# Kingpin Monitor

**DATA SHEET**

## 01   Nexxiot Kingpin Monitor Solution

**Nexxiot Kingpin Monitor Solution** – is a zero-maintenance hardware unit combination for enabling real-time monitoring of hitches on pocket wagons. Device installation can be done in under 60 minutes ensuring quick and effortless onboarding. Once set up, the Kingpin Monitor Solution provides real-time visualization and remote monitoring of the Hitch Status. Intelligent energy harvesting, and energy management techniques ensures a hassle-free operation for a guaranteed time of 6 years.

## 02   Use Cases & Return on Investment

**Ground Support** – terminal workers are assisted during the loading and unloading process of a semi-trailer onto a pocket wagon, as the Displays visualize the measurements of the Sensors inside the Hitch in the form of bright LEDs.

**Monitor Loading Status remotely** – apart from being able to see the Hitch Status when standing in front of the pocket wagon, it is also possible to monitor the loading status remotely via the Nexxiot Connect Portal. With the help of a sophisticated trigger Engine, you will be notified about Safe or Unsafe Loadings of Trailers.

**From Reactive to Predictive Maintenance** – reducing the reliance on guesswork or approximations enables users to maximize the intervals between scheduled maintenance. Knowing the exact asset and part utilization and mileage enables a more precise optimization of the asset, workshop & repair schedules, effectively creating significant savings. Accurate mileage information can also be used to improve customer billing or subscribe to government subsidies.

**Quick Setup** – installation is assisted by Nexxiot Pairing App and can be done in under 60 minutes.

**Zero Maintenance** – Nexxiot Kingpin Monitor devices are 'install & forget' – there is no regular servicing or battery changes required. Nexxiot devices have a 6-year guaranteed lifespan.

**Rugged & IP67 Classification** – a custom-engineered plastic ensures that devices can withstand a great amount of damage without sacrificing their integrity. Devices are also entirely weather sealed for operation in the harshest of weather conditions - be it Scandinavian Winters or Middle Eastern summers.

| | | | |
|---|---|---|---|
| **Product** | | Kingpin Monitor Sensor | |
| **ID** | | PSK.1A (FW6170) PSK.1B (TWIN 2/3) PSK.1C (FW6150/60) PSK.1D (MAZ80800) | |
| **Physical** | Size | 150.5 mm x 59mm x 23 mm | |
| | Weight | 180 g | |
| **Environmental** | Operating temperature (EN 50155, Class TX) | -30 °C … +50 °C; Electronics operational up to +85 °C | |
| | Altitude | 2000 m / 6562 feet | |
| | Ingress Protection | IP66/IP67 | |
| **Energy** | Battery type | Li | |
| | Nominal battery voltage | 3.6 V | |
| | Battery capacity | 3800 mAh | |
| | Energy harvesting source | Dual 2A-Cell Type Lithium Primary Battery | |
| **IEEE 802.15.4** | Frequency range | 2405 MHz … 2480 MHz | |
| **NFC** | ISO 15693, 13.56 MHz | Passive, only used for Pairing App | |
| **ITSS Interface 2** | | ready | |
| **Lifetime** | Maintenance free | 6 to 10 years depending on environmental conditions and use of device | |

| Product | | Kingpin Monitor Display |
|---|---|---|
| ID | | PSK.1D |

| Physical | Size | 154 mm x 100 (201,5) mm x 43 mm |
|---|---|---|
| | Weight | 400 g |
| | Mounting hole spacing | 137 mm; Ø 7 mm, suitable for ¼" screws or rivets |
| Environmental | Operating temperature (EN 50155, Class TX) | -30 °C … +50 °C; Electronics operational up to +85 °C |
| | Altitude | 2000 m / 6562 feet |
| | Ingress Protection | IP66/IP67 |
| Energy | Battery type | Primary Lithium Thionyl Chloride |
| | Nominal battery voltage | 3.6 V |
| | Battery capacity | 19000 mAh |
| IEEE 802.15.4 | Frequency range | 2405 MHz … 2480 MHz |
| NFC | ISO 15693, 13.56 MHz | Passive, only used for Pairing App |
| ITSS Interface 2 | | ready |
| Lifetime | Maintenance free | 6 to 10 years depending on environmental conditions and use of device |

**Environment:**

RoHS
IEC 61373 Category 1, Class B
(Vibrations and shocks for rail)
IEC 60529 (IP66/IP67)
EN 50155
EN 50125-1
EN 60068-1
EN 60068-2-1
EN 60068-2-2
EN 60068-2-5
EN 60068-2-11
EN 60068-2-30

**Product Safety:**

IEC 62368-1
EN 45545-1
EN 45545-2
EN 60086-4

**Radio Equipment and EMC:**

Directive 2014/53/EU
EN 300 328
EN 301 489-1
EN 50121-3-2:2016