BERNARD GRUPPE

Data Sheet

BMA

BERNARD Mobility Analyser

The **BMA** captures image data using an integrated camera and processes it directly on the device. Objects within the field of view are detected and classified. Events are transmitted as JSON via MQTT. The BMA uses an integrated LTE modem for communication. Central management is handled by the **Control Center**.

Product variants:

- BMA-V3-27 — 2.7 mm focal length
- BMA-V3-60 — 6.0 mm focal length

Technical Data

General	
Function	Continuous detection of moving and stationary traffic
Typical applications	Traffic survey (cross-section & turning movement), Parking monitoring
Captured object classes	**12+1** (Model Traffic & Parking Accuracy+)
Detection accuracy*	Parking monitoring – Counting accuracy: **>99%** Traffic counting – Counting accuracy: **>95%** Classification main classes: **>95%** Classification subclasses: **>90%** **) With optimal alignment and calibration*
Speed estimation*	±10% deviation at <60 km/h ±15% deviation at <100 km/h ±20% deviation at <130 km/h **) With optimal alignment and a calibrated system over a 10 m section*
Object speed	**< 130 km/h**
Day / Night	Yes / Yes (with IR illumination)
Mounting Parameters	
Mounting type	Pole mounting, clamping range Ø 60–150 mm
Mounting height	**3.5 to 12 m**
Horizontal mounting angle	0°–360° (recommended: ~15° for better classification)

Electrical Characteristics	
Power supply	**12–48 V DC**
Maximum power consumption	**20 W**
Average power consumption	Standby: 4.5 W | Operation, IR off: 7 W | Operation, IR on: 10 W
Connectivity	
Technology	LTE Cat-4
4G bands	Global: B1, B2, B3, B4, B5, B7, B8, B8_US, B9, B12, B13, B14, B18, B19, B20, B25, B26, B28
SIM format	Nano-SIM
Transmission protocol/format	MQTT / JSON
Environmental Conditions	
Operating conditions	**–20 °C to +50 °C**
Protection class	**IP65**
Dimensions and Weight	
Device dimensions without bracket	17.8 × 11.9 × 10.9 cm (L × W × H)
Packaging dimensions	32.5 × 23.5 × 23.0 cm (L × W × H)
Device weight with bracket	880 g

Detection Distances

BMA-V3-27 (2.7 mm)

Orientation	Person/Bicycle	Car/Van	Truck/Bus
Near range	0–15 m	0–15 m	0–15 m*
Far range	7–20 m	7–40 m	7–60 m

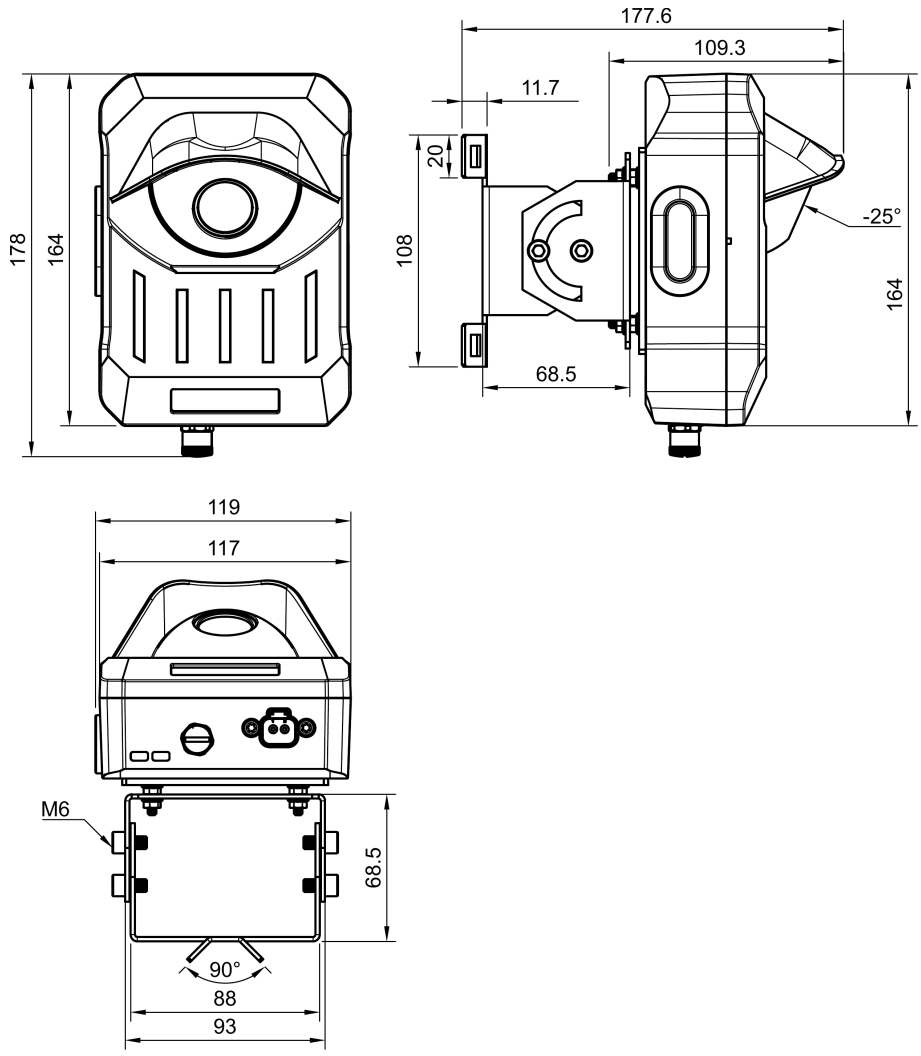
BMA-V3-60 (6.0 mm)

Orientation	Person/Bicycle	Car/Van	Truck/Bus
Near range	5–20 m	5–20 m	5–20 m*
Far range	10–40 m	10–60 m	10–90 m

* Long trucks/buses may not be fully within the field of view. Near range: BMA tilted downward. Far range: BMA with near-horizontal alignment. Installation height 6 m.

Scope of Delivery

- 1 × BMA
- 1 × Mounting bracket
- 2 × Hose clamps (Ø 60–150 mm, width 9 mm)
- 1 × Power cable 15 m (0.75 mm²)
- 1 × Quick-start installation guide

Not included: installation tools or other accessories such as power supply or Ethernet cable.

Dimension Drawing