



# PLICSMOBILE: Measurement data via the mobile network

# Data using the mobile network – simple and reliable

**The need for wireless signal transmission technologies increases as the wish for flexibility grows – particularly in connection with today's increasing instrumentation of remote system components. Although the wiring of industrial plants is usually very time and cost intensive, wireless signal transmission has caught on only very slowly until now. With PLICSMOBILE, sensors transmit their measured values and settings using the mobile phone network over long distances to visualization software – simply, cost-effectively and reliably.**

## **Low effort – high flexibility and certainty**

The reliability of the transmitting system is crucial for the success of wireless signal transmission. PLICSMOBILE is based on the commonly used, worldwide GSM/GPRS standard and, because it is integrated into the plics® system, it can be put into operation quickly and easily. The range of application for PLICSMOBILE includes mobile silos, deep wells, high containers, river and sea levels, waste oil collection sites and material recycling facilities.

## **Cost savings in planning, installation and servicing**

Compared with traditional wired instrumentation, wireless measurement data transmission with PLICSMOBILE really saves costs in process automation. Due to the simple and fast linking of measuring points to the measurement data centre or control room, the effort involved in planning, installing and commissioning is considerably lower than with connections via 4 ... 20 mA or fieldbus cables.



“The linking of remote or mobile measuring points to a processing centre with PLICSMOBILE reduces the work of planning and implementation considerably. The expenditures on materials for the connection and transmission of measurement data are also lower. PLICSMOBILE also reduces costs through lower servicing requirements and downtime.”



### **PLICSMOBILE: All advantages at a glance**

- Ideal for mobile, difficult access or remote measuring points
- Simple installation with little planning and documentation effort
- Fast extension of measuring points in existing systems
- Modernization of systems with full access to the sensors
- Remote diagnosis and maintenance
- Standard USB interface for on-site parameter adjustment

# PLICSMOBILE in the plics<sup>®</sup> system

## Power supply



Battery pack



Power pack



## Housing



Plastic double chamber



Stainless steel double chamber



Aluminium double chamber

## GSM/GPRS module



## Holder





**Trendsetting measurement technology orientates itself around the people who use it. That's why we developed plics® – the world's first modular product system for instrumentation. plics® brings these advantages to PLICSMOBILE, with a suitable housing version for every application.**

### **Simpler planning with plics®**

Depending on the application and local conditions, PLICSMOBILE can either be integrated into the double chamber housing of a plics® instrument or placed as a separate unit next to the sensor. No matter what measuring principle, the electronics version and process fitting, PLICSMOBILE can independently transmit the measured values and settings to the measurement data centre simply and reliably.

### **Clear advantages in plant construction**

Short delivery time, uncomplicated connection, fast setup and commissioning save the plant builder significant time and costs. The configuration of VEGA instruments, their wiring and their commissioning is always the same. Whoever knows this can work with any plics® measuring principle and application at any time.

### **Assistance for the user**

plics® delivers a convincing performance in daily use due to its high operational reliability, simplified servicing and reduced spares stock. The consistency of technology and operation simplifies and accelerates working with different plics® instruments.

### **The plics® advantages for PLICSMOBILE**

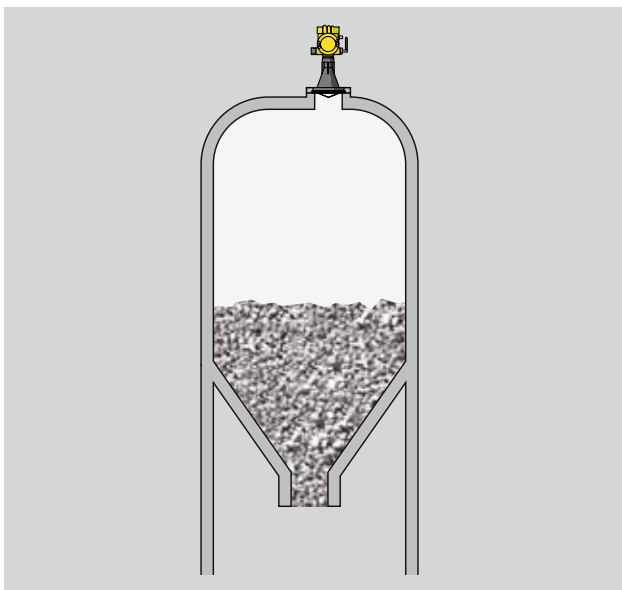
PLICSMOBILE is completely integrated in plics®. The fully integrated solution using the second chamber of a plics® sensor and the external version both demonstrate the flexibility of this solution.

