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## Key Features

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- Speed pulse signal or lap trigger output
- Automatic lap time calculation for more than 300 race tracks worldwide (constantly updated)
- User configurable positions for lap time calculation
- **GPS Speed, GPS Course and GPS Position Accuracy Channels**

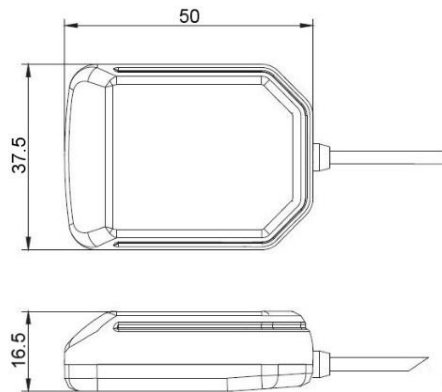
## Options:

- Mounting Plate
- Connector and cable length can be modified on customer request

## Technical specifications

| CAN characteristics             |       |            | Mechanical                   |    |                          |
|---------------------------------|-------|------------|------------------------------|----|--------------------------|
| CAN channels                    |       | 32         | Dimensions                   | mm | 37.5x50x16.5             |
| CAN lines                       |       | 1          | Weight Bike (cable included) | g  | 53                       |
| Baud rate                       | kBd   | up to 1000 | Weight Car (cable included)  | g  | 75                       |
| Sampling rate CAN channels      | Hz    | 200        | Housing material             |    | ABS-PC                   |
| Speed out                       |       |            | CAN Connection               |    | Binder 712, 5PM          |
| Pulse output via open collector | P/min | 1000       | Type                         |    | Raychem                  |
| Sink current                    | mA    | 20         | Wire cross section           |    | 5x AWG26                 |
| Electrical                      |       |            | Length Bike                  | mm | 400                      |
| Power supply                    | V     | 4 to 28    | Length Car                   | mm | 2000                     |
| Current consumption @5 V        | mA    | 80 to 85   | Environmental                |    |                          |
|                                 |       |            | Sealing class                |    | IP67                     |
|                                 |       |            | Operating temperature        | °C | -40 to +85               |
|                                 |       |            | Humidity                     | %  |                          |
| Ordering information            |       |            |                              |    |                          |
|                                 |       |            | BC-GPS2CAN_V2-000            |    | Bike                     |
|                                 |       |            | BC-GPS2CAN_V2-001            |    | Car                      |
|                                 |       |            | BC-GPS2CAN_V2-100            |    | Bike with Mounting Plate |
|                                 |       |            | BC-GPS2CAN_V2-101            |    | Car with Mounting Plate  |

## Dimensions

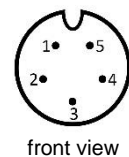


## Connector layout

## Connector type

### CAN line, Binder 712 5PM

| Pin | Name       | Description                                     | Color |
|-----|------------|-------------------------------------------------|-------|
| 1   | CAN H      | CAN high                                        | white |
| 2   | CAN L      | CAN low                                         | green |
| 3   | GND        | Ground                                          | black |
| 4   | Button/Lap | Push-button input/speed output (open collector) | blue  |
| 5   | Vext       | Power supply (4-28V)                            | red   |



front view

## Default CAN identifiers

| CAN-ID | Byte 0   | Byte 1 | Byte 2   | Byte 3 | Byte 4    | Byte 5 | Byte 6   | Byte 7 |
|--------|----------|--------|----------|--------|-----------|--------|----------|--------|
| 0x790  | V_Sat    |        | ValidSat |        | SSH       |        | Course   |        |
| 0x791  | Lat_dez  |        |          |        | Lon_dez   |        |          |        |
| 0x792  | Altitude |        |          |        | MMDD      |        | HHMM     |        |
| 0x793  | HorAccu  |        | VerAccu  |        | SpAccu    |        | CourAccu |        |
|        | Speed_N  |        | Speed_E  |        | Speed_D   |        | Speed_3D |        |
|        | HDOP     |        | GDOP     |        | PDOP      |        | VDOP     |        |
|        | Year     | Month  | Day      | Hour   | Min       | Sec    | hSec     |        |
|        | Latitude |        |          |        | Longitude |        |          |        |
|        | A_Lat    |        | A_Lon    |        | Banking   |        | Yawrate  |        |

## Mounting Instructions



**Improper mounting of the GPS module can result in bad GPS accuracy!**

- Do not use Velcro or similar to mount the GPS module to the vehicle
- Do not mount the GPS module on unstable or strongly vibrating parts of the vehicle
- The GPS module must be mounted on the top of the vehicle and be oriented parallel to the horizon.
- The optimum module location must not be “shaded” by any part of the vehicle or the driver.

to improve the accuracy on non-metal surfaces, please use the self-adhesive ground plane - AC-GPS\_ground\_plane-000 -

### GPS Speed, Course and Position Accuracy

The GPS Module has additional channels for speed, course, horizontal and vertical position accuracy.



“#SpAccu” - absolute speed accuracy in  $\pm x$  [km/h]

“#CourAccu” - absolute course accuracy in  $\pm x$  [°]

“#HorAccu” - absolute horizontal position accuracy in  $\pm x$  [m]

“#VerAccu” - absolute vertical position accuracy in  $\pm x$  [m]