component view and item ID

Wiring code: F27-SMR-006

Module code: F27RBSMART



3 - Precautions/Disclaimer

For the correct SMART module function, the motorcycle system must be intact and fully functional. Installation must be carried out by competent personnel and the supply conditions such as "**Appendix 1**" at the end of this instruction manual, must be read and accepted.

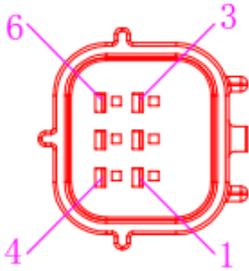
4 - Preliminary operation

- 4.1 Turn ignition off.
- 4.2 Put the bike on the centre stand.
- 4.3 Remove the seat.
- 4.4 Place the SMART control unit under the seat.



5 - Diagnostic plug

Position: under the seat
Type: 6 pins red



What to do:
Remove the cap
and plug the Smart connector
marked as **"DIAGNOSTIC"**



6 - Front O2 sensor (LN1)

Position: Left side,
close exhaust pipes.

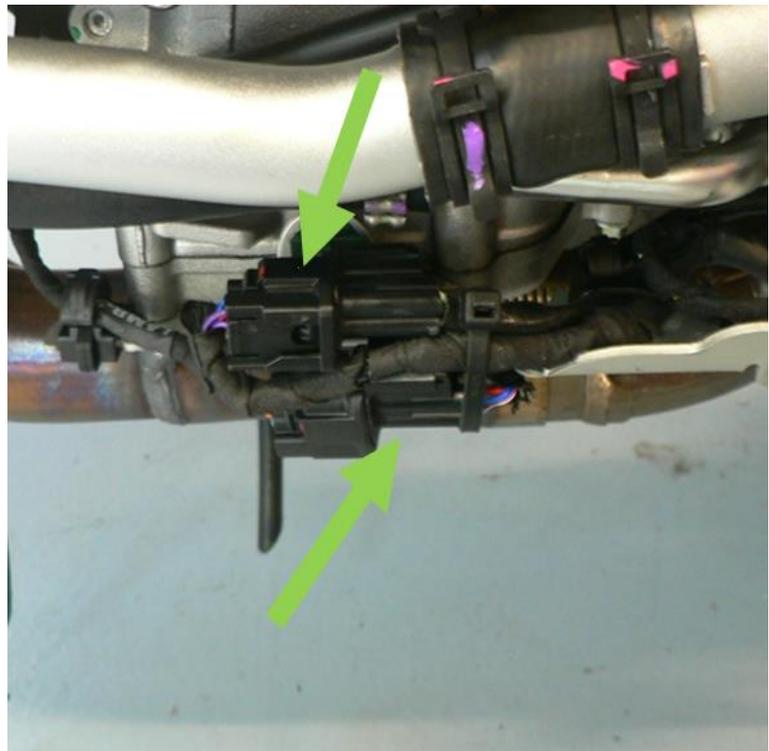
Type: 4 pins black,
LAMB- F cylinder's Lambda
sensor connectors.



What to do:

Unplug the bike original
connectors. Plug the SMART one
marked as **LN1**, in-line with the
stock wiring.

