



BATTERY ACCESSORIES

DATA LOGGERS

MACHINE DATA LOGGER CAN BUS ZTP

TECHNICAL FEATURES

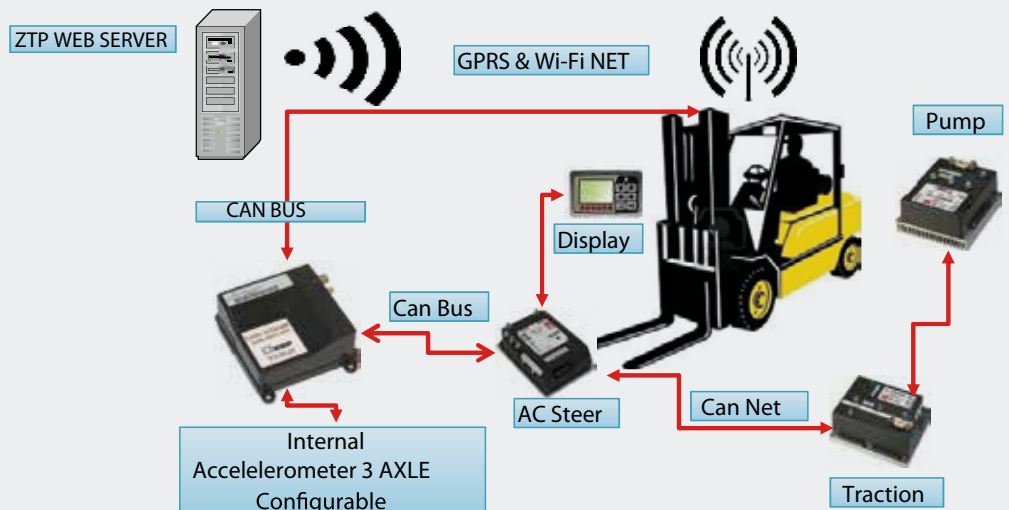
- Multivoltage supply (24V - 96V battery; 12V - 24V I.C. MACH.)
- Data transmission by UMTS or Wi-Fi with GPS integrated
- Internal memory 64Mb
- Nr.2 CAN BUS port
- Nr.1 USB port
- Badge reader with transponder technology
- Current sensor (600A or 1000A)
- Function of remote control, with ZAPI controllers
- 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

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 DATA LOGGER

12-80V - WI-FI



The ZTP-Drone battery datalogger can be programmed initially by WIFI, no interface needed.

Optional:

The datalogger can be programmed by PC with following tools:

- CAN To USB Converter (ZIV/Z-C13105)
- CAN Cable (BAT/49317)

The datalogger can be programmed by WIFI:

- Internet connection of your PC by hardware cable or UMTS
- Datalogger connection by WIFI

▶ **BAT/49206 (Universal)**

The ZTP-Drone battery datalogger is connected to an industrial battery. All important parameters are measured as the total voltage of the battery, the current, the temperature and the level of the electrolyte.

New : also the voltage in the middle of the battery is measured to detect a defective cell. All these data are stored internally for more than 1 year if needed. The ZTP-Drone battery has several LED's to allow visual warnings as the low level of the electrolyte.

▶ **BAT/49294 (Option)**

The BAT/49294 is a ZTP-Drone battery datalogger with a canbus-connection to control the ZIVAN charger. The datalogger will take over the control of the charger to allow an optimal charging profile in function of the battery (automatic choice of voltage, current, etc based on type of battery, temperature, SOC% ...)

TECHNICAL FEATURES

- Multivoltage 24-96V
- Dimensions 164x46x38 mm
- Input for voltage (+ ; - and middle voltage), current sensor (Hall), temperature sensor and electrolyte level sensor. The sensors are included
- Wifi communication
- Internal memory
- IP68

- Supplied complete of:
- current sensor
 - thermic sensor
 - electrolyte level sensor

When the ZTP-Drone datalogger detects a local Wifi network, the data is send to the ZTP-Cloud application. The ZTP-Drone datalogger doesn't need a continuous Wifi network, it's sufficient to have a local network at the charger room. If there is no local Wifi network or you don't want to use your local network, a local Wifi hotspot with 4G is a good alternative.

