



BATTERY ACCESSORIES

DATA LOGGERS

MACHINE DATA LOGGER CAN BUS ZTP

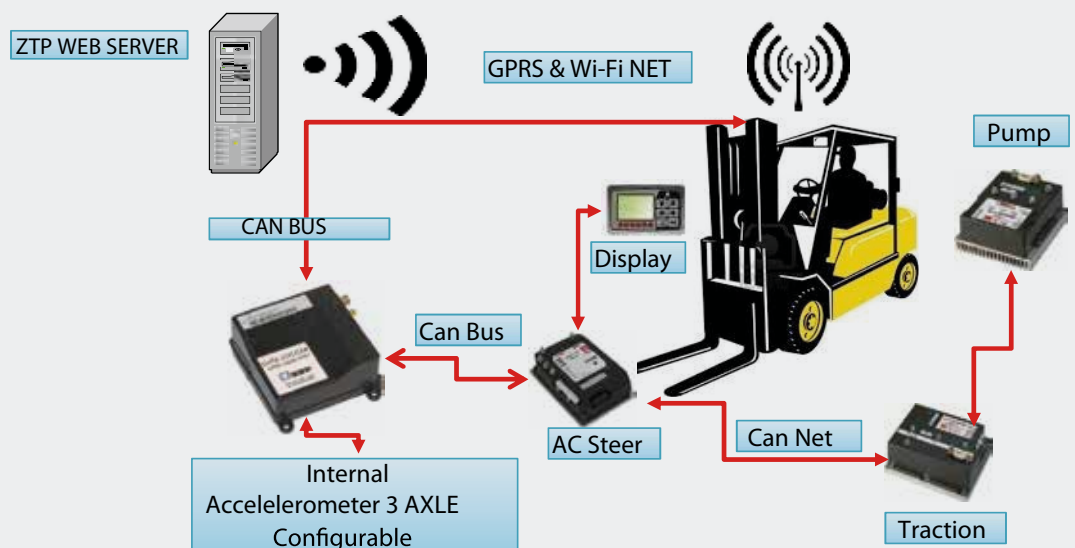
TECHNICAL FEATURES

- Multivoltage supply (24V - 96V battery; 12V - 24V I.C. MACH.)
- Data transmission by UMTS or Wi-Fi with GPS integrated
- Internal memory 64Mb
- Nr.2 CAN BUS port
- Nr.1 USB port
- Badge reader with transponder technology
- Current sensor (600A or 1000A)
- Function of remote control, with ZAPI controllers
- Timed block of the machine (function) in case of impact
- Impact alarm unlockable by safety badge
- Check of the sequence seat - safety belt
- Lock function with partial charge of the battery



IT CAN COLLECT AND TRANSMIT TO THE ZTP DATA CLOUD:

- The impact detected on horizontal axle (rear-fron.-lat.)
- The impact detected on vertical axle (hump of pump)
- Hours of work missing to the next maintenance
- Updated battery level percentage of every truck
- Updated working hours of every truck
- Technical message of maintenance
- Working statistics about:
Users / Machines / Traction/hydraulic / With/without load / Km runned / Top speed (to be implemented) / Speed before impact (to be implemented)
- Statistics of:
 - Battery high current
 - Low battery level
 - Low electrolyte level
 - Total battery charge
 - Partial battery charge
 - Battery use (A/H provided, A/H charged, cycles of charge etc...)
 - Battery charge by regeneration braking
 - Battery temperature



BATTERY DATA LOGGER

12-80V - WI-FI



BAT/47498

The data logger is connected to an industrial vehicle battery. It monitors the main battery parameters, recording all essential values then ensuring its utmost care and efficiency.

By external sensors (bidirectional current sensor, thermic sensor, liquid level sensor) all battery data can be read, recorded and broadcasted along working and charging cycle of the machine.

Collected data allows detecting battery status as well as introducing appropriate corrections to charging process insuring an extended battery lifetime.

By battery CAN Bus charger it is possible to modify real-time the charge algorithm.



Highly accurate State-of-Charge calculation based on battery voltage, current, temperature and time to maximize the machine uptime. Because the data logger is permanently connect to the battery, consistent, accurate and no-cut data collection is insured even along frequent battery shift.



The BFM device can be connected to the Battery Charger by the Can Bus port. The identity code of the battery can be transmitted to the Battery charger with data collected.



The peculiar battery data are automatically uploaded to ZTP cloud through Wi-Fi connectivity. The data logger may connect to local Wi-Fi otherwise dedicated access point.

TECHNICAL FEATURES

- Multivoltage supply (24V—96V)
- Dimensions: 164 x 46 x 38 (mm)
- 1 can bus port
- 1 USB port
- 2 digital inputs
- 4 analog inputs
- 2 digital out put (low curr.)
- Wi-Fi communication system integrated
- Bluetooth (opt.) - new -
- IP 68
- Internal memory 64Mb
- Button for manual data download

Supplied complete of:

- current sensor
- thermic sensor
- electrolyte level sensor

Reference	Machine Data logger	UMTS	WIFI	GPS
ZAP/G09118	ZTP DATA LOGGER CAN	✓		
ZAP/G09138	ZTP DATA LOGGER CAN	✓		✓
ZAP/G09150	ZTP DATA LOGGER CAN	✓	✓	
ZAP/G09139	ZTP DATA LOGGER CAN	✓	✓	✓
ZAP/G09123	ZTP DATA LOGGER CAN		✓	
ZAP/G09135	ZTP DATA LOGGER CAN OFFICE	✓		
ZAP/G09137	ZTP DATA LOGGER CAN OFFICE		✓	
ZAP/G09119	ZTP DATA LOGGER DIESEL CAN	✓		
ZAP/G09148	ZTP DATA LOGGER DIESEL CAN	✓		✓
ZAP/G09151	ZTP DATA LOGGER DIESEL CAN	✓	✓	
ZAP/G09145	ZTP DATA LOGGER DIESEL CAN		✓	
ZAP/G09146	ZTP DATA LOGGER DIESEL CAN		✓	✓
Accessories				
ZAP/XC99190	ZTP ICODE USER BADGE FOR LOG-IN/-OUT ON MACHINE			
ZAP/C99277	ZTP PC PROGRAMMER BADGE			



