

**Battery Care the new Battery Charger Philosophy** Battery Charger and Battery Tester

# Charge & Testing





### Connect

The new ADELSystem platform communication ADELBus allows the connection of all components in a simple but very powerful way. A single communication protocol based on MODbus-RTU or CANbus technology depending on the application field. It allows to communicate with all devices provided by ADELSystem and to develop an independent system for electrical continuity. Monitoring and control of all parameters in the system, even from the other side of the world, by means of application tools and Cloud. ADELSystem allows you to implement very simple but sophisticated monitoring and control for your energy system and opens your mind to new ways to approach your applications.

### **Everything and more!**

- More efficiency for the battery thanks to continuous control over time.
- More monitoring features in the main connection nodes: input, output load, battery.
- Event logging: number of battery charging cycles, charge cycles completed, aborted charge cycles, Ah charged, charging time, total number of transitions stand-by /back-up etc...
- Event Management: checking the load output, shutdown management of PCs (UPS function), RESET management of a generic equipment.
- Flexibility of use: customization of the entire battery charging curve, battery type setting, setting boost voltage, absorption, float, etc... configuration as Batteries Charger, Enabling power supply function.



# **Multimediality**

### ADELVIEW SYSTEM

Comprehensive suite for remote monitoring and management of Adel System devices connected in an ADELBus network.

- ADELView System is a PC-based software developed to monitor in real time every important parameter of the Battery Chargers. A simple and intuitive user's interface allows monitoring of battery parameters, load output, temperature sensor, mains presence and all alarm and diagnostic flags. All features are displayed on a single screen.
- ADELView app, application for tablet, you can visualize in real time data stored on your own device.
- ADELView Cloud, a suite available to all customers. Main function as Data Logger for all parameters coming from the connected devices.
- ADELView Config: interface that allows application engineers to configure the system, customize battery charging curve, set alarm thresholds, configure parameters, Demo for customers.

Everything is available in free download on the Web page.

### **ADELVIEW GRAPHIC**

The Device is a robust multifunction display. It allows to monitor, configur and manage the Adel System's devices connected in an ADELBus network. It has a high-brightness and wide viewing-angle 3.5" TFT-LCD screen which guarantees an optimum visibility in any operating condition. The user interface is clear, intuitive and allows configuring and managing the connected devices in a quick and straightforward way. Moreover, using the on-board Ethernet interface it is possible to remotely manages the ADELBus network through Internet with a PC or a mobile device. At the same time, the Device can act as a gateway that implements standard protocols such as Modbus TCP/IP and SNMP.

From the Display you can manages all the connected devices allowing:

- Monitoring
- Configuration
- Alarms management
- Events program, i.e. programmed actions that are coordinated among the devices







### CONTROLLER

You can connect the Device directly to the GenSet Controller by protocol Can J1939.

### ADELBUS

ADELSystem network, interconnect all Devices in Canbus and Modbus.

### BATTERY

You can recharge and Test all Battery types: Open Lead Acid, Sealed Lead Acid, AGM Sealed Lead Acid, Gel, Ni/ Cd. Any Size is taken in Care.

#### **BATTERY TEMPERATURE**

By installing the battery temperature probe "RJ Temp", the charging voltage is automatically adapted to battery temperatures. When battery temperature is low, the charging voltage increases. Conversely, when battery temperature is high, charge voltage is decreased. Over charging and gassing are thus prevented. This will extend battery life, it is a part of Battery Care Philosophy.

#### **DPY353**

"DPY353" is a circular LED display device for panel mount. Simple and sturdy, it displays the current charge mode, state of charge and system diagnostics at a glance.



# **Charging & Testing**

### **CHARGING**

### One device for all battery types

All devices are suitable to charge most battery types thank to user selectable charging curves. They can charge open lead acid, sealed lead acid, Gel, Ni-Cd, Ni-MH, Li Ion batteries. It is possible to change or add other charging curves connecting the device to a portable PC. Charging mode is then completely automatic.

