

The m.unit Basic is the same as the m.unit Blue without any of the Bluetooth capabilities and functions. The only physical difference between them is the m.unit Basic will come with a red serial number sticker while the m.unit Blue will come with a silver serial number sticker.

<u>m.Unit V.2</u> <u>Functions and Operation</u>	<u>m.Unit Blue/Basic</u> <u>Functions and Operation</u>
Entirely digital push button control unit (with optional 4- or 5-bush-button controls)	Complete digital pushbutton control unit; optional 4 or 5 pushbutton operation
Complete replacement of all OEM fuses. Eight independent circuits are digitally supervised. A circuit will be shut down in case of interference. After removing the interference the circuit will be switched on automatically.	Complete replacement of all OEM fuses. 10 independent circuits are digitally supervised; a circuit will be shut down in case of interferences. On removing the interference, the safety feature will be automatically reset
Integrated, digital, load-independent flasher relay with programmable switch off feature and adjustable position light feature	Integrated, digital, load-independent flasher relay; with programmable switch-off feature (optional), selectable m-wave mode
Integrated digital brake-light modulator with programmable flashing sequence	Integrated digital brake-light modulator with programmable flashing sequence, acceleration controlled emergency brake-light
Integrated starter relay for solenoid switches (up to 30A current flow)	Integrated starter relay for solenoid switch (up to 30A switching capacity)
Intelligent control and shut-down of single loads; i.e. switch headlight off during cranking to use maximum battery power.	Smart and fully configurable load control / shut-off for maximum starting power of battery on starting process
Control of head light's low beam and high beam (200W switched power max.) with only one push button	Low and high beam control (up to 200W switching power) using just one push button
Integrated digital horn relay	Integrated digital horn relay
Integrated alarm system (irrespective of orientation)	Integrated position-independent alarm system
Integrated hazard light feature	Integrated hazard light feature
Internal LED provides the status of vehicles electrical system at a glance – easy trouble shooting.	*Blue still has internal LEDs that provide the status of the vehicles electrical system at a glance.
Easy setup by a temporary push button	*This function is still an option with the blue, but the procedure to get into the setup menu has changed.
Diagnostic features for the assignment of input, output, switching state of the circuit, short circuit diagnostics etc.	Diagnostic feature for layout of input, output, circuit switching status plus diagnosis of electrical circuit, short-circuits, etc.
	Pairing of m-unit with other Motogadget products via LIN bus
	Direction indicator setting for use as position light
	Parking light, high beam flasher
	Two fully configurable auxiliary outputs AUX1 and AUX2
	calibration and current monitoring allows defect detection of all lights and blinkers

<u>m.unit V.2</u> <u>Inputs</u>	<u>m.unit Blue</u> <u>Inputs</u>
Turn R	AUX 2
Start	AUX 1
Horn	Kill
Turn L	Stand
Config	LIN
Light	Light
Brake	Brake
Lock	Horn
	Turn R
	Turn L
	Start
	Lock

--The V.2, Blue, and Basic have 1 battery mounting terminal and 2 mounting holes, one of which is used as a ground.

--m.unit V.2 uses screw terminals to hold the cables in place.

M.unit Blue and m.unit Basic use spring terminal blocks. This is done by pressing the orange colored insert, then inserting the cable end into the terminal block then pressing down on the orange insert.

--The m.unit Blue also has the Bluetooth symbol with an integrated LED. If the Bluetooth is activated the LED will be illuminated.

-- The V.2, Blue, and Basic inputs have the same maximum current (0.01A) and minimum wire cross-sections (0.1mm²).

<u>m.unit V.2</u> <u>Outputs</u>	<u>m.unit Blue</u> <u>Outputs</u>
Turn R	AUX 2
Start	AUX 1
Horn	Ignition
Turn L	Hi Beam
Light Lo	Light
Light Hi	Brake
Brake	Horn
Aux	Turn R
	Turn L
	Start
	Start

-- The V.2, Blue, and Basic outputs have the same *maximum current (10A) and *minimum wire cross-sections (1.5mm²).

