

# m-CAN J1850 – Installation and Operating Instructions For Harley Davidson® V-ROD model series

Thank you very much for choosing a high quality product of motogadget.

The m-CAN and connected instruments might be damaged when installed improperly. Please read the following information carefully and follow instructions during installation. Please note the correct order of the steps performed in these installation and operating instructions.

**THE CASING MUST NOT BE OPENED. IN CASE OF NON-COMPLIANCE, ALL WARRANTY CLAIMS WILL BECOME VOID. THE ONLY INTENDED USE OF THIS DEVICE IS THE COMBINATION WITH MOTOGADGET INSTRUMENTS. IN CASE OF IMPROPER USE WITH THIRD-PARTY INSTRUMENTS, ALL WARRANTY CLAIMS WILL BECOME VOID. IN CASE OF NON-INTENDED USE, THE DEVICE MAY BE DAMAGED. IN CASE OF MALFUNCTIONS, THE M-CAN HAS TO BE RETURNED TO MOTOGADGET FOR INSPECTION, TOGETHER WITH THE USED MOTOGADGET INSTRUMENT. MOTOGADGET WILL ACCEPT NO LIABILITY FOR ANY DIRECT, INDIRECT OR SUBSEQUENT DAMAGE OF ANY KIND RESULTING FROM USE, INSTALLATION OR CONNECTION OF THE DEVICE OR OTHER DELIVERED EQUIPMENT. THIS EXCLUSION OF LIABILITY APPLIES TO, INCLUDING BUT NOT LIMITED TO, PERSONAL, MATERIAL AND FINANCIAL DAMAGES. PARTICULARLY, THE USE IN PUBLIC TRAFFIC IS AT THE USER'S OWN RISK.**

## Scope of Application

Using the m-CAN, all motogadget instruments (except motoscope Pro) can be connected directly to the wiring harness of the Harley Davidson® V-ROD series (models built from 2004 to 2012). Not compatible with special edition models like Screaming Eagle etc.. There is no need for modifications to the wiring harness.

**Important!** For Models built from 2004 to 2006 equipped with a tank with a capacity of 15L, the supplied resistor for the low fuel indicator is required. Connect one end of the resistor to the orange cable. Screw the other end of the resistor into the terminal No. 31. Please use a heat-shrinkable sleeve to insulate the resistor. It is not possible to display the fuel warning light if VRSC models with ultrasonic fuel sender (2007) are used with the m-CAN J1850.

## Instrument installation

According to the respective manual, remove the tank and the original speedometer. Disconnect the connector on the instrument. Subsequently, the instrument connector will be routed beneath the tank. Mount the motogadget instrument and, if available, the motogadget indicator lights assembly to the vehicle. Please use the extensive mounting hardware kits provided for Harley Davidson® vehicles. Now, also route the instrument cable and the indicator lights assembly cable to the position of the original connector beneath the tank. Carefully remove 50 mm (2 in.) of the cable jacket. Next, remove 10 mm (approx. 1/2 in.) of the strand insulation and slide the end ferrules onto the exposed strand ends. Cut off any excess cable material using wire-cutting pliers.

## Connecting the motogadget instrument to the m-CAN

To protect the components, **make sure** to apply contact grease to all metal parts of the screw-type terminals. Insert the instrument cables into the corresponding terminals (see table below) and tighten the screws.

Terminal	motoscope mini	motoscope classic	motoscope tiny	SureShift	Multiview
25	-	-	red	-	-
26	red	red	brown	red	red
24	black	black	black	black	black
10	green	green	green	green	green
8	yellow	yellow	-	yellow	yellow
7	white	orange	orange	white	white

## Connecting the motogadget indicator lights to the m-CAN

Together with the end ferrules, insert the cables of the indicator lights into the screw-on terminal (see table below) and tighten the screws.