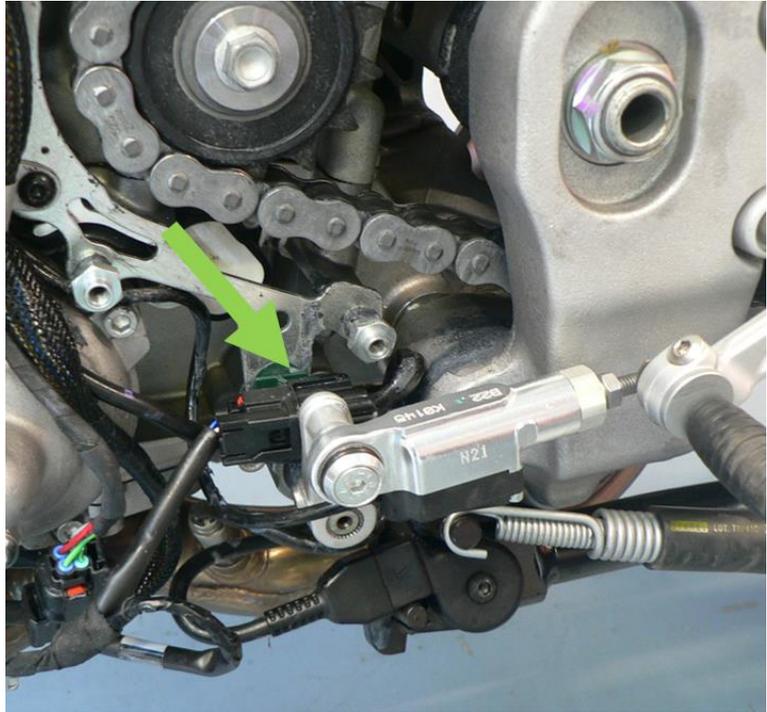
Fasten them to the frame using
zip ties.



7 - Rear O2 sensor (LN2)

Position: Left side, behind gear lever.

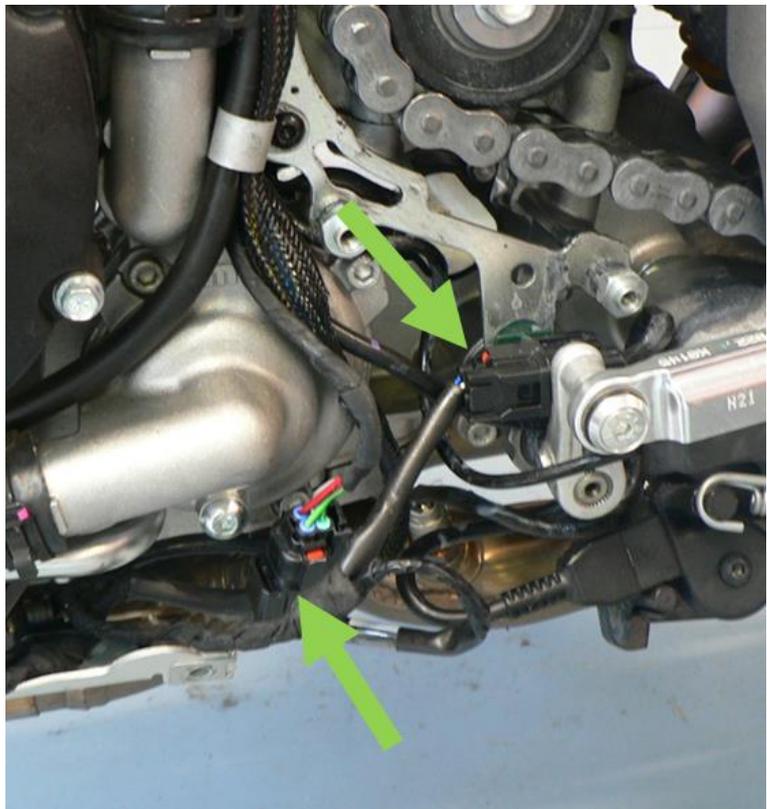
Type: 4 pins black, LAMB-1R cylinder's Lambda sensor connectors.



What to do:

Unplug the bike original connectors. Plug the SMART one marked as **LN2**, in-line with the stock wiring.

Fasten them to the frame using zip ties.



8 - Power supply (GND)

Position: Bike battery under the seat.