*Start outputs for the V.2, Blue, and Basic are 30A and 2.5mm².

*AUX outputs for the m.unit Blue and Basic are greater than the m.unit V.2
Blue and Basic=20A V.2=16A

Light Control Differences:

- M.unit Blue and m.unit Basic have a new feature, high beam flashing, that is activated with a short press of the pushbutton.
- “The parking light is activated under Setup Menu no. 12. The parking light is switched on, when the high beam is on when the ignition is turned off. For this purpose, no extra parking lamp is required – this function is realized with the existing low beam and rear light. Parking light activation is signaled by two brief horn sounds. To avoid excessive battery discharge, please ensure that the parking light is switched on for a maximum of 2 hours.” This is not a new feature of the m.unit Blue and m.unit Basic, but Motogadget explains this feature more clearly in the manual.

Kill Switch Differences:

- All functionality is the same with the kill switch. Only difference between the V.2 m.Unit is what input the kill switch/pushbutton is wired to. The kill switch is wired to the ‘config’ input on the V.2 and the ‘KILL’ input on the Blue and Basic.

Keyless-Go (m-Unit Blue Only):

- New feature of the m.unit Blue which is used with a smartphone and the *m.ride* app.
“The pairing of the m.unit with a smartphone is a prerequisite of this feature. In the *m.ride* app, the feature can be activated or deactivated. With this feature active, the vehicle will be unlocked with a smartphone distance of less than approx. 2m. Pressing the start pushbutton will switch on the ignition, pressing it again will start the engine. Double-clicking the button will shut off the running engine, another double-click will shut off the ignition. When walking away from the vehicle, the vehicle will be locked and the alarm system activated (provided that it is activated in the setup menu). Please make sure to carry the ignition key on you, so you can start the vehicle even without your smartphone.”

Speedometer Sensor (m-Unit Blue Only):

- New feature of the m.unit Blue which is used with a smartphone and the *m.ride* app.
“A speedometer sensor is required for matching the vehicle odometer with *m.ride*. If the vehicle is equipped with a speedometer sensor, connect the sensor signal cable to the AUX2 input, and select option A or B in Setup Menu 11. If the speedometer sensor is equipped with two connection cables, connect the ground cable to the vehicle ground connection and the second cable to the AUX2 input.”

Wiring the m-Button:

- The green wire is now wired into the ‘KILL’ input of the m.unit Blue and m.unit Basic

START Output:

“Starters with integrated solenoid (magnetic switch) with a current flow of maximum 30A (e.g. Valeo, Bosch, Harley Davidson), are connected using two connection cables with 2.5mm² cross-section to the m. Unit’s two START output terminals.”

- V.2 used only 1 wire going into the *START* output. The Blue and Basic versions will use 2 wires, one going into each output terminal.

IGNITION Output:

- New output feature on the m.unit Blue and m.unit Basic. Only ignition systems can be connected to this output.

“This output powers the ignition system. The ignition system can only be connected to this output.”

AUX1 Output:

“All loads, such as the rear light, license plate light, radio, heated grips etc. are powered by this output. In setup menu, Different configurations of this output are possible in the setup menu – depending on the use.”

AUX2 Output:

“This output is designed for multiple use and is equipped with 2 connecting terminals. Depending on the configuration, AUX2 input can be used for switching operations (via pushbutton/switch), or alternatively, the switching can be automatically performed.”

Ignition Lock:

- New disclaimer in the m.unit Blue and m.unit Basic manual

“According to the German Road Traffic Licensing Regulation (StVZO), the vehicle has to be equipped with a steering lock. If the ignition lock and steering lock are built as one unit, please clarify in advance, if you are allowed to carry the lock separately on you (e.g. as a brake disc lock) – this requiring registration in the vehicle documents.”