The free ZTP-Cloud application converts all data of all your dataloggers to one main screen. This dashboard gives an overall view of the use of the batteries of each department, you can find easily all fault messages (high temperature, wrong charger, defective cells but also opportunity charging ...) and shows all detailed information of each battery in simple graphs for fast analysis. You can export all data to an excel datasheet.

In case of remarks the ZTP-Cloud always points out some actions to solve the problem

Actions required

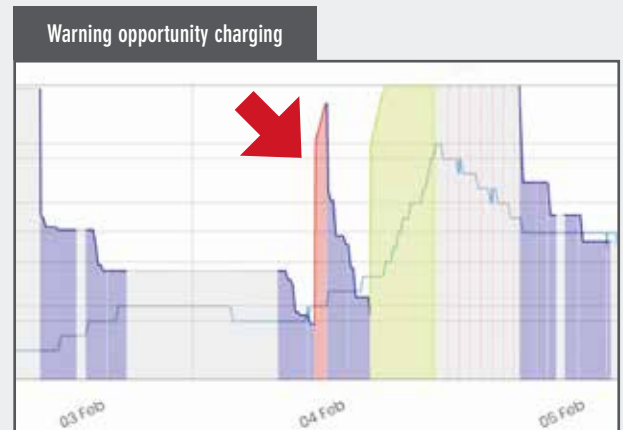
More than 35% of the cycles appear to be incomplete charges.

- Check the charging cycle is correct.
- Check the use of the battery, avoiding opportunity charging.

History

Alarm number	Cycle	Date	State	Alarm detail
17220	17275	Wednesday, February 28, 2020 10:14 PM	Warning	Warning high voltage
17981	17992	Wednesday, February 26, 2020 8:53 AM	Event	Event opportunity charge
17046	17650	Tuesday, February 25, 2020 7:17 PM	Warning	Warning high voltage
16635	17002	Tuesday, February 25, 2020 8:48 AM	Event	Event opportunity charge
16764	16884	Monday, February 24, 2020 8:45 AM	Event	Event opportunity charge

Simple graphics/interface





BATTERY ACCESSORIES

DATA LOGGERS

SMART.UP

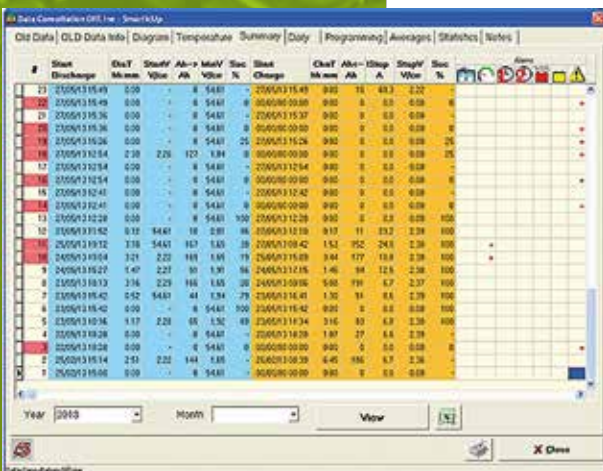
VERSION 24/36/48/72/80/96 VOLT

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 Sampling 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

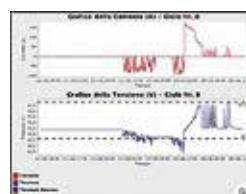
Mechanical size	60mm x 60mm x 130mm
Weight	200g
Protection grade	IP 54

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

OPTIONAL



▶ **BAT/47501**

Electrolyte level probe



▶ **BAT/47502**

Temperature sensor



▶ **BAT/47499**

USB cable



▶ **BAT/47500**

USB Flash drive