What to do:

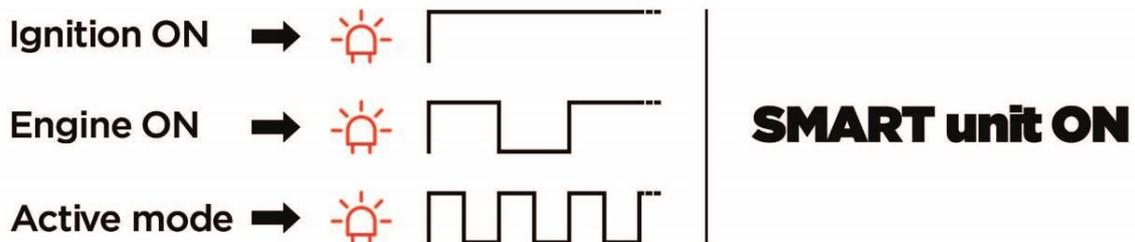
Connect the eyelet of the Rapid Bike wiring to the negative side of the battery.



9 – Final operations

8.1 Connect the wiring harness to the SMART unit.

8.2 Check the installation with the red LED placed on the back of SMART unit.



8.3 Fasten the wiring harness to the frame using zip ties.

8.4 Ensure the wiring harness is properly fastened, then reassemble all removed parts.

10 – Functioning, ON/OFF mode

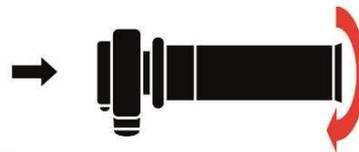
Slow flashing indicates the warm-up phase of the probes; when the SMART switches to faster flashing (normally 2-3 minutes after engine start-up) it signals that **it is active** and already **working with its preloaded map**.

Our programming of the RB SMART allows to enrich the stoichiometric ratio (AFR - air/fuel ratio) and optimize the self-adaptive engine operating parameters of the original ECU. The power delivery curve becomes smoother and more regular, also improving throttle response and engine responsiveness. The result is a significant increase in torque, both in the original configuration and with after-market exhaust systems and sports kits, thanks to improved engine efficiency.

Please note: optimum engine performance cannot be guaranteed if the SMART module is applied to motorcycles with original engine ECU (OEM) that have been remapped (after-market tuning).

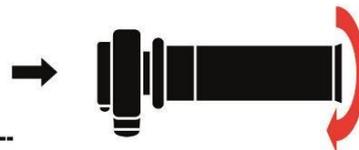
Rapid Bike SMART is programmed to be active (ON) by default as described in previous point. The following procedure shows how to turn SMART unit OFF, allowing the bike to run in stock configuration, and how to turn it ON again:

Turn ignition on and open throttle completely 5 times within 10 seconds



SMART unit OFF →  

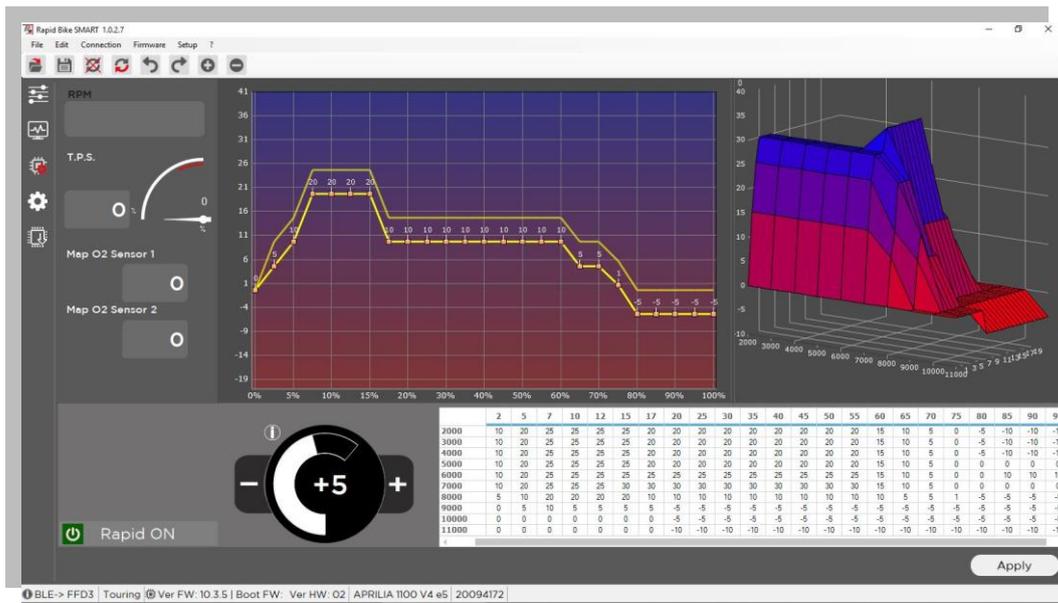
Repeat the operation to turn SMART unit ON