- Can be used with any plics® or plics®plus sensor
- Compatible with all electronics versions
- Housing suitable for any application
- Remote transmission of current and stored measurement data as well as settings

# PLICSMOBILE in two versions

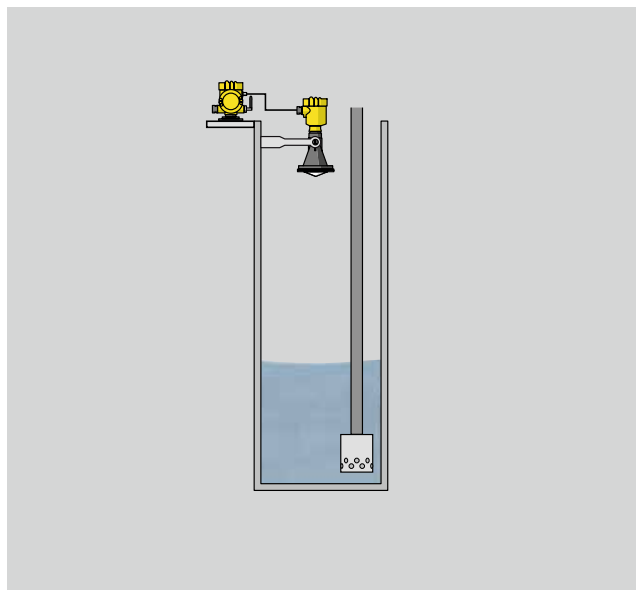
VEGA has been offering solutions for wireless local-area communication in the form of PLICSRADIO for years. PLICSMOBILE now extends this technology to applications for remote areas. Whether as a compact unit composed of sensor and radio module, or in the externally housed version, PLICSMOBILE can be used to realize wireless communication quickly, uncomplicatedly and cost-effectively.

## Integrated version PLICSMOBILE



- Radio unit integrated in the sensor housing
- Suitable for all plics®plus sensors
- Measurement data can be transferred via cables and/or wirelessly
- Suitable for all electronics versions (HART, Profibus PA and Foundation Fieldbus)

## External version PLICSMOBILE T61



- Radio unit in the external housing
- Suitable for all plics® and plics®plus sensors
- Simple retrofitting into existing systems
- Power supply for radio unit and sensor via battery or rechargeable power pack
- Integrated energy management for long operating periods
- Suitable for all electronics versions (HART, Profibus PA and Foundation Fieldbus)



### Design and function of PLICSMOBILE T61

PLICSMOBILE T61 is an external GSM/GPRS radio unit for transmission of measurement data and remote parameter adjustment of plics® sensors. The connection of PLICSMOBILE to a sensor allows measurement data and diagnostic information to be transferred wirelessly. A battery or rechargeable power pack as well as a USB connection are integrated in the instrument.

#### Technical data

##### Power supply

Operating voltage 9.6 ... 32 V DC

##### Battery pack (optional)

Battery type 6 x AA (Alkaline-Manganese)  
 Operating voltage 9 V DC

##### Power pack with charging electronics (optional)

Operating voltage 7.2 V DC

##### Sensor supply

Number of sensors 1 x plics® sensor  
 Terminal voltage 22.5 ... 20.5 V with 4 ... 20 mA  
 Current limitation 25.7 mA

##### Radio transmission

Radio frequency Quadband GSM  
 (850/900/1800/1900 MHz –  
 depending on service provider)

##### Ambient conditions

Ambient, storage and transport temperature -40 ... +80 °C (-40 ... +176 °F)

