VERIBOX-MINI

ATEX data logger for Zone 1 and 2 with integrated 4G communication – remote meter reading, process and level monitoring

VERAUT

ATEX ZONE 1 + 2 | EX II 2G EX IB IIA T2 GB | 4G LTE WITH 3G/2G FALLBACK | BATTERY UP TO 6 YEARS

4 DI · 3 AI · 2 DO | RS232 · RS485 · TTL | FTP · MQTT · HTTP · SMS

Readings from the hazardous area – without a power connection

The **VERIBOX-MINI** is a battery-powered data logger with ATEX approval for Zone 1 and Zone 2. It reads meters, volume converters and sensors, stores the values locally and transmits them over the mobile network – with no power supply at the measuring point and no gateway.

Devices are connected through four digital inputs, three analogue inputs, encoder and serial interfaces; common volume converters are read directly. Two digital outputs handle switching and alarm functions on site.

Transmission runs over **4G LTE** with fallback to 3G and 2G. If the connection fails, the device buffers the values and retransmits them with their time stamp – the load profile stays complete.



Zone 1

Ex II 2G Ex ib IIA T2 Gb, intrinsically safe, type examination TÜV-A 04 ATEX 0001X. Zone 2 as well.

6 years

Battery life with daily transmission. Lithium primary cell, no mains or auxiliary power connection.

4G LTE

Automatic fallback to 3G UMTS and 2G GPRS. Transmission via FTP, MQTT, HTTP or SMS.

39,500+

Devices in service worldwide; the product family has been proven in the field for over 30 years.

Product features

- ATEX approval for Zone 1 and 2, type of protection intrinsic safety (Ex ib)
- Fully battery-powered – no mains or auxiliary power at the measuring point
- 4 digital inputs for pulse, reed, S0 and Namur
- 3 analogue inputs 0 – 10 V and 0 – 20 mA plus PT1000
- Encoder inputs for absolute and Grey code registers
- Serial reading via RS232, RS485 and TTL (Modbus RTU/ASCII)
- Direct protocol support for common volume converters (section 07)
- 2 digital outputs for switching and for alarm signalling on site
- Load profile at hourly intervals, buffer with automatic retransmission
- Limit, event and device alarms by SMS or to the backend
- Commissioning and diagnostics via LC display and 4-button menu
- Sealable enclosure for measuring points subject to metrological control

Typical applications

- **Gas networks** – volume converters at transfer, regulator and metering stations
- **Water supply** – remote meter reading, pressure and level measurement
- **Tank and vessel monitoring** – fill levels in hazardous areas
- **Process monitoring** – pressure, temperature and flow via analogue signals
- **Remote measuring points** – without power supply or network infrastructure
- **Industry and chemicals** – data acquisition in Zone 1 and Zone 2
- **Submetering** – pulse and meter data as the basis for billing
- **Fault signalling** – alarms by SMS to the standby service and to the backend

WORKS WITH VERILOG web portal – analysis, alarms, export · NB IoT BOX MINI – the same interfaces with NB-IoT instead of 4G · NB IoT BOX LITE – logger for pulse and encoder meters · VUSWM – ultrasonic water meter · HES, MDM and ERP systems – data handover

VERAUT – VERFAHRENS- und AUTOMATIONSTECHNIK GmbH · Derfflingerstrasse 14/C/3 · 4020 Linz · Austria
+43 732 386361-0 · info@veraut.com · www.veraut.com

Subject to technical change. The information describes the product status at the time of preparation and does not constitute warranted characteristics in a legal sense. For use in hazardous areas the EC type examination certificate and the operating instructions apply; binding delivery characteristics are given in the order confirmation.

01 Inputs and outputs

Digital inputs	4 × pulse, reed, S0 or Namur
Encoder	Absolute and Grey code registers, Namur
Analogue inputs	3 × 0 – 10 VDC and 0 – 20 mA
Temperature	PT1000
Serial interfaces	RS232, RS485 and TTL; Modbus RTU and ASCII
Digital outputs	2 × switching and alarm output

02 Data acquisition and alarms

Load profile	Hourly intervals, 24 values per day
Buffering	Local memory with automatic retransmission including time stamp
Alarms	Limit, event and device alarms
Signalling	SMS to the standby service and message to the backend
Switching	Two digital outputs, controllable on site

03 Explosion protection and approvals

Marking	Ex II 2G Ex ib IIA T2 Gb
Zones	Zone 1 and Zone 2
Type examination	TÜV-A 04 ATEX 0001X
Standards	EN 60079 (explosion protection), CE marking

04 Communication

Mobile network	4G LTE with automatic fallback to 3G UMTS and 2G GPRS/CSD
Protocols	FTP/FTPS, HTTP(S), MQTT and SMS
SIM	Supplied by VERAUT, national roaming across several network operators
Antenna	Internal; external connection via FME for difficult reception conditions
Send interval	Freely configurable, typically once per day
Backend	VERILOG web portal as well as HES, MDM and ERP systems; CSV and XML export

05 Power supply and environment

Power supply	Lithium primary cell, no mains connection required
Battery life	Up to 6 years with daily transmission
Operating temperature	−20 … +60 °C
Operating mode	Ultra-low-power, autonomous operation

06 Mechanics and operation

Dimensions	approx. 185 × 135 × 60 mm
Weight	approx. 680 g including battery
Mounting	Wall mounting; enclosure can be sealed
Operation	LC display with 4-button menu for commissioning and diagnostics

07 Volume converters and meters supported directly

The serial interface reads the device protocols of common volume converters directly – meter readings, load profiles and status information. Further devices on request.

- Honeywell / Elster EK260 and EK280
- Instromet 444 and 999
- RMG / Kamstrup TME-400
- SICK Flowsick
- ITRON Corus and Evo+
- Dresser MicroSeries
- American Meter iMeter
- Flonidan UniFlo
- Plum MacBat
- Elgas Elcor
- Gas, water and energy meters with pulse or encoder output
- Pressure, temperature and level sensors with an analogue signal

08 Platform, data retention and support

Operation	Servers of VERAUT GmbH in Linz, Austria, GDPR compliant; no public cloud
Tenant separation	Every customer sees only their own data
Data retention	5 years as standard, longer retention optional
Backup	Daily automatic backups, restore at system and data level
Encryption	TLS transport encryption; AES-256 of stored data optional
Support	German, English and Hungarian; response within 3 working days

09 From the field



VERIBOX-MINI on a gas line, enclosure sealed



Gas metering point: VERIBOX-MINI at the volume converter

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