### **JUMPER POSITIONS / VPC:**



Open Lead Acid: Float 2.23V Boost 2.40V

(factory preset)

Sealed Lead Acid (1): 2 3

Float 2.25 Boost 2.40V

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AGM Sealed Lead Acid (2): Float 2.27 Boost 2.40V



Gel: Float 2.30V Boost 2.40V Ni/Cd LI-Ion

1 2		+ Battery	0 U		
3 4			P U		
5		–Ó Battery Fault	'		
Diagnosis					
<b>Battery Type</b>					
	•••				

Jumper for Battery Type Selection

### **Multi-Stage charging** Four charging modes

Automatic multi-stage operation and real time diagnostic allow fast recharge and recovery of deeply discharged batteries, adding value and reliability to the system hosting the Battery Charger device. The type of charging is Voltages stabilized and Current stabilized IUoU. Battery Charger feature four charging modes, identified by a flashing code on a LED.

- Recovery (5 Blinks / sec) able to recharge batteries even when their voltage is close to zero
- Boost Bulk (2 Blinks / sec)
- Absorption (1 Blinks / sec)
- Float (1 Blink / 2 sec)



### **Recovery charging**

Automatic multi-stage operation optimizes and adapt to battery status, even when the battery voltage is very low. CB can recharge batteries even when their voltage is close to zero. It allows recharge and complete recovery of flat batteries.



Typical charging curve for recovery of batteries with voltage close to zero.

### Adjustable charging current

The maximum battery charging current can be set from 10% to 100% of the device rated value.





### **TESTING**

### **Battery and Device Diagnosis**

All CB devices support the user during installation and operation. A LED flashing sequence code allows to discriminate among various possible faults.

#### ERROR CONDITIONS, LED FAULT ON AND LED DIAGNOSIS FLASHING WITH SEQUENCE OF:

1 flash = Reverse polarity, wrong battery voltage 2 flashes= Disconnected battery 3 flashes = Battery element in short circuit 4 flashes = Overload 5 flashes = Battery to be replaced

(Internal impedance Bad or Bad battery wire connection)



### **Battery Life Test**

For battery reliability during time. The device detects each two hours the internal Battery impedance, to avoid any possible risk of damages and grant a permanent and reliable battery connection on the device. The device, through inside battery detection circuit recognizes sulphated batteries or batteries with a shortcircuited or open cell.

Battery	1 2 4 4 4 4 4 4 4 4 4 4
MM	Battery Fault Diagnosis

### **Temperature Compensation**

In special application like Fire prevention System, you can recharge the battery also with temperature compensation charging function, for the best condition of your battery in high temperature environment.



### Diagnostic checks "during operation"

#### ACCIDENTAL DISCONNECTION CABLES

Detect accidental disconnection and immediately switches off output power.

#### BATTERY NOT CONNECTED

If the battery is not connected the battery output is disabled.

#### TEST OF WIRE CONNECTION IMPEDANCE

During Float charge the resistance on the battery connection is checked every 20 sec. This to detect if the cable connection has been properly made.

### BATTERY IN OPEN CIRCUIT OR SULPHATED

Every Two hours detect the internal impedance, while in Float charging mode.

### REVERSE POLARITY CHECK

If the battery is connected with inverted polarity, the device is automatically protected.

#### TEST OF BATTERY VOLTAGE CONNECTIONS

Appropriate voltage check, to prevent connection of wrong battery types.

### END OF CHARGE CHECK

When the battery is completely full, the device automatically switches to Float charging mode.

### CHECK FOR BATTERY CELLS IN SHORT CIRCUIT

Thanks to specific testing algorithms, the CB recognize batteries with cells in internal short circuit.