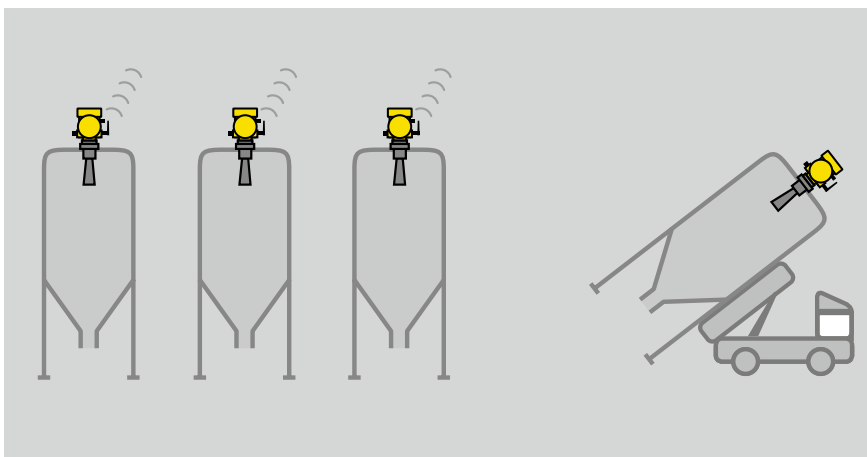
##### Electrical protective measures

Protection rating IP 66/IP 67



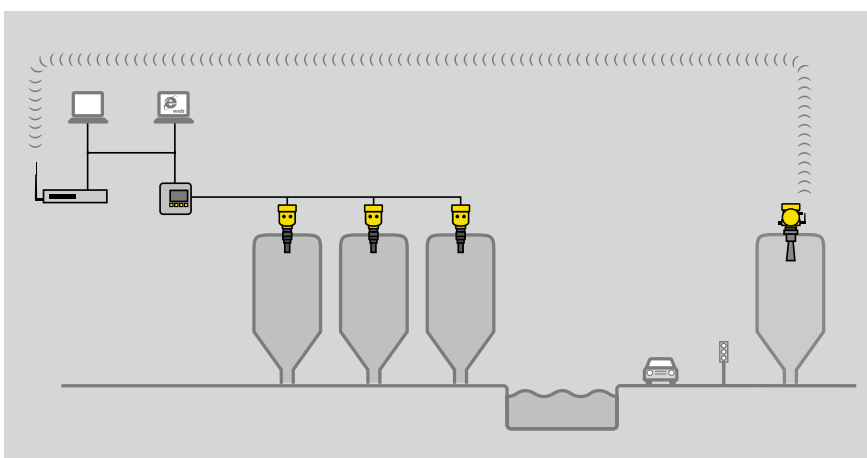
# PLICSMOBILE for widely different applications

Due to the massive time savings in planning and installation, wireless signal transmission with **PLICSMOBILE** is ideal for simple and fast connection of sensors. Radio supported communication is particularly advantageous when the routing of cables involves considerable work and expense, or is not possible at all due to lack of infrastructure.



## Networking of mobile containers

- Transmission of measurement data from transportable silos and tanks
- Data connection of mobile system components, e.g. conveyor belts or mobile filling systems



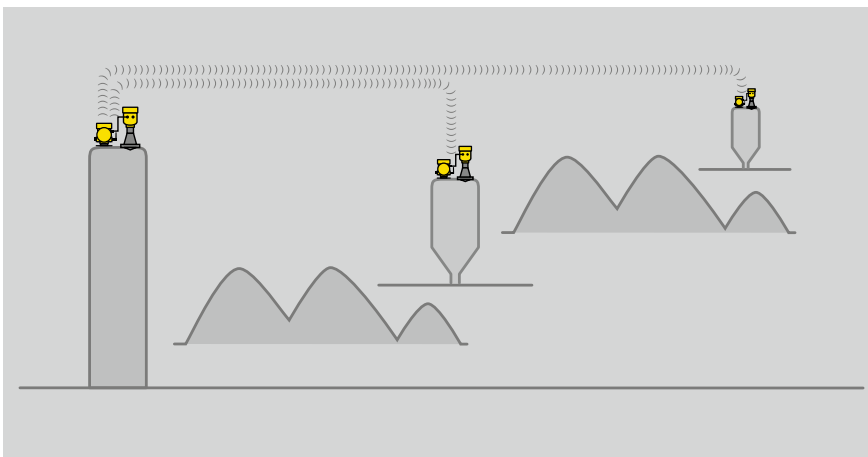
## Expansion of existing systems

- Simple imbedding of individual measuring points in existing system structures
- Bridging of obstacles like roads, railroad tracks or rivers
- Reduction of on-site service visits through remote diagnosis and teleservice



