Magneti Marelli RIU1 / RIU2

For ASW-NEXT

Short User Manual

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Technical support: asw_support@immo-tools.lt

NOTES:

Antenna and LED are optional components. They should be connected only to test key validity on-the bench.

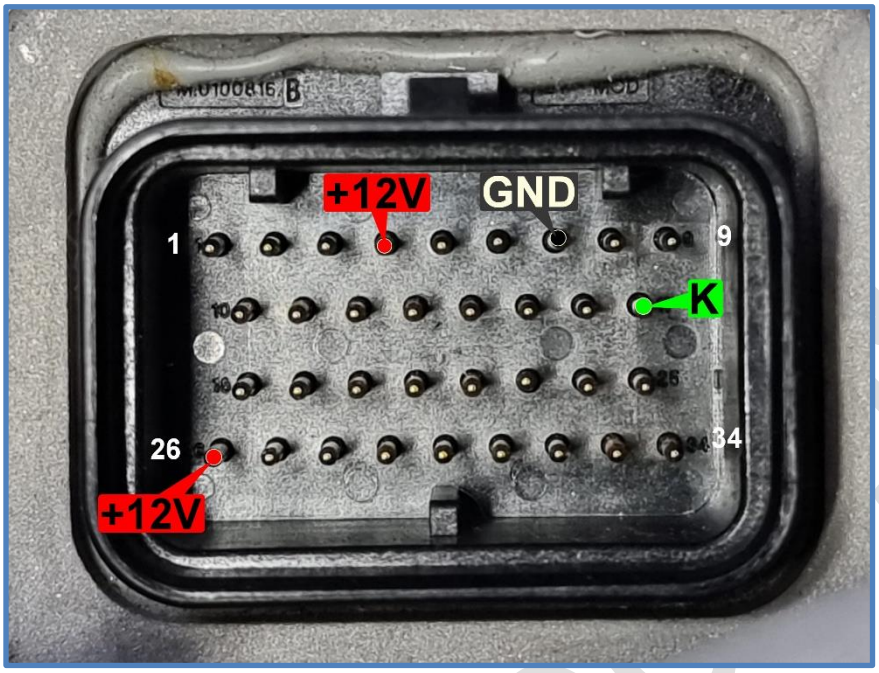
Place antenna on the ignition lock. Transponder may not be read correctly without ignition lock inside the antenna coil!

NOTE: It is not necessary to connect antenna and LED for key programming or reset-to-VIRGIN procedures to perform.

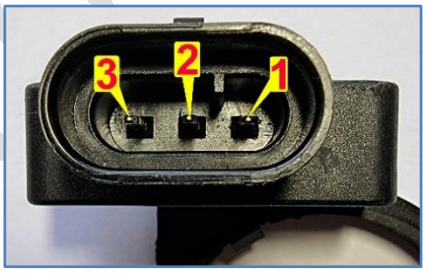
Reset RIU1 / RIU2 to VIRGIN before to program IMMO-OFF dump to the FLASH. IMMO-OFF mode is not possible when EEPROM contain key programming data!

1. How to identify RIU1 / RIU2

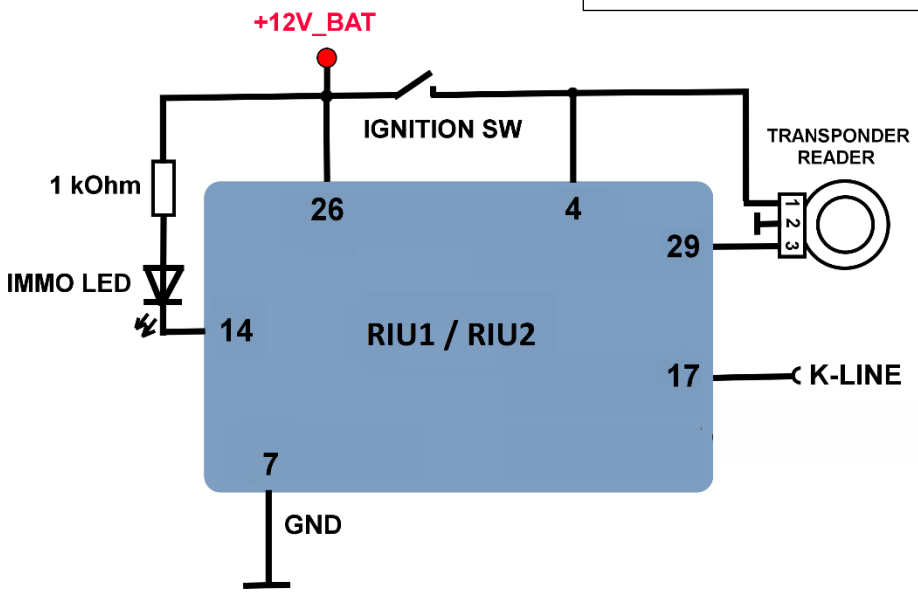
2. How to connect RIU1 / RIU2 on-the-bench?