SMART unit ON →  

11 – Extras

On/Off operation can be performed also with Rapid Bike SMART software downloadable for free from www.RapidBike.com or www.Dimsport.com. Furthermore, software allows users to increase/reduce the range of the adjustments available with SMART unit as well as to do various reading and checking operations.



To connect with the SMART control unit, you only need an internal or external Bluetooth adapter to the PC at least release **4.0 BLE**. More information on the “Rapid Bike SMART” software manual, available with its installation.



The Bluetooth interface of the SMART control unit also allows the connection and management of some parameters with your smartphone; search the “**Rapid Bike SMART APP**” available in the RapidBike.com site and on-line store for Android® and IOS®



Appendix 1

USER'S RESPONSIBILITIES

RAPID device allows the User to have access to some engine parameters (for example: lambda, fuel, rpm limiter, etc.). Changing such parameters might make the vehicle non in compliance with some power and/or speed and/or emissions standards of Your Country and also might determine a superior wear and tear of mechanical and electrical components of the vehicle, to the point that manufacturer's (or seller's) warranty might be considered void.

Dimsport Srl (except as set forth hereafter) does not grant any warranty and shall never be considered liable for any disruption that may derive from using RAPID device, in particular with respect to any extra wear and/or deterioration of the engine or of any other mechanical and/or electrical part of vehicle.

The reading and understanding of RAPID device Instructions must forerun the use of RAPID device (in all its parts).

If the User is a consumer the provisions of D.lgs 206/2005 which concern the conformity warranty of purchased items shall apply (in accordance with such D.lgs 206/2005, a consumer is a person that buy products outside from his business). Therefore, the consumer with no extra expenses, has the right to obtain the conformity restatement of purchased item, by its replacement or reparation. For this purpose, Dimsport must be informed about item non-conformity within 2 (two) months from the discovery of such non-conformity. This warranty covers the defects that come within 2 (two) years from the delivery. The normal "wear and tear" shall never be considered non-conformity. This warranty shall never be applied if the consumer alters RAPID device and/or if the consumer directly or indirectly repairs it and/or if the non-conformity is due to improper, negligent or imprudent use of RAPID device.

If the User is a professional user, Dimsport only warrants that RAPID device is free from manufacture defects for 2 (two) years from the purchase date, provided that the professional user is able to demonstrate such date by showing proper documentation.

