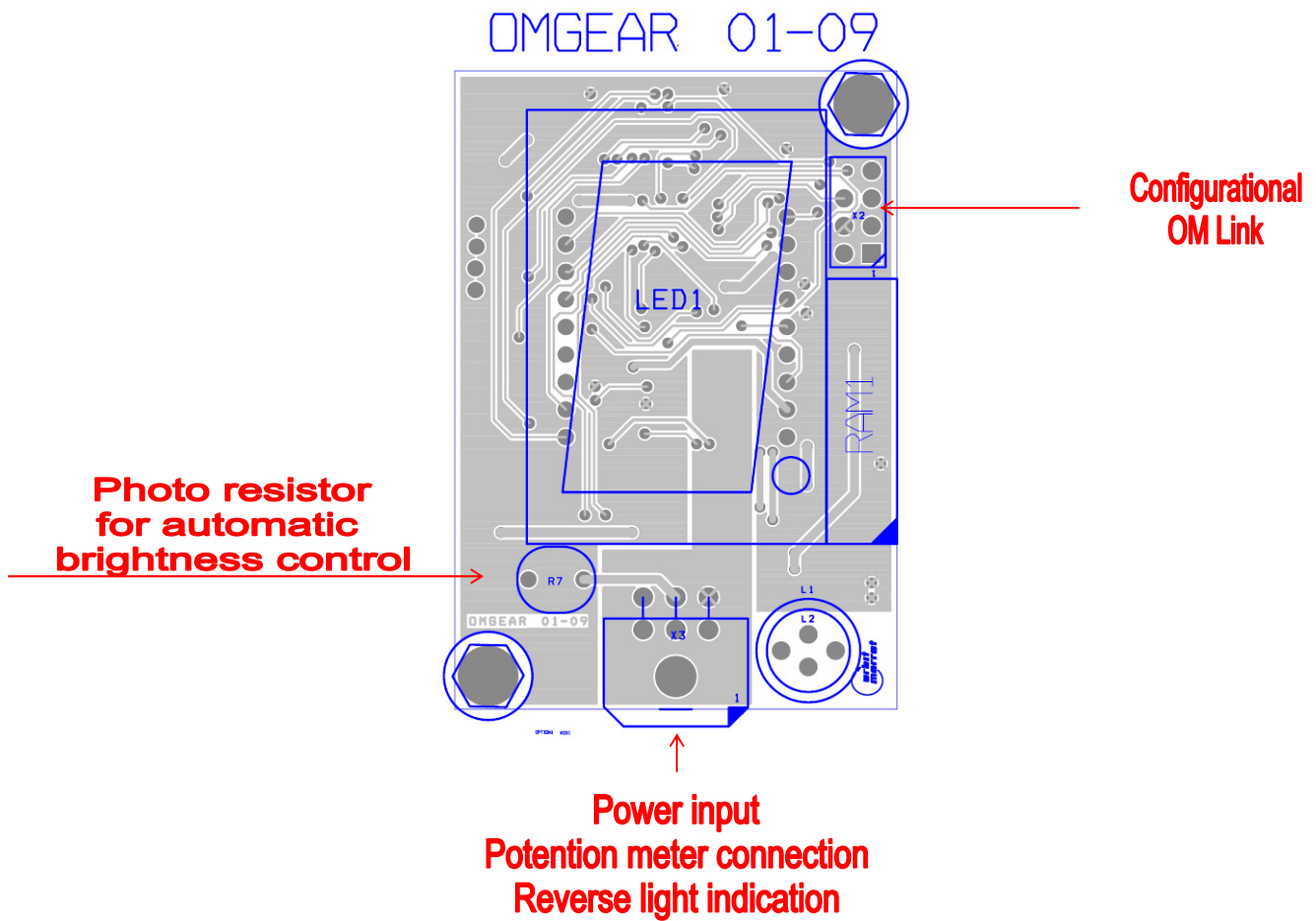


OMZ160GEAR

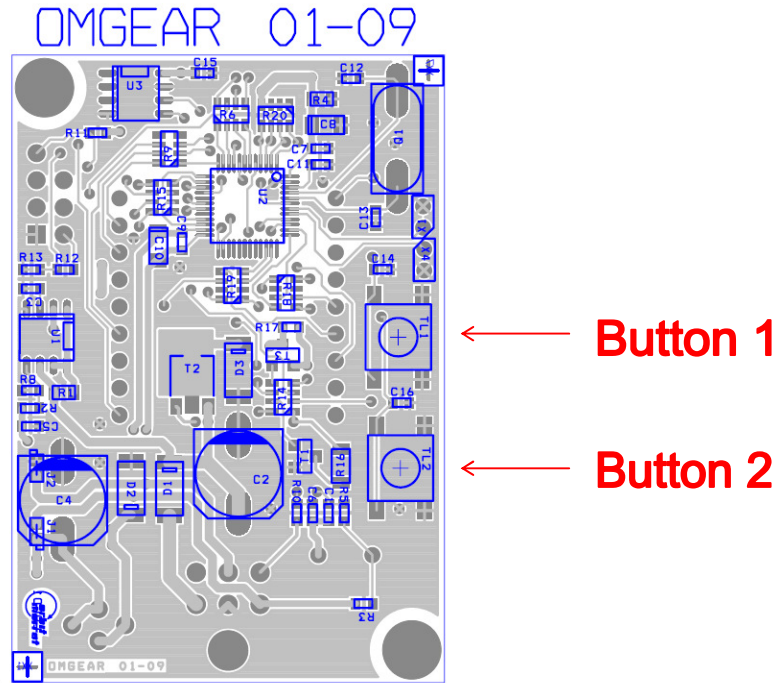
- Settings
- Function

1. Connectors

1.1. Display board – top view



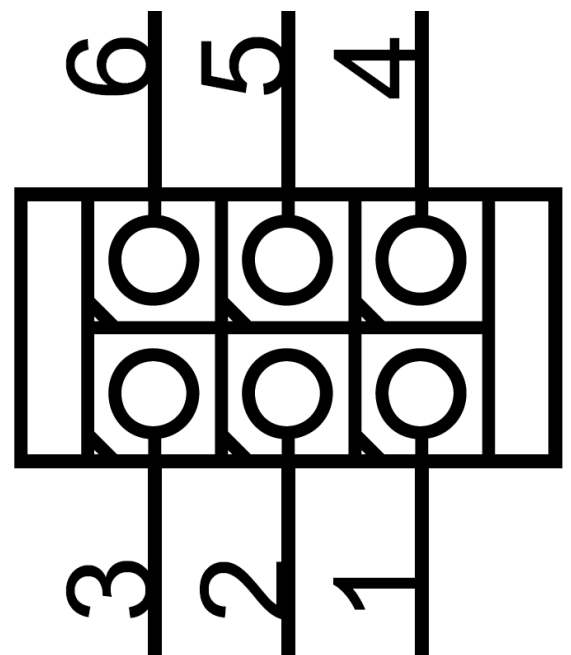
1.2. Display board – bottom view



1.3. Connector wiring

PIN	Function
1	„+“ power suply
2	“-“ power suply
3	“+” potentiometer power suply
4	“+” reverse light
5	“-“ potentiometer power suply
6	potentiometer wiper

Attention! PIN no. 5 must NOT be connected to PIN no. 2.



2. Description of functions

2.1. Start-up

After switch-on all the display's segments light up and then switch off one by one. Only symbol „-“ stays on. As soon as the instrument detects the position of the sensor (which gear the vehicle is in), the corresponding information is projected on the display (1 to 9, N, R)

2.2. Normal state – projection

The instrument measures and displays symbols of corresponding shifting gears (1 to 9) and symbols „R“ a „N“.

2.3. Change of settings

2.3.1. Automatic dimming of the display.

The Instrument reacts to the ambient light and controls the display's brightness accordingly.

Automatic dimming can be either disabled, or set in the following three levels of sensitivity: „H“ (Hi), „M“ (Medium) and „L“ (Low). These settings can be realised by pressing Button „2“. When Button “2” is pressed, one of the selected values (0/H/M/L) starts flashing. You can select the desired option by pressing Button “1”. Your selection is confirmed by pressing Button “2”. If no action is taken for 60 seconds, the instrument will return into the gear projection mode.

2.3.2. Energy Saving mode for „N“ or „R“ positions.

When either “N” or “R” symbols are being projected for a certain period of time, the instrument's display can be switched off automatically and this way energy can be saved. This Energy Saving mode can be either disabled, or pre-set to activate itself after 1 min, 10 min, or 30 min of inactivity. This setting can be reached by pressing buttons “A” and “B” simultaneously. Symbol “S” will appear after the release of the two buttons and one of the selected values (0/1/1./3.) will start flashing. Make your selection by using Button “1”. You can confirm your selection by pressing Button „2“. If no action is taken for 60 seconds, the instrument will return into the gear projection mode.

2.3.3. Setting shifting gears.

