

# Collision Avoidance System CAS-M light



The collision avoidance system CAS-M light helps the driver to focus on the track and warns him if a car is approaching from behind. The system provides information about relative speed and distance of the closest vehicle on the CAN bus. An additional display with CAN bus interface is required (e.g. DDU 9). The information is based on a Bosch radar sensor which contains a FMCW radar transceiver operating in the globally harmonized frequency range of 76.0 - 77.0 GHz. Targets in front of the sensor are reflecting the radar signal and the relative speed and distance is determined via Doppler-effect and beat frequency.

The benefit is even more increased during darkness or in bad weather conditions. The system interface is very intuitive and adaptable to the drivers liking.

## Application

Operating temperature	-40 to 85°C
Storage temperature	-20 to 95°C
Range	150 m
Tracks	1 Object (nearest)
Interface	CAN
CAN rate	500 kbaud or 1 Mbaud
CAN update rate	50 Hz

## Technical Specifications

### Mechanical Data

Weight of radar sensor MRR	199 g
Size	60x70x32 mm

- ▶ Radar sensor with integrated logic
- ▶ Warning for overtake situations
- ▶ Easy system adaptation
- ▶ Universal CAN interface for various displays
- ▶ Visualization via display LEDs

Vibration	Random vibration $a_{eff} = 30.8 \text{ m/s}^2$ , 3x8 h (according ISO/DIS 16750-3)
Protection Classification	IP 6K6K (DIN 40 050) IP 6K7 (DIN 40 050)

## Electrical Data

Supply voltage	6.5 to 18 V
An external fuse has to be provided (rec. 10 A).	
External overvoltage protection is required (internal overvoltage protection up to 35 V).	
Reverse polarity voltage protection	-14 V max. $t \leq 60 \text{ sec}$

## Connectors and Wires

Mating connector	F 037 B00 168-01
Pin 1	GND
Pin 2	CAN-H
Pin 3	CAN-L
Pin 4	n.c.
Pin 5	n.c.
Pin 6	n.c.
Pin 7	n.c.
Pin 8	V+

## Installation Notes

The system includes a radar sensor and a detailed user manual. Ordering information for suitable wiring looms for the different CAS-M light packages are specified in the user manual.

The system needs to be connected to the vehicle CAN bus (connection to display needed) and supplied with 12 V from the supply system on board.

See CAS-M light in action on <http://youtu.be/EzpSy-eJRi4>

### Ordering Information

**Collision Avoidance System CAS-M light (500 kbaud)**

Order number **F 02U V02 021-01**

**Collision Avoidance System CAS-M light (1 Mbaud)**

Order number **F 02U V02 220-01**

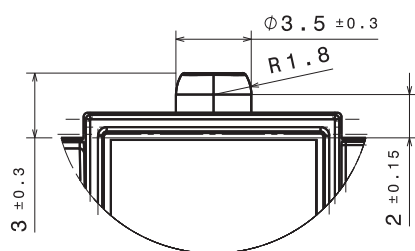
**Collision Avoidance System CAS-M light incl. Display DDU 9 (500 kbaud)**

