

• LAP TIMERS • LOGGERS • CAMERAS • DASHES • SENSORS • AND MORE

SHOP NOW

MARELLI MF4 ECU for Ducati 998 Racing (no stock bike)







## INTRODUCTION

AIM has developed special applications for many of the most popular ECUs; by special applications we mean user-friendly systems which allow to easily connect your ECU to our high tech data loggers: user needs only to install harness between the **logger** and the ECU.

Once connected, the logger displays (and/or records, depending on the logger and on the ECU data stream and configuration) values like RPM, engine load, throttle position (TPS), air and water temperatures, battery voltage, speed, gear, lambda value (air/fuel ratio) analog channels...

All AIM loggers include – free of charge – **Race Studio 2** software, a powerful tool to configure the system and analyze recorded data on your PC.

Warning: once the ECU is connected to the logger, it is necessary to set it in the logger configuration in Race Studio 2 software. Select Manufacturer "Marelli" Model "MF4-998\_RK". Refer to Race Studio Configuration user manual for further information concerning the loggers configuration.

Warning: it is always suggested to verify if the ECU needs any software/firmware setting or upgrade to export data to an external logger.



# **INDEX**

Chapter 1 – CAN Communication setup	3
Chapter 2 – Connection with AIM loggers	
Chapter 3 – MF4 Ducati 998 Racing communication protocol	



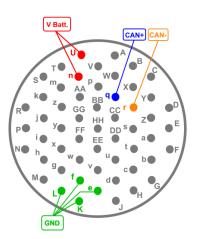
# **Chapter 1 – CAN Communication setup**

Magneti Marelli MF4 ECU for Ducati 998 Racing (no stock bike) championship is equipped with a CAN communication setup used to communicate parameters to an external logger and shown here below.

LOG Battery+	AIM cable labelled 9-15VDC	LOG Battery+
LOG Battery-	AIM cable labelled GND	LOG Battery-
LOG CAN+	AIM cable labelled CAN+	ECU CAN+
LOG CAN+	AIM cable labelled CAN-	ECU CAN+

## **Chapter 2 – Connection with AIM loggers**

Magneti Marelli MF4 ECU is equipped with a 55 pins connector shown here below.



To connect AIM logger to the ECU:

- connect AIM cable labelled CAN+ with pin "q" of 55 pins connector;
- connect AIM cable labelled CAN- with pin "r" of 55 pins connector
- connect AIM cable labelled GND with pin "K", "L", "e" or "f" of 55 pins connector;
- connect AIM cable labelled "VBatt" with pin "n" or "U" of 55 pins connector.



### Chapter 3 – MF4 Ducati 998 Racing communication protocol

Channels received by AIM loggers connected to Magneti Marelli MF4 for Ducati 998 Racing (no stock bike) are:

#### FUNCTION

- ECU\_1 MF4\_RPM
- ECU\_2 MF4\_THROTPOS
- ECU\_3 MF4\_WATER\_TEMP
- ECU\_4 MF4\_AIR\_TEMP
- ECU\_5 MF4\_AIR\_PRESS\_SENSOR

RPM Throttle position Water temperature Air temperature Air pressure sensor