In order to project the individual gears, the instrument needs to know their precise location in relation to the sensor used. The instrument then calculates $\frac{1}{2}$ of the distance between the “neighbouring” gears and compares this set position with the actual position of the sensor.

The physical position of all shifting gears needs to be stored in the instrument’s memory.

This is done by a calibration process, which is launched by pressing Button “1”. Symbol “C” will light up and after the release of the Button number “1” will start flashing. If Button “1” is pressed now, calibration will not be successful. Before pressing Button “2” the potentiometer needs to reflect the physical position of the 1st gear. When the position of the rotary potentiometer (which can be turned around indefinitely, but its electrical range is limited to 345°) approaches the “blind spot” (20° out of the total 365°), symbol “E” starts flashing.

Please make sure the “blind spot” is not in between two individual gears or close to them. If so, change the potentiometer’s position (in case of a linear potentiometer rotate its position).

After pressing Button “2” symbol “-“ will appear. This means the position of the first gear has been stored. The next gear number in the order will start flashing (2,3,4,5,6,7,8,9,N,R). If you do not need some of the characters, you can skip them by pressing Button “1”. Do the same in order to exit the numbers and enter the letters. Once you have stored the last character “R”, the calibration process is complete and the device is ready to be used. If there is a pause during the calibration process longer than 60 seconds, the process will not be completed successfully and will need to be repeated from the beginning.

3. Technical data

- ✓ Dimensions: 48 x 63 x 31mm
- ✓ Weight 67 grams
- ✓ Segment height: 30mm
- ✓ Projected shifting gears: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
- ✓ Brightness: Maximum / Automatically controlled – 3 levels
- ✓ Power supply: 10 to 30 VDC (VAC)
- ✓ Power consumption: Projection mode: „R”: max 1.0W/14.4V, 2.0W/28.8V
other: max 1.2W
Less than 0.12W/14.4V, 0.2W/28.8V

- ✓ Reverse light output: PNP open collector, max. 6W
- ✓ Connection: Connector
- ✓ Setting: by push buttons (settings stored even when no power)
- ✓ Operating temperature: -30°C...85°C
- ✓ Storing temperature: -40°C...90°C
- ✓ Enclosure material: ABS