## **General Data**

### Maximum safety and protection

All Battery Charger ADELSystem are designed to provide safe operation and long power supply and battery life. The following protections are standard features:

- Outputs protected against short circuit and overload
- Outputs in conformity to SELV and PELV conditions
- High insulation between primary and secondary
- Protection against deep battery discharge
- Protection against reverse polarity connection

• Detection of batteries with wrong rated voltage All protections have automatic reset. No thermal fuse to be replaced.

### Technology

The Battery Charger range is based on two strategic know-how elements

### SWITCHING TECHNOLOGY

ADELSYSTEM has a 25 year experience in design of advanced stabilized switching technology power supplies. A power supply/battery charger unit based on this technology is much more efficient.

### **BATTERY CARE**

Unlike most other state-of-the-art battery chargers, the Battery Charger ADELSystem are equipped with complex algorithms which controls the charging process and enable several monitoring functions. The firmware implements the extended Adel battery care know-how, result of many years of experience in this field

## Robust construction and easy installation

All the units in the range have aluminium casing, DIN rail fastening clip and are light and compact. IP20 protection degree.

### Norms

In Conformity to: Safety EN IEC 62368-1, Emission: IEC 61000-6-4, Immunity: IEC 61000-6-2; EN60950 / UL1950; Electrical Safety EN54-4 Fire Detection and Fire Alarm Systems; EMC Directive; DIN41773 (Charging Cycle); UL1236; Directive, 2014/35/UE (Low Voltage); CE.

# Input - Output

### Wide input voltage range

Flexibility is given also by the wide range input voltage. All devices accept input voltage 115 / 230 / 277 Vac.



### One device for Output 12 or 24 Vdc

You can select the voltage between 12 or 24 Vdc just before installing the device in your panel (available on some products in the ADELSystem range).



### **Power Supply Function**

On some devices it is possible to enable the power supply function, to provide power also when the battery is disconnected from output battery output. Enabling by Jumper:





# **Connections & Monitoring**

### **Monitor Signals**

Clear definition of each system operation, via LED indications and Relay contacts:

#### CONTACT PORT SIGNALS, GALVANIC INSULATED

Mains or back-up conditions Battery or system fault Flat battery



### DISPLAY SIGNALS BY LED

Input: Mains or Back Up Battery or system Fault Low battery (capacity less than 30%) Type of Charging mode Autodiagnosis true through "blinking code"



### **Driver Comand**

Remote link for selection of Float/ Boost charging via RTCONN remote connections cable, it is possible to drive the devices from Boost to Float charge.

It is also possible to permanently put a jumper for Boost Charging.



### Accessories

Temperature sensor Probe, for ambient temperature compensation charging.



### Auxiliary Output "Aux 2 and Aux 3"

ADELBus network in Can J1939 or ModBus, for the connection to net ADELsystem devices and connection to external Controller ex. GenSet.





