BERNARD GRUPPE

Data Sheet

BMA TLC

BERNARD Mobility Analyser Traffic Light Controller

The **BMA TLC** 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 generated via event triggers and transmitted via the **BMC** using potential-free contacts to the traffic light controller. Central management is handled by the **Control Center**.

Product variants:

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

Technical Data

General	
Function	Permanent detection of moving traffic and communication to the traffic light controller (via BMC)
Captured object classes	**12+1** (Model Traffic & Parking Accuracy+)
Detection accuracy*	Counting accuracy: **>95%** Classification main classes: **>95%** Classification subclasses: **>90%** **) At optimal alignment and calibration*
Virtual loops	Up to **12** via BMC *One potential-free contact per loop*
Lanes	Up to 4
Fault output	Optional
Frame rate	**30 FPS**
Day / Night	Yes / Yes (with IR illumination)
Mounting Parameters	
Mounting type	Pole mount, 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	**24–30 V DC** (via BMC)
Maximum power consumption	**20 W**
Average power consumption	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, SIM card included
Transmission protocol/format	MQTT / JSON
Environmental Conditions	
Operating conditions	**–20 °C to +60 °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-TLC-V3-27 (2.7 mm)

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

BMA-TLC-V3-60 (6.0 mm)

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

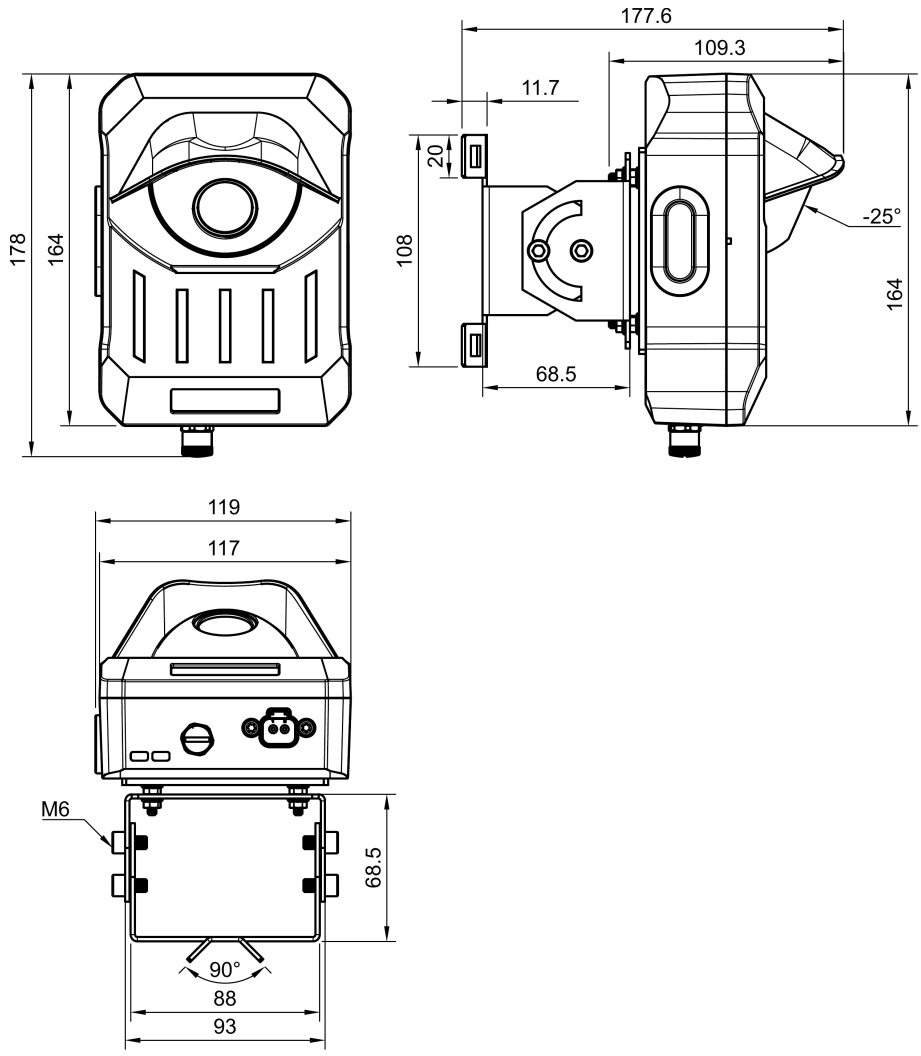
* Long trucks/buses may not be fully within the field of view. Close range: BMA tilted downward. Long range: BMA with near-horizontal alignment. Installation height 6 m.

Maximum Cable Length BMA TLC ↔ BMC

Cable cross-section	Max. length at 24 V	Max. length at 30 V
1.5 mm²	150 m	300 m
0.75 mm²	75 m	150 m
0.5 mm²	50 m	100 m

Scope of Delivery

- 1 × BMA TLC
- 1 × Mounting bracket
- 2 × Hose clamps (Ø 60–150 mm, width 9 mm)
- 1 × Power cable 15 m (0.75 mm²)
- 1 × Nano-SIM (inserted)
- 1 × Quickstart Installation

Not included: mounting tools, power supply, Ethernet cable. The BMC is not included in the scope of delivery.

Dimension Drawing