

# Magneti Marelli MIU G3 (M3G1)

For ASW-NEXT

Short User Manual



December 2022

## 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!**

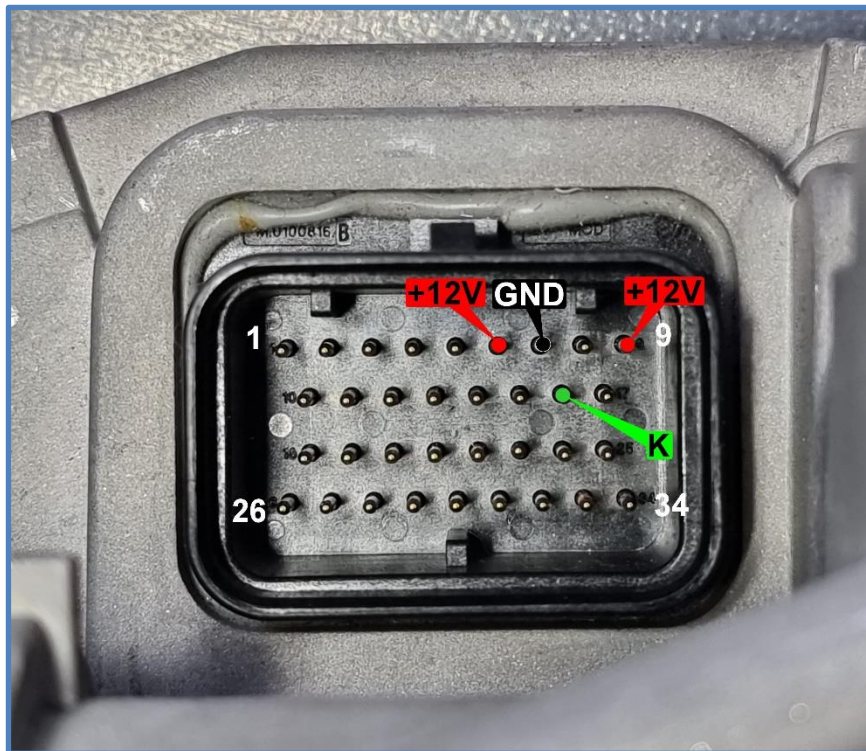
**NOTE: It is not necessary to connect antenna and LED for key programming or reset-to-VIRGIN procedures to perform.**

**Reset MIUG3 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 MIU G3 (M3G1)



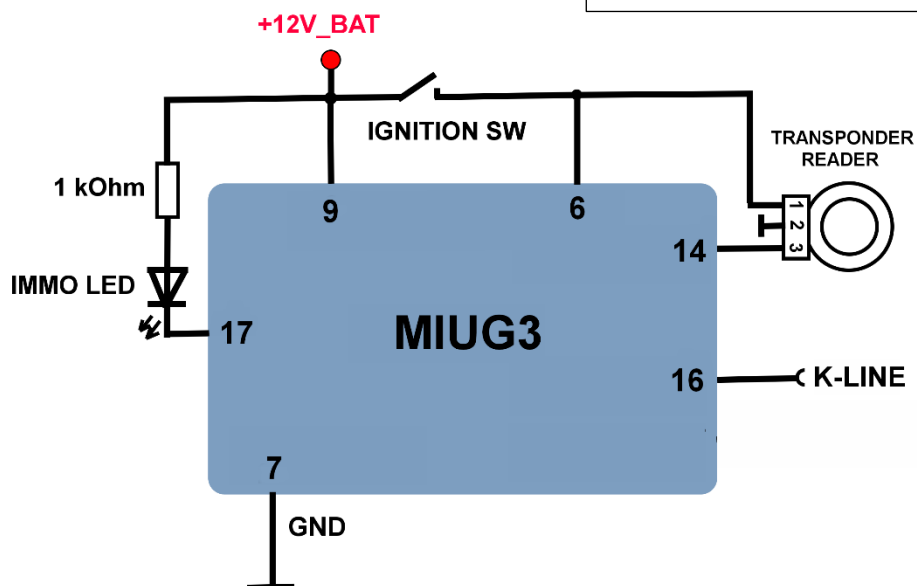
## 2. How to connect on-the-bench?