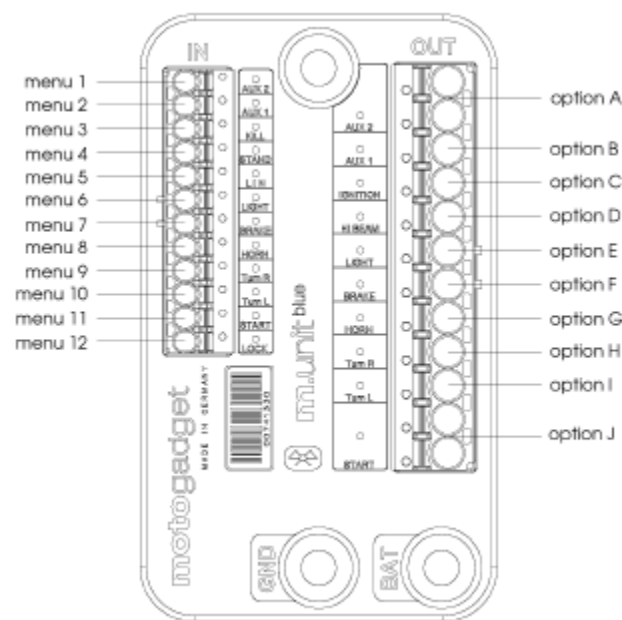
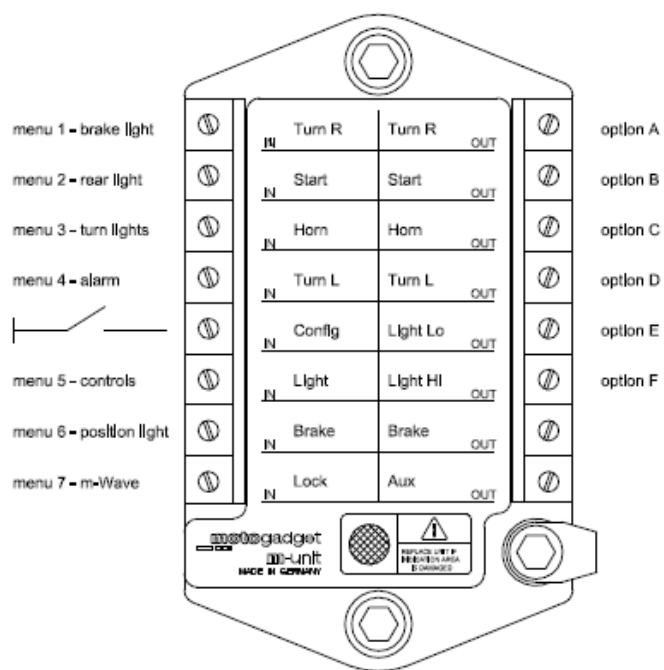
Emergency Brake Light:

- New feature of the m.unit Blue and m.unit Basic

“In this configuration (Menu 4 / Option G), a detected deceleration of more than 8m/s² over a time period in excess of 1 second will be considered as an emergency braking event. The braking light will pulse with 5Hz and the hazard lights are active while braking. This is used to prevent collisions by giving clearly visible warning signals to the traffic behind you.”

Setup/Layout:

- Since the m.unit Blue and m.unit Basic have more input/outputs the structure of the device setup has slightly changed with more available options. See table below for comparison. Note the menu numbers on V.2 side will not be in order. This is to compare the same functions side by side:



V.2 Setup	Blue and Basic Setup
<i>Menu 5 – Handle bar Control Configuration</i>	<i>Menu 1 – Handlebar Instruments</i>
A) Configuration A (5 push button control) > default setting	A) Configuration A (5 push button control)
B) Configuration B (HD and BMW)	B) Configuration B (HD and BMW)
C) Configuration C (Japanese and European motorcycles)	C) Configuration C (Japanese and European motorbikes)
D) Configuration D (new Ducati models)	D) Configuration D (new Ducati models)
E) Configuration E (4 push button mode)	E) Configuration E (4 push button mode)
<i>Menu 2 – Rear light configuration</i>	<i>Menu 2 – Rear light configuration</i>
A) standard (brake light connected to „brake” and rear light to „AUX”) > default setting	A) standard (brake light connected to Brake and rear light to AUX1)