### 

Battery Care		12-24 Vdc		12 Vdc	
		115 - 230 - 277 Vac		115 - 230 - 277 Vac	
	Model Output	<b>CB12245A</b> 12 Vdc - 6A 24 Vdc - 5A	<b>CB122410A</b> 12 Vdc - 15A 24 Vdc - 10A	<b>CB123A</b> 12 Vdc - 3A	<b>CB6012A</b> 12 Vdc - 3A
	Nominal Input Voltage	115 - 230 - 277	115 - 230 - 277	115 - 230 - 277	115 - 230 - 277
	Frequency (Hz)	47- 63 Hz ± 6%	47- 63 Hz ± 6%	47- 63 Hz ± 6%	47- 63 Hz ± 6%
OUTPUT DATA	Output Vdc / IN	12 Vdc - 6A 24 Vdc - 5A (230 Vac) 24 Vdc - 4A (120 Vac)	12 Vdc - 15A 24 Vdc - 10A	12 Vdc - 3A	12 Vdc - 3A
	Efficiency (50% of IN)	>90%	>91%	>81%	>81%
	Over Load and Short-circuit protection	<ul> <li>✓</li> </ul>	V	V	<b>v</b>
	Overheating Thermal Protection	V	V	V	<b>v</b>
	Reverse polarity protection	¥	<ul> <li>✓</li> </ul>	V	<b>v</b>
	Power Supply Function	¥	<ul> <li>✓</li> </ul>	×	×
BATTERY CHARGER OUTPUT	Boost - Bulk charge (Typ. at IN)	14.4 Vdc (12 Vdc) 28.8 Vdc (24 Vdc)	14.4 Vdc (12 Vdc) 28.8 Vdc (24 Vdc)	14.4 Vdc	14.4 Vdc
	Max. Time Boost-Bulk charge (Typ. at IN)	15 hr	15 hr	15 hr	15 hr
	Min. Time Boost-Bulk charge (Typ. at IN)	4 min.	1 min.	70 min.	70 min.
	Float charge (Typ. at IN)	13.75 Vdc (12 Vdc) 27.50 Vdc (24 Vdc)	13.8 Vdc (12 Vdc) 27.6 Vdc (24 Vdc)	13.75 Vdc	13.75 Vdc
	Recovery Charge	3-8 Vdc (12 Vdc) 6-18 Vdc (24 Vdc)	2-10 Vdc (12 Vdc) 2-20 Vdc (24 Vdc)	2 - 7 Vdc	2 - 7 Vdc
	Charging current Limiting IN (ladj)	20 ÷ 100% / Ibatt	20 ÷ 100% / Ibatt	20 ÷ 100% / Ibatt	20 ÷ 100% / Ibatt
	Boost Charge Enabling	<b>v</b>	V	×	×
	Output Voltage Selection	12 / 24	12 / 24		
	Charging Curve				
SIGNAL OUTPUT	Mains or Backup Power	<b>v</b>	V	V	×
(RELAT)	Low Battery and Fault Battery	V	<ul> <li>V</li> </ul>	<ul> <li>✓</li> </ul>	V
CONNECTION & MONITO-	Temp. Compensation Charging probe	×	×	×	×
RING	Adel Bus	CB12245AJ: Can J1939	Modbus	×	×
CLIMATIC DATA	Ambient Temperature (operation)	-25 - +70 °C	-25 - +70 °C	-25 - +70 °C	-25-+70°C
	Derating T <sup>a</sup> > (In)	>40°C 2.5%	>50°C 2.5%	>50°C 2.5%	>50°C 2.5%
	Automatic Derating	¥	<ul> <li>V</li> </ul>	×	×
	Ambient Temperature Storage	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C	-40-+85 °C
	Humidity at 25 °C, no condensation	95% at 25°C	95% at 25°C	95% at 25°C	95% at 25°C
GENERAL DATA	Insulation Voltage (IN / OUT)	3000 Vac	3000 Vac	3000 Vac	3000 Vac
	Insulation Voltage (IN / PE)	1605 Vac	1605 Vac	1605 Vac	1605 Vac
	Insulation Voltage (OUT / PE)	500 Vac	500 Vac	500 Vac	500 Vac
	Protection Class (EN / IEC 60529)	IP 20	IP 20	IP 20	IP 20
	Reliability: MTBF IEC 61709	> 300 000 hr	> 300 000 hr	> 300 000 hr	> 300 000 hr
	Environment Pollution Degree	2	2	2	2
	Terminal Blocks Connection Screw Type	2,5 mm	6 mm (30-10 AWG) 2,5 mm (24-14 SWG)	2,5 mm	2,5 mm
	Dimensions (w-h-d) mm	45x110x105	115x115x135	45x110x105	45x100x100
	Safety Standard Approval		CE	CE	CE
OPTIONAL	ADELView Graphic	$\checkmark$	V	×	×
	ADELView System		V	×	×
	ADELBus (1) LIL 1020	<ul> <li>Image: A start of the start of</li></ul>	<ul> <li>Image: A second s</li></ul>	×	×
	(I) UL 1230				