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?

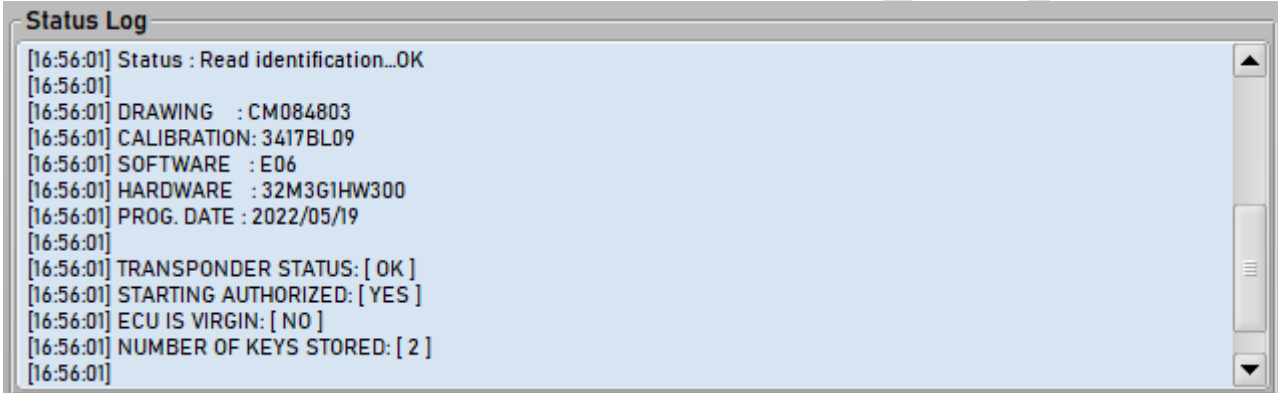
- ✓ Connect **RED** and **BLACK** crocodile clips of ASW-NEXT interface to “+” and “-” of scooter battery
- ✓ Connect **GREEN** wire of ASW-NEXT interface (“K”) to **pin 3** in the diagnostic connector - this is a K-LINE.  
Prepare yourself a piece of wire to make a bridge between green wire of ASW-NEXT and pin 3 of the diagnostic connector.



## 4. Software features

- ✓ Read / Write **EEPROM** M95320
- ✓ Read / Write **FLASH** (write range of software and calibrations 20000-7FFFF)
- ✓ Reset **MIUG3** to **VIRGIN** state
- ✓ Reset **MIUG3** to **IMMO-OFF** state
- ✓ Read / Set transponder data from / to EEPROM of **MIUG3**
- ✓ Reset auto-adaptive values
- ✓ Enable / Disable **ASR** feature (for ECUs with ABS / ASR)
- ✓ Read / Erase diagnostic trouble codes (**DTC**)

Explanation of statuses:



```
Status Log
[16:56:01] Status : Read identification...OK
[16:56:01]
[16:56:01] DRAWING : CM084803
[16:56:01] CALIBRATION: 3417BL09
[16:56:01] SOFTWARE : E06
[16:56:01] HARDWARE : 32M3G1HW300
[16:56:01] PROG. DATE : 2022/05/19
[16:56:01]
[16:56:01] TRANSPONDER STATUS: [ OK ]
[16:56:01] STARTING AUTHORIZED: [ YES ]
[16:56:01] ECU IS VIRGIN: [ NO ]
[16:56:01] NUMBER OF KEYS STORED: [ 2 ]
[16:56:01]
```

### **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 MIUG3
- NO COMMUNICATION WITH ANTENNA

### **STARTING AUTHORIZED**

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

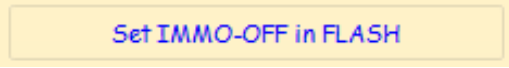
### **ECU IS VIRGIN**

- 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:

```
TRANSPONDER STATUS: [ OK ]  
STARTING AUTHORIZED: [ YES ]  
ECU IS VIRGIN: [ YES ]  
NUMBER OF KEYS STORED: [ 0 ]
```