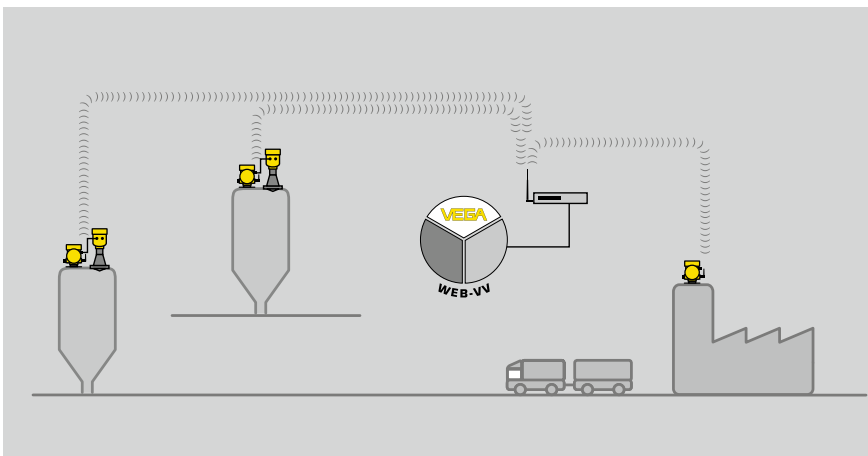


“PLICSMOBILE can be used independently of the existing infrastructure; for example, in plant and machinery systems or at changing deployment locations. The measurement data is also accessible anywhere in the world thanks to GSM/GPRS transmission.”



### Linking of remote system components

- Simple installation and commissioning without cost-intensive cabling runs
- Quick bridging of large distances
- Reduction of on-site service visits through remote diagnosis and teleservice



### Use in Vendor Managed Inventory (VMI)

- Quick and cost-effective solution for wireless measurement data transmission into a VMI system
- Direct linking of remote measuring points to the measurement data processing centre

# PLICSMOBILE – simple and self-sufficient



“Radio technology offers great flexibility and, in conjunction with efficient energy management, it is a clever solution for cost-effective and energy saving measurement data transmission. As an integral component of plics®, PLICSMOBILE is an excellent addition to VEGA’s line of instruments for wireless bridging of large distances.”

**The setup and commissioning of PLICSMOBILE is very simple, thanks to the worldwide use of the GSM/GPRS standard. The user can select the network provider best suited for his operating location. The familiar SIM card, that is also used for mobile telephones, contains all necessary network settings for radio operation.**

### **Radio transmission**

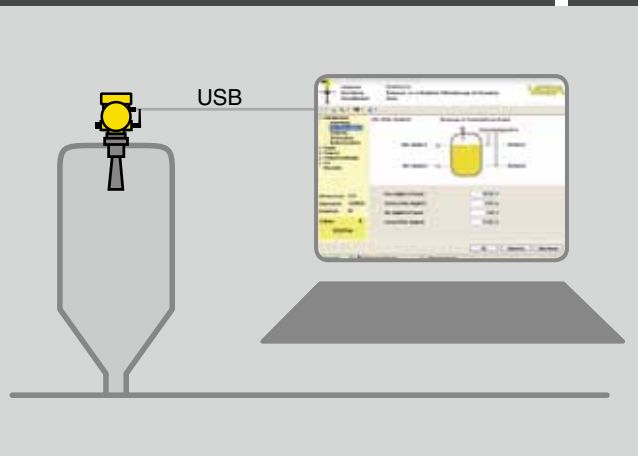
PLICSMOBILE uses the public mobile telephone network. The patch antenna is integrated inside the plastic housing versions or the externally mounted rod antenna (for optimized radio performance) guarantees reliable transmission of the measurement data. The system, based on quadband technology, is compatible with almost all frequencies and can be used worldwide. Additionally, the use of the GSM and GPRS standards makes simple connection to the Internet and thus also to the VEGA remote inventory system, WEB-VV possible.

### **Remote diagnosis and teleservice**

PLICSMOBILE is set up and put into operation via DTM and PACTware. For this purpose, the radio unit has an integrated USB interface that can be used to connect it directly to a laptop computer on site. However, to reduce servicing time and travel, the diagnosis and servicing of the system can also be carried out over the mobile network from anywhere in the world.

### **Energy supply via battery power**

The optionally integrated battery or rechargeable power pack in PLICSMOBILE T61 delivers the energy for the radio unit and the connected sensor. An intelligent energy management optimizes the operating time of the system through cyclic measurement and transmission of process values. PLICSMOBILE can thus adapt itself on the spot to the requirements of the application. This opens up a wide range of possible uses for the instrument.





VEGA Grieshaber KG  
Am Hohenstein 113  
77761 Schiltach  
Germany

Phone +49 7836 50-0  
Fax +49 7836 50-201  
E-mail [info@de.vega.com](mailto:info@de.vega.com)  
[www.vega.com](http://www.vega.com)

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