(2) UL 60950



		<b>24 Vdc</b>			
		115 - 230 - 277 Vac			
<b>CB1210A</b> 12 Vdc - 10 A	<b>CB1235A</b> 12 Vdc - 35 A	<b>CB243A</b> 24 Vdc - 3A	<b>CB6024A</b> 24 Vdc - 3A	<b>CB2410AC</b> 24 Vdc - 10A	<b>CB2420A</b> 24 Vdc - 20A
115 - 230 - 277	115 - 230 - 277	115 - 230 - 277	115 - 230 - 277	115 - 230 - 277	115 - 230 - 277
47- 63 Hz ± 6%	47- 63 Hz ± 6%	47- 63 Hz ± 6%	47- 63 Hz ± 6%	47- 63 Hz ± 6%	47- 63 Hz ± 6%
12 Vdc - 10A	12 Vdc - 35A	24 Vdc - 3A	24 Vdc - 2A	24 Vdc - 10A	24 Vdc - 20A
>89%	>91%	>81%	>81%	>88%	>91%
V	<b>v</b>	V	<b>v</b>	V	<b>v</b>
V	¥	V	<b>v</b>	V	<b>v</b>
V	¥	V	¥	V	<b>v</b>
×	×	×	×	×	×
14.4 Vdc	14.4 Vdc	28.8 Vdc	28.8 Vdc	28.8 Vdc	28.8 Vdc
15 hr	15 hr	15 hr	15 hr	15 hr	15 hr
1 min.	1 min.	1 min.	1 min.	1 min.	1 min.
13.75 Vdc	13.75 Vdc	27.5 Vdc	27.5 Vdc	27.5 Vdc	27.5 Vdc
2 - 9 Vdc	2 - 9 Vdc	2 - 16 Vdc	2 - 16 Vdc	2 - 18 Vdc	2 - 7 Vdc
20 ÷ 100% / Ibatt	10 ÷ 100% / Ibatt	20 ÷ 100% / Ibatt	20 ÷ 100% / Ibatt	20 ÷ 100% / Ibatt	10 ÷ 100% / Ibatt
V	v	×	×	V	V
IUoUo, Automatic, 3	stage				
V	V	V	×	<b>v</b>	V
V	V	V	V	V	<b>v</b>
V	V	×	×	<ul> <li>✓</li> </ul>	V
×	ModBus	×	×	×	ModBus
-25 - +70 °C	-25 - +70 °C	-25 - +70 °C	-25 - +70 °C	-25 - +70 °C	-25 - +70 °C
>40°C 2.5%	>50°C 2.5%	>50°C 2.5%	>50°C 2.5%	>50°C 2.5%	>50°C 2.5%
>40 °C	<b>V</b>	×	×	×	<b>v</b>
-40 - +85 °C	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C
95% at 25°C	95% at 25°C	95% at 25°C	95% at 25°C	95% at 25°C	95% at 25°C
3000 Vac	3000 Vac	3000 Vac	3000 Vac	3000 Vac	3000 Vac
1605 Vac	1605 Vac	1605 Vac	1605 Vac	1605 Vac	1605 Vac
500 Vac	500 Vac	500 Vac	500 Vac	500 Vac	500 Vac
IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
> 300 000 hr	> 300 000 hr	> 300 000 hr	> 300 000 hr	> 300 000 hr	> 300 000 hr
2	2	2	2	2	2
2,5 mm	4 mm	2,5 mm	2,5 mm	2,5 mm	4 mm
65x115x135	150x115x135	45x110x105	45x110x105	100x115x135	150x115x135
CE c Sus <sup>2</sup>	CE c Sus <sup>2</sup>	CE	CE	CE c Sus <sup>2</sup>	CE c Sus <sup>2</sup>
×	V	×	×	×	V
×	×	×	×	×	×
×	V	×	×	×	V

