BERNARD GRUPPE

Data Sheet — preliminary

BPD

BERNARD Presence Detector



The **BPD** 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 signal controller. Central management is handled by the **Control Center**.

Product variants:

- 100510 — 2.7 mm focal length

Technical Data

General	
Function	Demand and occupancy-based extension at the stop line, detect outputs via BMC
Virtual loops	Up to **4** via BMC
Captured object classes	**3** — motor vehicles, pedestrians, cyclists *Selectable as a filter per virtual loop; classes are not available as data output*
Fault output	Optional
Detection accuracy*	Counting accuracy: **>95%** Classification main classes: **>95%** **) At optimal alignment and calibration*
Frame rate	**5 FPS**
Range	Up to **35 m**
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)

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Maximum power consumption	**20 W**
Average power consumption	**tbd** — measurement under continuous load pending
Connectivity	
Technology	LTE Cat-4 — remote maintenance, configuration and updates via the Control Center
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
Traffic data output	**Not available** — output via potential-free contacts only
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

2.7 mm focal length

Alignment	Person/Bicycle	Car/Van	Truck/Bus
Near range	0–15 m	0–15 m	0–15 m*
Far range	7–20 m	7–35 m	7–35 m

Preliminary values, measurement on the series device pending. * Long trucks/buses may not be fully within the field of view. Near range: BPD tilted downwards. Far range: BPD aligned close to the horizon. Installation height 6 m.

Maximum Cable Length BPD ↔ 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

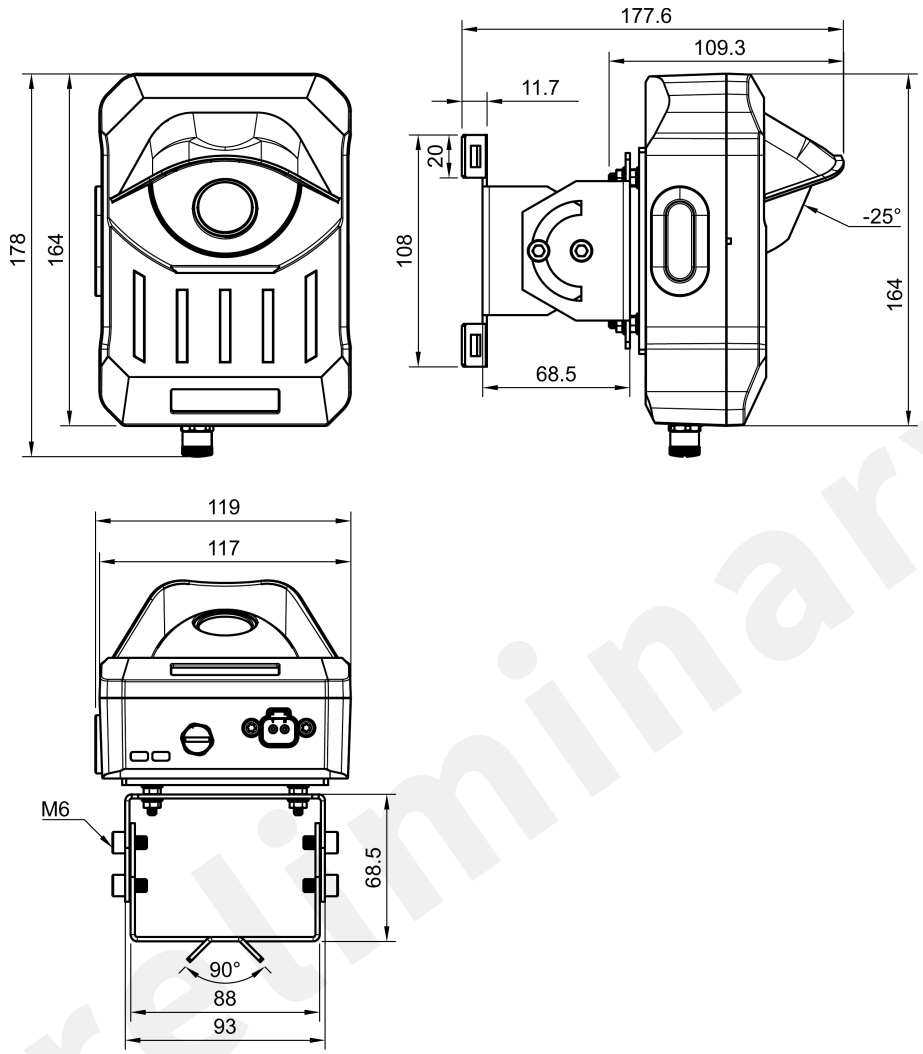
- 1 × BPD
- 1 × mounting bracket
- 2 × hose clamps (Ø 60–150 mm, width 9 mm)
- 1 × power cable 15 m (0.75 mm²)
- 1 × Nano-SIM
- 1 × quickstart installation guide

Not included: mounting tools, power supply unit, Ethernet cable, BMC.

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Dimensional Drawing



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Preliminary data sheet. Values marked *tbd* or *preliminary* have not yet been released; all specifications are subject to change until series release.