B) one wire rear light / brake light for LED	B) one-wire rear light / brake light for LEDs
C) one wire rear light / brake light for light bulbs	C) one-wire rear light / brake light for light bulbs
<i>Menu 3 – Turn lights configuration</i>	<i>Menu 3 – Direction Indicator configuration</i>
A) Standard (no automatic shutdown) > default setting	A) no automatic shut-down
B) shut down after 10s	B) shut-down after 10s
C) shut down after 20s	C) shut-down after 15s
D) shut down after 30s	D) shut-down after 20s
E) shut down after 40s	E) shut-down after 25s
F) shut down after 50s	F) shut-down after 30s
	G) shut-down after 35s
	H) shut-down after 40s
	I) shut-down after 45s
	J) shut-down after 50s
<i>Menu 1 - Brake light configuration</i>	<i>Menu 4 – Brake light configuration</i>
A) standard (continuous light) > default setting	A) standard (continuous light)
B) fade in and fade out	B) fade in and fade out with 3Hz
C) flashing	C) flashing with 5Hz
D) 8 times flashing and continuous light	D) 8-time flashing with 5Hz and continuous light
E) 2 times flashing; 1s continuous light and start again	E) 2-time flashing then 1s continuous light – repeated
F) 3s continuous light and flashing	F) 3s continuous light, then flashing with 5Hz
	G) emergency braking – flashing with 5Hz and hazard lights
<i>Menu 4 – Alarm configuration</i>	<i>Menu 5 – Alarm configuration</i>
A) alarm deactivated > default setting	A) alarm deactivated
B) medium sensitivity, pre-alarm	B) silent alarm (alarm displays in the m.ride app only)
C) high sensitivity, pre-alarm	C) pre alarm 10s, low sensitivity
D) low sensitivity, no pre-alarm	D) pre-alarm 10s, medium sensitivity
E) medium sensitivity, no pre-alarm	E) pre-alarm 10s, high sensitivity
F) high sensitivity, no pre-alarm	F) pre-alarm 10s, maximum sensitivity
	G) low sensitivity
	H) medium sensitivity
	I) high sensitivity
	J) maximum sensitivity

<i>Menu 6 – Turn lights as position lights</i>	<i>Menu 6 – Direction indicators as position lights (low light)</i>
A) function deactivate > default setting	A) function deactivated
B) brightness 10%	B) brightness 10%
C) brightness 20%	C) brightness 15%
D) brightness 30%	D) brightness 20%
E) brightness 40%	E) brightness 25%
F) brightness 50%	F) brightness 30%
	G) brightness 35%
	H) brightness 40%
	I) brightness 45%
	J) brightness 50%
<i>Menu 7 – m-Wave (smooth turn signal)</i>	<i>Menu 7 – m.wave flashing sequence (smooth direction indicators)</i>
A) function deactivate > default setting	A) function deactivated
B) function activated	B) function activated
N/A	<i>Menu 8 – Light configuration</i>
	A) lights on after engine start
	B) lights on with ignition ON
	C) manual switch-on (light switch)
	D) lights on after engine start – and off with kill pressed
	E) lights on after engine start – and off after 20s of ignition OFF (garage light)
N/A	<i>Menu 9 – AUX1</i>
	A) use rear light output (active, when light is active)
	B) active with ignition ON
	C) active after engine start
	D) ON/OFF with push button to AUX1 input
	E) ON/OFF with switch connected to AUX1 input
N/A	<i>Menu 10 – AUX2</i>
	A) active with ignition ON
	B) active after engine start

	C) ON/OFF with pushbutton connected to AUX2 input
	D) ON/OFF with switch connected to AUX2 input
N/A	<i>Menu 11 – Side Stand</i>
	A) <i>Stand</i> input used as N/C contact (engine start enabled when input is open)
	B) <i>Stand</i> input used as N/O contact (engine start enabled when input switched to earth)
N/A	<i>Menu 12 – Parking Light</i>
	A) not active
	B) active
	C) 1h active
	D) 3h active
	E) 6h active

Starting Setup:

- To start the setup menu in the m.unit Blue and m.unit Basic press the horn pushbutton 3 times briefly immediately after switching on the ignition. If the horn sounds, push it faster next time.
- The V.2 used a push button wired in the 'config' input.

Calibration (m-Unit Blue Only):

- New feature of the m.unit blue. See description below:
When exiting from setup, m.unit calibrates itself so as to be able to detect any defective lamps while operating. For this purpose, the TurnR, TurnL, Light, Highbeam, Brake and AUX1 outputs are successively switched on to measure the individual currents at each output. In case of a defective lamp, a message is transmitted to the m.ride app and, if possible, the change to a different lamp is executed (low beam / high beam, or rear light / brake light, respectively). In case of a defective direction indicator light, the flashing frequency is doubled – in accordance with legal regulations. Therefore, every time the existing wiring is changed or a different illuminant is used, the setup needs to be started and exited for re-calibration. The m.unit also measures its position during the calibration process, thus the bike need to stand in upright position on the main stand.

New features of the m.ride app (m-Unit Blue Only):

- pairing via an encrypted Bluetooth LE (Low Energy) connection; thus a secure and extremely
- low power consumption for both vehicle and smartphone
- Keyless-Go, unlock your bikes electrical system when approaching with smartphone
- Reporting of alarm events (date, time, vehicle "down" etc.)
- Real-time fault indication via audio voice to head-set
- Manual switching of outputs (except starter)
- Firmware updates from any location
- Configuration of m.unit setup menu
- The m. Unit's speedometer input for storage and matching of vehicle's odometer allows for
- vehicle management with automatic notifications of maintenance tasks and status of wheels,
- chain, brake pads, oils, operating supplies, spark-plugs, etc.
- Status, alarm, driver and maintenance logbook
- Display of parking position and "ping!" feature for locating your vehicle

Pairing m.unit with a smartphone(m-Unit Blue Only):

"Install the app m.ride (Android 6.0 / iOS 10.0 or higher required, restricted compatibility of device manufacturer and model apply). After Installation, select Hardware option in m.ride main menu and follow instructions. An m.unit can pair with a maximum of 5 handheld Bluetooth devices. Connecting to the 6th device will override the 1st device in memory."

Reset (m-Unit Blue Only):

"To delete all internal data such as Bluetooth devices, settings and events, start the setup und hold the start-button for 10s. A successful reset will be indicated by a brief flashing of the blinkers. We recommend a reset particularly if the m.unit was purchased in used condition, prior to installation."

Information to User:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the distance between the equipment and the receiver
- Connect the equipment to outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Technical requirements

The m.ride App is now available for Android (from version 6.0) and for iOS (from iPhone 5) shortly thereafter. The modern Bluetooth® LE is used to couple the m.unit blue with the smartphone. This requires certain requirements for the smartphone's hardware.

The following Android models are currently compatible:

- Samsung Galaxy S7/S7 Edge
- Samsung Galaxy S6/S6 Edge
- Samsung Galaxy S5/S5 Neo
- Samsung Galaxy Note 4
- Samsung Galaxy Note 5
- Samsung Galaxy Tab A (2016)
- Samsung Galaxy Tab 4 7.0
- Samsung Galaxy Tab S2 10.5
- Google Pixel/ Pixel XL
- Google Nexus 5
- Google Nexus 5X
- LG G4
- LG G5
- Sony Xperia Z3 Compact
- OnePlus 3/OnePlus 3T
- Huawei P9/ P9 Plus

We intend to make further smartphone models compatible in the next few weeks. Please note that we have to determine priorities and cannot consider every single device.

Further information on the App can be found at mride.de or in Google Play.

Included at time of delivery

- m.unit blue or m.unit basic
- Approx. 50 cm connecting cable for battery positive terminal with 10 mm² cross section
- 2 cable eyes
- 1 x M5 stainless steel bolt
- 2 x M5 stainless steel bolts with nut
- 1 x speed sensor with 2 magnets
- Detailed installation and operating instructions