Rattery Care		<b>12 Vdc</b>	30 Vdc	36 Vdc
Dat	lery Gare	48 Vdc	115 - 230 - 277 Vac	115 - 230 - 277 Vac
	Model	CB123A/48	CB304A	CB363A
	Output	12 Vdc - 3A	30 Vdc - 3A	36 Vdc - 3A
INPUT DATA	Nominal Input Voltage	35 - 72	115 - 230 - 277	115 - 230 - 277
	Frequency		47- 63 Hz ± 6%	47- 63 Hz ± 6%
OUTPUT DATA	Output Vdc / IN	12 Vdc - 3A	30 Vdc - 3A	36 Vdc - 3A
	Efficiency (50% of IN)	>81%	>81%	>81%
	Over Load and Short-circuit protection	<b>v</b>	<b>V</b>	<b>v</b>
	Overheating Thermal Protection	<b>v</b>	<b>V</b>	<b>v</b>
	Reverse polarity protection	<b>v</b>	<b>V</b>	<b>v</b>
	Power Supply Function	×	×	×
BATTERY CHARGER	Boost - Bulk charge (Typ. at IN)	14.4 Vdc	36 Vdc	43.2 Vdc
001201	Max. Time Boost-Bulk charge (Typ. at IN)	15 hr	15 hr	15 hr
	Min. Time Boost-Bulk charge (Typ. at IN)	70 min.	1 min.	1 min.
	Float charge (Typ. at IN)	13.75 Vdc	33.45 Vdc	40.14 Vdc
	Recovery Charge	2 - 7 Vdc	2 - 29 Vdc	2 - 29 Vdc
	Charging current Limiting IN (ladj)	20 ÷ 100% / Ibatt	20 ÷ 100% / Ibatt	20 ÷ 100% / Ibatt
	Boost Charge Enabling	×	×	×
	Output Voltage Selection	×	×	×
	Charging Curve	IUoUo, Automatic, 3 stage		
SIGNAL OUTPUT	Main or Backup Power	V	V	<b>v</b>
(RELAY)	Low Battery and Fault Battery	V	V	<b>v</b>
CONNECTION & MONITO-	Temp. Compensation Charging probe	×	×	×
RING	Adel Bus	×	×	×
CLIMATIC DATA	Ambient Temperature (operation)	-25 - +70 °C	-25 - +70 °C	-25 - +70 °C
	Derating $T^a > (In)$	>50°C 2.5%	>50°C 2.5%	>50°C 2.5%
	Automatic Derating	×	>40 °C	>40 °C
	Ambient Temperature Storage	-40 - +85 °C	-40 - +85 °C	-40 - +85 °C
	Humidity at 25 °C, no condensation	95% at 25°C	95% at 25°C	95% at 25°C
GENERAL DATA	Insulation Voltage (IN / OUT)	3000 Vac	3000 Vac	3000 Vac
	Insulation Voltage (IN / PE)	1605 Vac	1605 Vac	1605 Vac
	Insulation Voltage (OUT / PE)	500 Vac	500 Vac	500 Vac
	Protection Class (EN / IEC 60529)	IP 20	IP 20	IP 20
	Reliability: MTBF IEC 61709	> 300 000 hr	> 300 000 hr	> 300 000 hr
	Environment Pollution Degree	2	2	2
	Terminal Blocks Connection Screw Type	2,5 mm	2,5 mm	2,5 mm
	Dimensions (w-h-d) mm	45x110x105	45x110x105	45x110x105
	Safety Standard Approval	CE	CE	CE
OPTIONAL	ADELView Graphic	×	×	×
	ADELView System	×	×	×
	ADELBus	×	×	×



# **Adel View Graphic**



The DPY351 is a robust and versatile multifunction display that allows monitoring, configuring and managing the ADELSystem devices connected in an ADELBus network. It is equipped with a high-brightness and wide viewing-angle 3.5" TFT screen which guarantees an optimum visibility in any operating condition. The user interface is clear, intuitive and allows configuring and managing the connected devices in a quick and straightforward way. Moreover, using the on-board Ethernet interface it is possible to remotely manage the ADELBus network through Internet with a PC or a mobile device. At the same time, the DPY351 can act as a gateway that implements standard protocols such as Modbus TCP/IP and SNMP.

