EFFEKTA®
innovating power.

Power supply
for the lift industry

- UPS/AC Power supplies
- DC Power supplies
- Batteries
- Lithium Batteries

effekta.com

Company

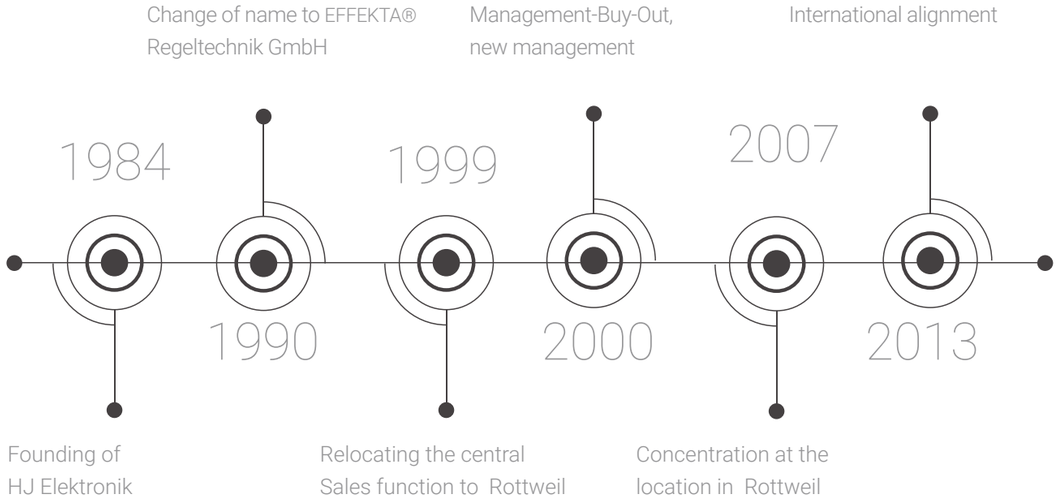
What started out in 1984 as a small company by the name of HJ Elektronik is now one of the leading manufacturers of uninterruptible power supply (UPS) units: With around 80 employees, we work on a daily basis to provide ever better products and services. Starting with uninterruptible power supply units as our core product, we have extended our portfolio over the years - expanding our expertise at the same time: As well as UPS units in the office sector and for mounting in 19“ racks our product range now also includes rectifiers and inverters for solar power generation as well as power packs, accumulators and battery monitoring systems.

Special units

Our commitment is embodied in more than innovative products in meaningful configurations for the data processing market: We also deliver conviction on a significant scale in industrial applications and in other sensitive areas. We provide companies such as Berliner Verkehrsbetriebe, Daimler AG, Siemens AG, Deutsche Telekom AG, BASF AG, Bayer AG (Leverkusen) or the German Aerospace Institute [Deutsches Institut für Luft- und Raumfahrt] with bespoke uninterruptible power supply units. This enables our products to provide a vast array of devices, some of them extremely sensitive, with very reliable protection.

Service

The high performance standard of our services is as central to us as the quality of our products: Maintenance, repair and emergency service for all of our products and systems comprise a firm part of what we offer – regardless of whether the order is for a small UPS unit for the office or for a bespoke system in a sensitive industrial environment. EFFEKTA has always defined service with this motto: You can depend upon us.



Drive on despite **blackout!**

USV Lift 4500

– universal, compact, powerful!

EFFEKTA®

one product, many advantages:

- Continues without stopping to the next floor in the event of a power failure
- Enough power for drive, control system, emergencycall function, emergency lighting, cabin fan, cabin lighting
- Just one rechargeable battery for all functions
- 10 year service life expectation for the rechargeable lithium battery
- No more sudden braking to a complete stop
- Low maintenance overhead because only 1 rechargeable battery in the system
- Optimized for installation on the shaft wall
- High-quality battery monitoring
- Elevator cabin functions remain available for a long time, even when stranded after failure of the elevator drive system
- Additionally 24 VDC-output
- Able to operate at temperatures of up to 40°C

UPS Lift 4500

For elevator industry; 3 kW with lithium batteries

EFFEKTA has developed a special UPS for the lift industry to accommodate the special requests of this industry.
The UPS Lift 4500 provides an ideal sinusoidal output voltage with a power factor of 1.0.