Order number **F 02U V02 591-01**

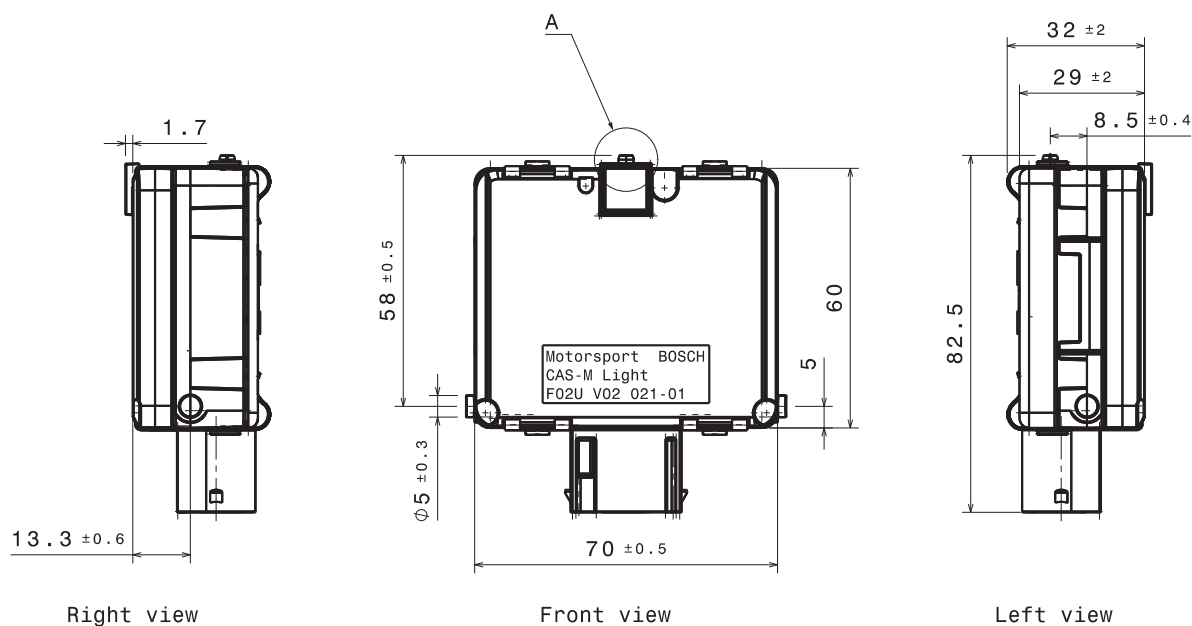
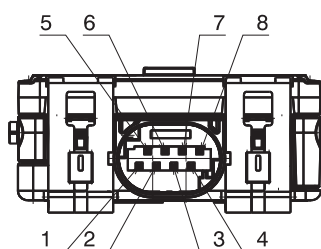
**Collision Avoidance System CAS-M light incl. Display DDU 9 (1 Mbaud)**

Order number **F 02U V02 592-01**

### Dimensions



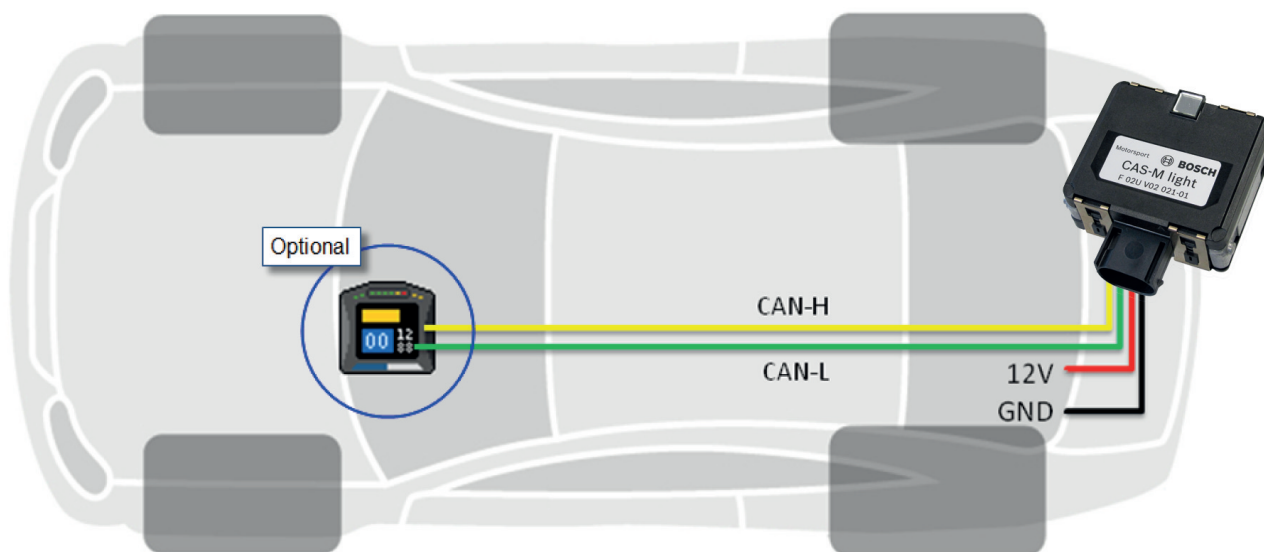
Detail A



Right view

Front view

Left view



Wiring schematic

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