### What does it do?

From ADELBus network (ADELSystem network) manages all the connected devices allowing:

### Monitoring

- Event logging: number of battery charging cycles, charge cycles completed, aborted charge cycles, Ah charged, charging time, total number of transitions stand-by / back-up etc.
- Status of Charging Battery

### Configuration

- Charging curve,
- Battery type,
- Limitation charging Current
- Enabling power supply function
- Timer...

### Alarms and Recorder management

- Setting Alarm threshold
- Receive Message from other devices
- Event Record

### Events program, i.e. programmed actions

- Coordinated action among devices
- Program Event to other device to change the type of charging curve
- Checking the load output, shutdown management Reset.



### **PRODUCT RANGE**



DC UPS "ALL IN ONE" DC UPS "All In One"DC Power Back Up units. Multi-function devices: power supply, battery charger and back-up module in the same casing together with Adel Battery Care software.



POWER SUPPLY LOW INPUT VOLTAGE Switching power suppy for direct connection to secondary transformer. In 24 Vac. Out 12 - 24 - 48 Vdc Watt: 25 - 460.



AUXILIARY MODULE Decoupling Modules for redundancy applications. Electronic Fuses for Over Load output control, up to 4 cannel.



FLEX DIN rail Switching Power Supplies. Very compact in size, 150% power boost, wide input voltage range 110 - 230 - 400 - 500 Vac. Selectable output protection mode.



DC/DC CONVERTER Dc / Dc Converter, step Up and Step down. Input - Output isolated, low voltage. With or without DIN Rail.



SFP SAFETY POWER Power continuity solutions for alarm systems and fire alarms. Available as a fully enclosed device conforming with EN54.4 or as a component to be integrated in other instrumentation.



D-FLEX

High efficiency Power Supply in Mini Size Dimension, for all kind of small power request in a flat control panel. For Domotic, Domestic and Industrial field.



INTERFACES Wide range of passive interfaces units for Input and Output connections, for PLC and CNC machine.



POWER VIEW GRAPHIC Robust Display wide viewingangle 3.5" TFT. ADELBus network. Gateway for Ethernet in Modbus TCP and SNMP.



The Best generation of Battery Charger with 4 level of charge, Auto Diagnosis system inside. One product for all battery types.



BATTERY BANK Power Storage Devices, for connection to DC Ups Products. Battery size: 1.2; 3; 7,2; 12 Ah, 24 Vdc.



#### ADEL VIEW SYSTEM Suite for remote monitoring and management devices connected in an ADELBus network. Features: PC software; iOS and Android; Cloud latform; Advanced features for installation and demonstration purposes.

### INNOVATION AND MULTIMEDIALITY

ADELSystem continues to implement its offering of innovative and functional products as a company specializing in the electrical continuity for the DIN Rail field. The wide range of available products is now involved in the Interconnection field through the ADELBus protocol implemented in the main devices of our products range. Every new device developed comes with ADELBus inside. The Power Continuity products ADELSystem are enhanced by Multimedia devices like Display and Software APPlications for the new way towards Industry 4.0.

These, are innovative solutions has been developed by the ADELSystem R&D team for the expert electrical designer and the user who need to change their point of view in the search of innovation. ADELBus, the ADELViewsystem and the ADELViewgraphic are the connecting elements to DC Ups, Power Supply and Battery Charger for catching all of the parameters inside the device. All of this, to involve you into a new evolution of Actions both for today and next-future life.





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