



TRAILER LIGHTS CONTROLLING MODULE TYPE **MP2RS** INSTALLATION MANUAL

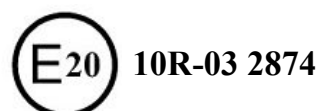


QUASAR ELECTRONICS
ul. Cieślowskich 25K
03-017 Warszawa
tel. (22) 427-31-41..44

<http://www.quasarelectronics.pl>

[e-mail: biuro@quasarelectronics.pl](mailto:biuro@quasarelectronics.pl)

CERTIFICATION OF APPROVAL:



GENERAL FUNCTIONS DESCRIPTION

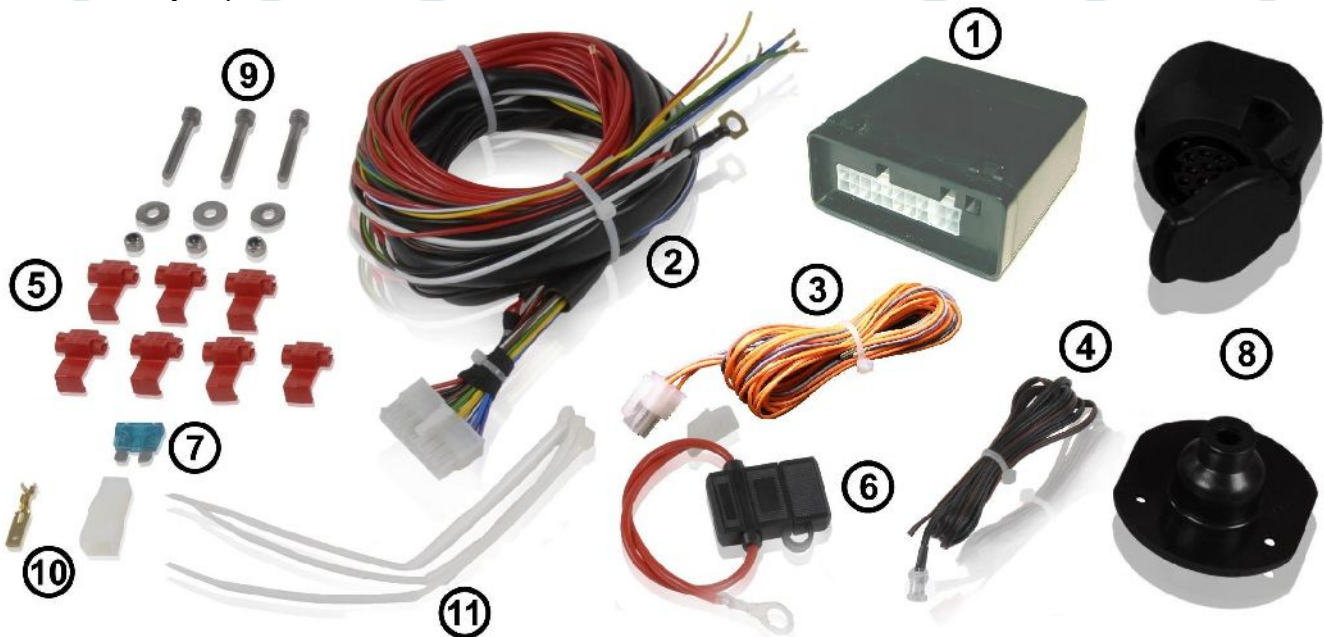
- The module is designed to control the trailer lighting system. The car rear light voltages are used to drive the controller module. The module inputs should be connected to the cars' rear light driving wires according to required trailer lighting driving pattern. The module inputs for correct operation require only around 1 mA each (a 5W bulb is drawing 0.5 amp) and total current consumption does not activate overload sensing modules in the car's lighting system. The module will activate required lights on the trailer after receiving input driving signal;
- The controller can also work with electric installations in the cars where some of the lights perform two light intensity functions based on PWM (pulse width modulation) technique.

MODULE FUNCTIONS

- Driving the trailer lights according to required regulations;
- Reverse light driving;
- Sequential control of the trailer fog light;
- Automatic detection of a connected trailer (tested electric connection only);
- Parking sensor switching (turning ON/OFF);
- Interoperation with double or single filament bulb systems or LED.

ASSEMBLY KIT CONTENT

Assembly kit photo:



- | | |
|--|----------|
| ■ (1) Central control module | - 1 pc. |
| ■ (2) Main harness MP2-W16 | - 1 pc. |
| ■ (3) Additional harness MP2RS-W04 | - 1 pc. |
| ■ (4) LED harness (optional) | - 1 pc. |
| ■ (5) Fast connector | - 7 pcs. |
| ■ (6) Fuse holder harness | - 1 pc. |
| ■ (7) Fuse 15 Amp | - 1 pc. |
| ■ (8) Trailer 13-pin socket with a gasket | - 1 pc. |
| ■ (9) Mounting screw with a nut and washer | - 3 pcs. |
| ■ (10) Connector with an insulating cover | - 1 pc. |
| ■ (11) Cable tie | - 3 pcs. |

CONTROLLER MODULE UNIT FUNCTIONS

SEQUENTIAL CONTROL OF THE TRAILER FOG LIGHT (54G)

In order to avoid blinding the driver by car's rear fog light glare reflected by the trailer's front surface, the sequential control of the trailer fog light is applied.

- Turning on the trailer fog light:

First turning the car fog light on and off causes the car fog light is turned off while the trailer fog light is turned on.

- Turning off the trailer fog light (54G):

The next turning the car fog light on and off causes both car and trailer fog lights are turned off.

- Indication the trailer fog light state with LED:

The LED is used for trailer fog light state indication. The LED should be mounted in the car rear window vicinity so as to be visible in the central rear-view mirror.

The car fog light (54G) controlling	Car fog light state	Trailer fog light state	LED
			<input type="radio"/> OFF
			<input checked="" type="radio"/> ON
			<input checked="" type="radio"/> ON
			<input checked="" type="radio"/> ON
			<input type="radio"/> OFF

TESTING TRAILER ELECTRIC CONNECTION AND DISCONNECTION

Detection whether the trailer is plugged in or not is done by checking if the trailers direction lights bulbs are connected. The bulbs' floss performs as a sensor for the testing circuit. Minimal power load for proper work is 10 Watt.

COOPERATION WITH PARKING SENSORS

In the cars, where the ultrasonic parking sensors without "permanent obstacle" learning function are installed (the trailer becomes a permanent obstacle), the sensors can be blocked for the time when the trailer is plugged in. The module has a current output (max. load 2A) which connects to GROUND when the trailer is unplugged. Positive trailer detection disconnects the GROUND on that output. To this output the ultrasonic sensor control modules' ground can be connected allowing for defeating the sensors while the trailer is plugged in.



In a case when testing of the module installation cannot be done with a real trailer, a **TMP-02** tester can be used for simulating full electric driving load of the module outputs.

The tester is available from **QUASAR Electronics**.

For more information please visit www.quasarelectronics.pl

SCHEMATIC OF MODULE INSTALLATION