BATTERY ACCESSORIES

DATA LOGGERS

SMART.UP

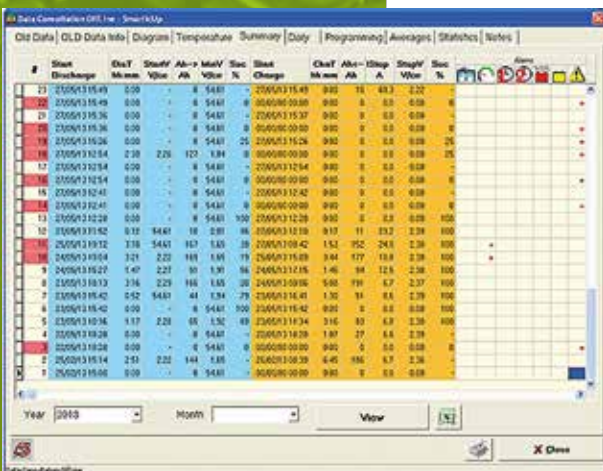
VERSION 24/36/48/72/80/96 VOLT

SmartUP is a device designed for the monitoring and control of lead batteries.

FEATURES

- Battery Monitoring devices
- Data Memory 400 working cycles
- For batteries 24/36/48/72/80/96V (12V available on request)
- Hall effect sensor
- Discharge time and capacity
- Battery faults and failures occurring during the charging process
- USB Flash memory for data downloading
- USB Cable for programming
- Possibility to connect with RS 485 & CAN BUS
- IP54 protection
- Working temperature -20° to +50°

SUMMARY



The data analysis can be done in an intuitive way. You can consult the "Monthly Summary" Tab.

On a table are shown all of the battery working cycles:

1. In blue the discharging phase
2. In orange the charging phase

The anomalies are indicated with red dots:

3. Low electrolyte level
4. Overdischarged Battery
5. Timer 1° phase
6. Timer 2° phase
7. Overrecharge
8. Low battery efficiency
9. Recharging not completed



▶ BAT/37099

100 ÷ 340 Ah

▶ BAT/37102

350 ÷ 740 Ah

▶ BAT/37100

750 ÷ 1500 Ah

TECHNICAL DATA

Stored working cycles	400
Current and voltage graphic data	11400 samples (47 days setting Samplng Time = 6min)
Stored daily data	Last 30 days

WORKING RANGE

Current size: BAT/37099	Suitable for batteries from 100Ah to 340Ah
Current size: BAT/37102	Suitable for batteries from 350Ah to 740Ah
Current size: BAT/37100	Suitable for batteries from 750Ah to 1500Ah

ELECTRICAL DATA

Power supply min ÷ max	18V ÷ 144V
Average absorbed power	< 1.5W
Internal protection	Fuse at the supply port
Working temperature	-20°C ÷ +50°C

PHYSICAL DATA

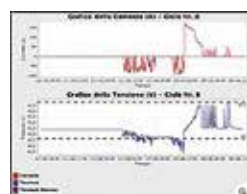
Mechanical size	60mm x 60mm x 130mm
Weight	200g
Protection grade	IP 54

SUMMARY



400 working cycles stored (Discharge/Recharge)

- Discharging time and capacity
- Recharging time and capacity
- Detailed working data
- Battery faults during the battery use and recharge



Battery voltage and current diagrams

- Working cycle Data e Time
- Zoom capability



SMART.UP plus

VERSION 24/36/48/72/80/96 VOLT

SmartUP is a device designed for the monitoring and control of lead batteries.



▶ **BAT/37104**

100 ÷ 340 Ah

▶ **BAT/37106**

350 ÷ 740 Ah

▶ **BAT/37108**

750 ÷ 1500 Ah

FEATURES

- Battery Monitoring devices
- Data Memory 400 working cycles
- For batteries 24/36/48/72/80/96V (12V available on request)
- Hall effect sensor
- Discharge time and capacity
- Battery faults and failures occurring during the charging process Temperature indication available on SMARTUP Plus Low electrolyte level available on SMARTUP Plus
- USB Flash memory for data downloading
- USB Cable for programming
- IP54 Protection
- Working temperature -20° to + 50°

OPTIONAL ACCESSORIES

- Temperature probe for immersion
- Electrolyte level probe.

TECHNICAL DATA

Stored working cycles	400
Current and voltage graphic data	11400 samples (47 days setting Sampling Time = 6min)
SmartKey data	454 events
Stored daily data	Last 30 days

WORKING RANGE

Current size: BAT/37104	Suitable for batteries from 100Ah to 340Ah
Current size: BAT/37106	Suitable for batteries from 350Ah to 740Ah
Current size: BAT/37108	Suitable for batteries from 750Ah to 1500Ah

ELECTRICAL DATA

Power supply min ÷ max	18V ÷ 144V
Average absorbed power	< 1.5W
Internal protection	Fuse at the supply port
Working temperature	-20°C ÷ +50°C

PHYSICAL DATA

Mechanical size	60mm x 60mm x 130mm
Weight	200g
Protection grade	IP 54

OPTIONALS



▶ **BAT/47501**

Electrolyte level probe



▶ **BAT/47502**

Temperature sensor



▶ **BAT/47499**

USB cable



▶ **BAT/47500**

USB Flash drive