Antenna on the ignition lock



Transponder Reader (Antenna) pinout



NOTE: **Transponder reader (antenna) must be mounted on the ignition lock when testing on-the-bench or in the scooter. Transponder may not be read correctly without ignition lock being inside the antenna! IMMO LED will blink fault code 2 (KEY NOT DETECTED).**

3. How to connect in the scooter?

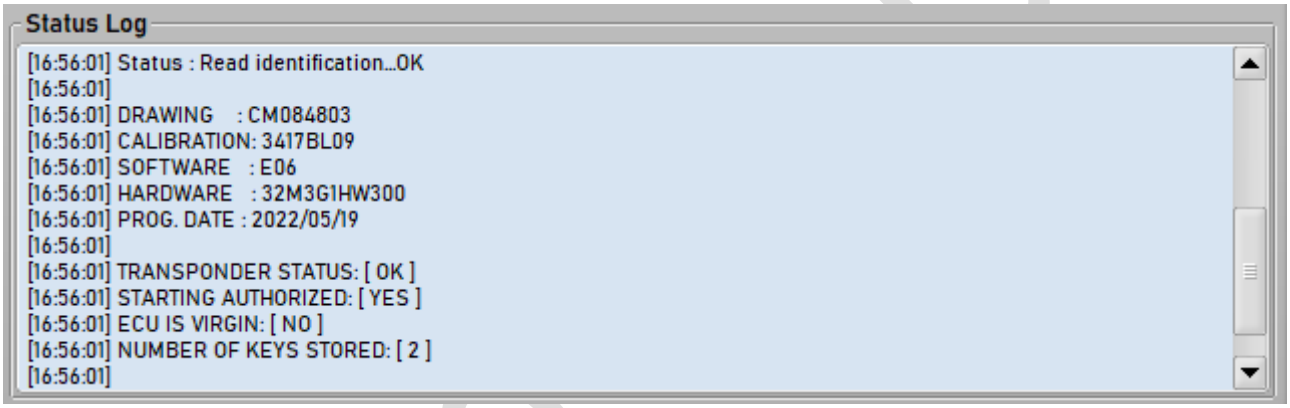
✓ Connect **RED** and **BLACK** crocodile clips of ASW-NEXT interface to "**+**" and "**-**" of scooter battery

✓ Connect **GREEN** wire of ASW-NEXT interface ("**K**") to **pin 3** in the diagnostic connector - this is a K-LINE.
Prepare yourself a piece of wire to make a bridge between green wire of ASW-NEXT and pin 3 of the diagnostic connector.

4. Software features

- ✓ **Read / Write EEPROM** M95320
- ✓ **Read / Write FLASH** (write range of software and calibrations 20000-BFFFF)
- ✓ **Reset RIU1 / RIU2** to VIRGIN state
- ✓ **Reset RIU1 / RIU2** to IMMO-OFF state
- ✓ **Read / Set transponder data** from / to EEPROM of **RIU1** / **RIU2**
- ✓ **Reset auto-adaptive values**
- ✓ **Enable / Disable ASR feature** (for ECUs with ABS / ASR)
- ✓ **Erase diagnostic trouble codes (DTC)**

Explanation of statuses:



TRANSPONDER STATUS

- OK – transponder was read correctly and it was recognized as valid
- KEY NOT DETECTED – no T11 transponder was detected by antenna
- KEY NOT RECOGNIZED – T11 transponder was detected but its value is not stored in RIU
- NO COMMUNICATION WITH ANTENNA

STARTING AUTHORIZED

- YES – engine start enabled
- NO – engine start disabled

ECU IS VIRGIN

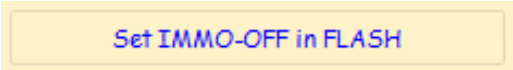
- YES – key programming not done, ECU is blank
- NO – key programming done

NUMBER OF STORED KEYS

- 0-8 – actual number of stored keys (0 for VIRGIN ECU)

5. How to set IMMO-OFF

- Read FLASH from control unit by K-Line or load existing FLASH file

- Press 

- **Save File** dialog will popup to save modified file

- Reset control unit to VIRGIN. This is important because IMMO-OFF mode is not possible when EEPROM contain key programming data

- Program modified FLASH file to the control unit by K-Line

- Read identification. Now statuses should look like this, even without valid transponder: