

⚠ ATTENTION: Before installing, read the instructions and recommendations contained in the manual. Equipment must be installed and used in accordance with these instructions. The device is designed for installation in motor vehicles with 12-volt electrical system and equipped with CAN bus data. The device must be connected to 12V and negative terminals grounded. The manufacturer and retailer are not responsible for any damages resulting from improper installation, use, operation or control of the product differently from the instructions for use. Incorrect repairs to the facility or its treatment are at risk of damage to the equipment or vehicle power supply and loss guarantees. For proper operation and flawless product, we recommend installation of professional service.

SYSTEM DESCRIPTION

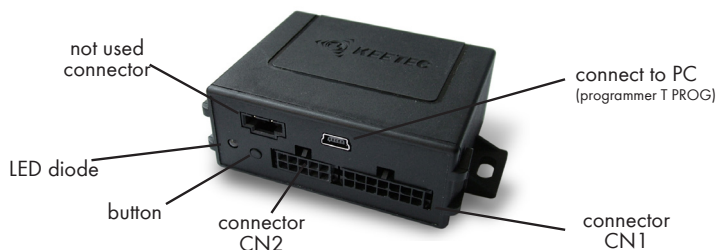
KEETEC M CAN module is designed for vehicles equipped with CAN data bus and 12V supply voltage. Serves to convert the digital signal from the data bus to analog outputs, which the car alarm uses when monitoring the vehicle. Also, writing some data into CAN BUS when analogue inputs is activated is possible. M CAN provides us with information about doors opening, trunk, hood, turn on the ignition, unlock / lock the vehicle by remote control and write commands for lock, unlock, lights flashing, trunk open is possible. A detailed list of analog outputs can be found in other parts of this instructions for use. Before installation into the vehicle check the compatibility of M CAN module according to the attached list of supported vehicles.

I. ENTERING THE CODE

M CAN module must be programmed for specific vehicle after installed, according to type of vehicle in which is installed. Module must be set by entering the three-digits code, which can be found in the attached list of vehicles.

Procedure to entry vehicle code for reading from CAN BUS

- choose correct code for reading from the list of supported vehicles
- press and hold the button on M CAN module for 20 seconds, until LED diode on module turns on.
- release button. LED diode turns off. Program mode is ready.
- press the button so many times, which is the value of first number of vehicle code (for 0 press button 10 times). LED diode flashes after each press of button. After required number of button pressing, LED confirms the setting of the first number of the vehicle code by fast flashing.
- use the same way to set second and third number of vehicle code
- correctness of the entered code and connection to the CAN BUS can be verify by short press of the service button with the ignition turned on. LED flashes quickly and irregularly. After about 5 seconds. LED turns off.
- if you entered the vehicle code that is not in the list of supported vehicles LED 20 times quickly flashes. Disconnect the power supply from module. When you connect it again, enter the right code of vehicle.



II. SPEED OUTPUT SETTINGS

Speed output can be set as pulsing or switchable. Pulse output can be set by entering the code number 911 (procedure is the same as when entering the vehicle code) and switching output can be set by entering code number 912. Factory setting of output - switch.

PULSE - output is set to pulse (pulses according to vehicle speed). The output must be calibrated at speed 50 km/h. When you reach the vehicle speed of 50 km/h, 5 times press the valet switch or button on the M CAN module. Speed calibration is done. In case of faulty calibration repeat this procedure again.

SWITCH - on output set as switch will permanent pulse appear until speed up to 10 km/h. As speed increases and exceeds 10 km/h, the pulse disappears.

III. M CAN SETTINGS

M CAN can be set by entering the following codes (the procedure is the same as when you entering your vehicle code).

code 913 - disable lock / unlock repeat pulse. After locking/unlocking the vehicle only single lock / unlock appears even if you press the buttons repeatedly.

code 914 - permission of repeated lock / unlock pulse. After locking/unlocking the vehicle lock / unlock pulse appears each time you press the buttons.

code 915 - permission of locking pulse reactivation. When unlocking the vehicle and will not open any doors, some vehicles will automatically lock itself. By enabling this feature lock pulse appears on lock output when vehicle automatic locks itself.

code 916 - disable of locking pulse reactivation.

code 917 - activation of **Info GPS** function. By activating this function, the output of the engine speed is changed to the output that turns on when the door is open or ignition is switched on when vehicle is locked by remote control. Output can be turned off by pressing the open or close button on the remote control.

code 918 - deactivation of Info GPS

code 999 - reset of M CAN to the factory settings

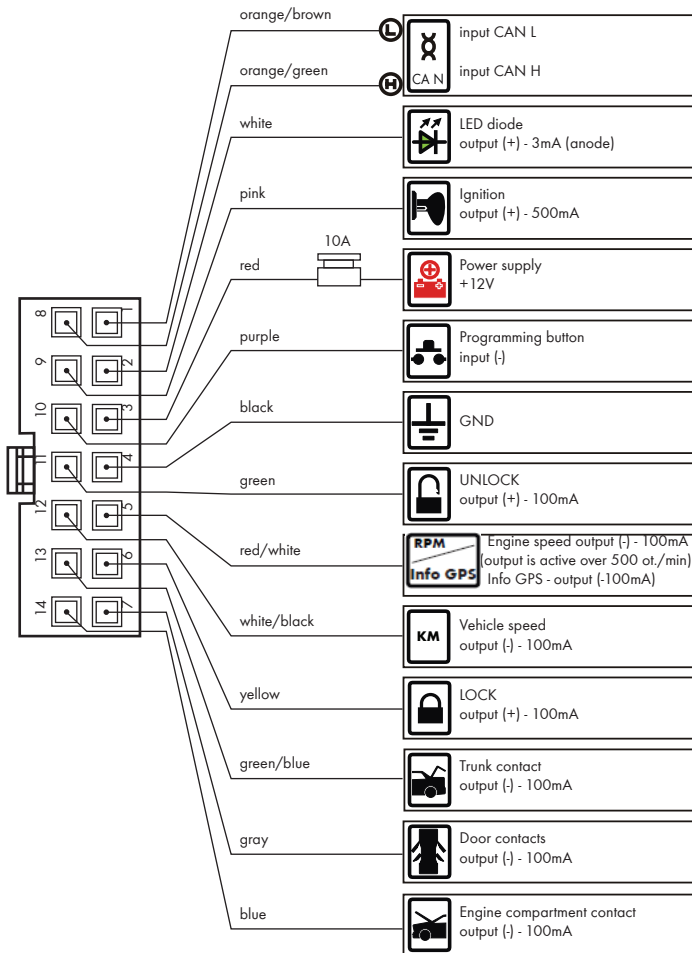
IV. MODULE OUTPUTS DESCRIPTION

PIN	FUNCTION	OUTPUT		FUNCTION DESCRIPTION
6	Lock of vehicle	+12V 100 mA	Pulse (0.5 sec.)	Lock of vehicle by original remote control
11	Unlock of vehicle	+12V 100 mA	Pulse (0.5 sec.)	Unlock of vehicle by original remote control
2	LED diode	(+) 3 mA		Output for LED diode (when programing vehicle code)
10	Programming button	(-)	input	Programing vehicle code
14	Engine compartment	(-) 100 mA	perman-	Open of engine compartment
7	Door contacts	(-) 100 mA	perman-	Open of vehicle doors
4	GND	(-)		GND (-)
13	Trunk	(-) 100 mA	perman-	Open of trunk
9	Ignition	+12V 500 mA	perman.	Ignition turn on
12	Speed of vehicle	(-) 100 mA	switch	Output is active until vehicle doesnt exceed speed of 10 km/h
			pulse	
3	Power supply	+12 V		Power supply +12V
5	Engine speed	(-) 100 mA	perman-	Output is activated after RPM exceed 500 rotate/min.
5	Info GPS	(-) 100 mA	switch	The output is active when you open the door or turn the ignition when vehicle is locked by the remote control
8	CAN H			input CAN BUS H (2wire CAN BUS system) input CAN BUS (1wire CAN BUS system)
1	CAN L			input CAN BUS L (2wire CAN BUS system)

IV. MODULE INPUTS DESCRIPTION

PIN	FUNCTION	INPUT	DESCRIPTION	
3	Lock vehicle	(-)	Impulse (0.5 sec.)	Doors locking
7	Unlock vehicle	(-)	Impulse (0.5 sec.)	Doors unlocking
8	Unlock driver's door	(-)	Impulse (0.5 sec.)	Only driver's door unlock
1	Roll-down windows	(-)	long impulse	Window roll-down during of input signal length
6	Roll-up windows	(-)	long impulse	Window roll-up during of input signal length
4	Trunk open	(+)	Impulse (0.5 sek.)	Trunk will be released
5	Open right slide door	(+)	Impulse (0.5 sek.)	Right slide door will be unlocked/opened
10	Open left slide door	(+)	Impulse (0.5 sek.)	Left slide door will be unlocked/opened
9	Hazard lights	(+)	Impulse	Hazard lights flashing
2	not connect	(-)	-	spare input

V. PINOUT OF CONNECTOR CN1



VI. PINOUT OF CONNECTOR CN2