Terminal	- motosign mini - ms cobl frame - Active view	- HD handlebar clamp - metric handlebar clamp	motoscope tiny	motoscope classic
19	red	purple	yellow	white/orange
20	green	white	blue	blue
21	black	yellow	white	grey
22	purple	green	purple	white/green
23	blue	black	connect to terminal No. 19	connect to terminal No. 19
24	yellow + orange	blue + orange	-	white/brown
26	brown + white	red	-	white/yellow
-		brown	-	-

### Connecting the supplied motogadget V-ROD type vehicle connector to the m-CAN

Insert the cable of the model-specific connector (included) with the attached end ferrules into the screw-type terminals (shown in table on right side) and tighten the screws.

**ATTENTION ! Please make sure to note the proper polarity when plugging the connector into the connector attached to the vehicle!**

The connector is equipped with a large and a small tab on the left side and the right side respectively. Please make sure they fit into the corresponding seat.

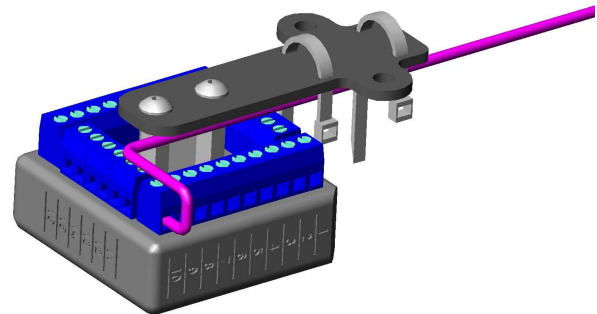
Terminal	Connector cable – Color code
28	red
12	blue
13	yellow
14	white
29	black
27	brown
30	green
15	purple
16	grey
31	orange (15L Tank, with resistor)

### Connecting the menu push-button

The menu push-button is connected to the terminals No. 17 and 18. The polarity is irrelevant.

### Mounting the cables to the m-CAN

Screw the provided black mounting plate to the two mounting bolts on the m-CAN. To ensure optimum strain relief, combine all connecting cables (see right hand figure) and mount them to the mounting plate using both tie-bands. The m-CAN is mounted to vehicle parts or the vehicle wiring harness by screws or tie-bands respectively, with both bores of the mounting plate.



### Notes

No additional mounting of cables required.

Short-circuits of terminal block outputs or contact to ground or +12V respectively may damage the device.

### Instrument settings

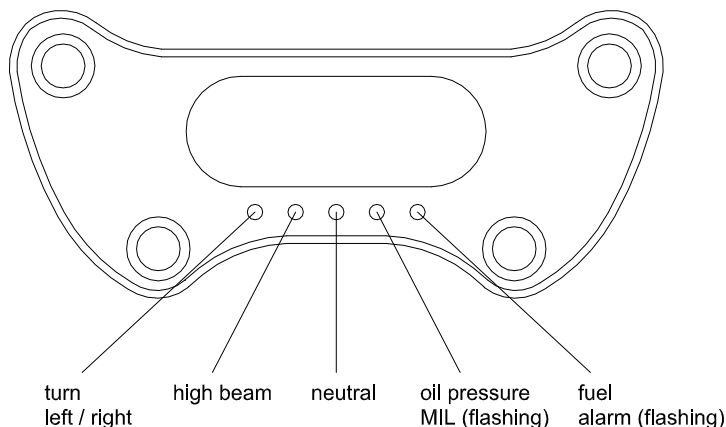
motoscope mini, Classic, Chronoclassic, Pro and SureShift: ImpE=1, ImpW=4 und Circ=2000mm.

motoscope Tiny: Pulse=4, Circ=2000mm.

### Modes

Some of the indicator lights are multi-functional. For example, the figure below shows the modes of the indicator lights assembly with 5 lights (ms combi frame, motosign mini, Activeview and handlebar clamps).

When using the motoscope Tiny and motoscope Classic, only 4 indicator lights are available. The display mode layout is as follows: green LED (left): turn signal (flashing) and low fuel indicator (continuously), blue LED: high beam, green LED: neutral, red LED (right): error memory (flashing) and oil pressure (continuously).



*The motogadget team wishes you a pleasant and safe trip and a lot of fun with your new motogadget instrument.*