Remote Terminal Units – Positioning

**Large**

Modular RTU based on S7-400
For large applications with high demands on the performance.

**Medium**

Modular RTU based on S7-300 / S7-1500 / ET 200SP
For medium-sized applications with flexible configuration.

**Small**

Modular RTU based on S7-1200
For small and cost-effective applications.

**Compact RTU**

Low-Power RTU
For small applications with autonomous power supply.

*Expansion Flexibility*
Remote Terminal Unit (RTU) for monitoring of systems via mobile phone:

- Independent operation of self-sufficient power supply
- Robust design allows operation in -40°C to +70°C
- Reliable transmission of measured values via mobile phone
- Simple commissioning via integrated web server
- Fields of Application: water and waste management, agriculture and inventory monitoring
- Monitoring of pumping stations, water reservoirs, irrigations

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SIMATIC RTU3030C
Compact Remote Terminal Unit with a self-sufficient power supply
SIMATIC RTU3030C

Highlights

- Remote communication via cellular radio (2G / 3G)
- Communication:
  - SMS or e-mail
  - Event- or time-controlled
  - Telecontrol protocols: TeleControl Basic, DNP3, IEC 60870-5-104
- Security mechanisms:
  - OpenVPN tunnel
  - Encrypted e-mail
- Web Server for configuration and diagnostics
- Remote reading and setting of I/Os
- Data logging on memory card
- Wake-up through SMS or phone call
- Time Synchronization via:
  - NTP
  - Telecontrol protocol
  - Cellular network

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SIMATIC RTU3030C
Power Source Options

- Battery 1: Pure battery operation with 1 or 2 batteries
- Battery 2: Pure rechargeable battery operation with solar panel
- Battery recharged by solar panel: Mixed battery + rechargeable battery operation
- Plugged into standard power outlet: Plugged into standard power outlet, battery operation as backup
- Accu: Unspecified

12-24V DC
Typical Fields of Application

- Collection and monitoring of filling height / level / pressure / flow rate / temperature
- Detection of leaks or loss of water
- Monitoring of pumping stations, water towers / reservoirs
- Remote inventory monitoring of fill levels in tanks, silos
- Monitoring of agricultural or greenhouse irrigation systems
Use Case 1: Monitoring of Measuring Stations

**Task**
Monitoring of measuring stations at remote locations without connection to the power grid. If specified threshold values are exceeded, an alarm is to be sent.

**Solution**
The RTU3030C is operated without an external power supply and sends data to a control center via a telecontrol protocol. Power is, for example, provided by batteries. Should extraordinary events defined by the user occur (e.g., exceeding of threshold values), alarms / warnings / fault messages are sent with high priority to the control center or selected personnel by e-mail or SMS.

**Benefit**
Deployment location is not dependent on power grid availability. Reduction of the time and money required to monitor widely spread pants. Option of quickly responding to faults in the wide area network.