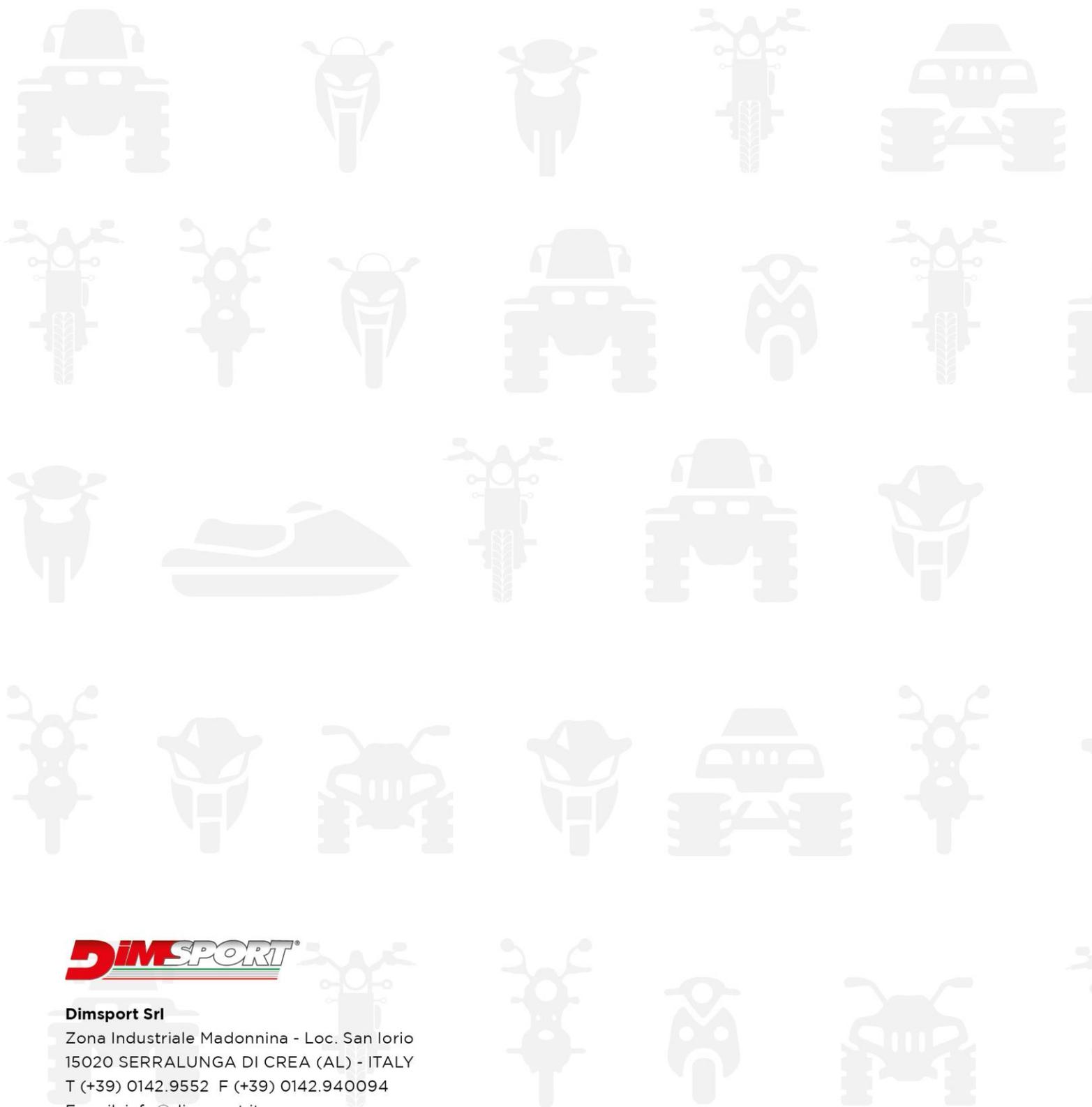
UNDER NO CIRCUMSTANCES SHOULD RAPID DEVICE BE USED TO BREAK THE LAW OF THE COUNTRY OF USE OF THE VEHICLE. FAILURE TO COMPLY WITH SUCH PROVISION WOULD DETERMINE THE IMMEDIATE TERMINATION OF THIS AGREEMENT.

Without prejudice to mandatory law provisions, Dimsport Srl shall be relieved from any and all contractual and / or extra-contractual liability for personal injury; for direct and / or indirect damage (both with reference to emerging damage and loss of profit); for any claim and / or cost of any kind; which has been suffered by the User or by any third parties and which may derive from the use or misuse and / or may depend and / or in any case may be attributable to RAPID device, except in the case that those events may be attributable to Dimsport for wilful misconduct or gross negligence. The foregoing limitations and exclusions shall be applied to the maximum extent permitted by legislation in force in the User's jurisdiction.

Notes:

A series of horizontal dotted lines for writing notes, spanning the width of the page.

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