Details

USV Lift 4500 ohne Kabelschutzabdeckungen

USV-Unterseite mit Anschlüssen und „intelligent slot“

Characteristics

- UPS classification VFI-SS-111 according to IEC 62040-3
- Online double conversion with sinusoidal output voltage
- Switchable to ECO mode
- Wide input voltage range
- Incl. communication slot
- 36 month warranty

EFFEKTA®

Specifications

Lift 4500		
Power	Nominal power in VA/Watt	3000/3000
Autonomy time	150/100/70/50/20 % load	30 sec. / 5 sec. / 13 sec. / 20 sec. / 37 sec.
Technology	Online double conversion	VFI-SS-111 according to IEC 62040-3
Phases	Input / Output	1-phase / 1-phase
Input	Nominal voltage	220, 230, 240 VAC
	Input voltage range	160-300 VAC, ±5%
	Input frequency range	40-70 Hz (automatically sensing)
Output AC	Output voltage	220, 230, 240 VAC
	Voltage tolerance	±1%
	Frequency range	47~53 Hz (@ 50 Hz) or 57~63 Hz (@ 60 Hz)
	Switchover time AC <–> Bypass Switchover time Inverter <–> Bypass	0 ms 4 ms (typical)
	Overload capability @ normal mode (<40°C)	105~110 % for 10 mins, 110~130 % for 1 min, 130~150 % for 30 sec, >150 % immediate changeover to bypass
	Overload capability @ battery mode (<40°C)	105~110 % after 10 minutes shutdown, 110~130 % after 1 minute shutdown, 130~150 % after 30 seconds shutdown,>150 % immediate shutdown
	Voltage waveform	sinusoidal
Output DC	Output voltage	24 VDC
	Output power	2A
Efficiency	Normal mode	>92 %
	ECO-mode	>96 %
Lithium Battery	Type	Lithium-Iron-Phosphate (LiFePo4)
	Nominal voltage	96 VDC
	Nominal capacity	6 Ah
	Cycle life time	>2000 at 80 % DoD
	Max. charging current	2 A
	BMS / Monitoring	Integrated battery management system
Communication	Interfaces	EPO, (USB / RS232 / CAN optional)
	Slot for communication cards	Mini-Slot for optional SNMP or relay card
	Display	LCD and LED
Dimensions / Weight	(H x W x D in mm)	670 x 508 x 93
	kg	20
	Protection class	IP21
Connections	Input	hardwired
	Output	hardwired
Environmental conditions	Temperature	0~40° C
	Humidity	20~90 % (not condensing)
	Operation noise	<44 dB (1 m)
Standards	Security	IEC/EN62040-1, IEC/EN60950-1
	EMC	IEC/EN62040-2 class C2, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8
	Approvals	CE

MTD Industry
UPS for Elevators

- **Automatic bypass**
- **Separately removable battery holder**
- **Messages via relay:** Bypass status
- **Messages via optocoupler:** Battery LOW, UPS fault
- **Remote control functions**

EFFEKTA®

Energy-saving UPS for elevators in the Climate House

Energy efficiency – not just a question of standards
OSMA elevators, a company with a rich tradition, was immediately faced by two basic requirements to satisfy in its project at ‚Climate House Bremerhaven 8° East'. The objective not only entailed implementing the energy efficiency stipulations of VDI standard 4707 for no fewer than seven elevators, but also to provide autonomous power to stationary elevators in a way that entails the lowest possible level of power consumption. There was also a question of resource conservation - a key promotional claim of Climate House 8° East in Bremerhaven - the aim being to build an energy-efficient structure that delivers a low environmental impact.

In keeping with the priority status of our customer OSMA this project also involved satisfying the quality and innovation standards of this leading elevator manufacturer: This family-owned company has about 650 payroll staff across its 18 locations in Germany. It produces around 1.200 elevators a year and provides maintenance cover to keep 20.000 existing elevator systems running safely and without any problems. There is good reason why the name OSMA is now synonymous with optimum technology, prize-winning design and great energy efficiency. OSMA is therefore an ideal partner for EFFEKTA to collaborate with, further enhancing its great reputation with new, intelligent UPS concepts.

To achieve tangible reductions in the energy needs of a stationary elevator, the UPS and/or its consumption of control current are an important factor. Consumption levels of 30 Watts or more are fairly common for a UPS and, given the tight limits governing the efficiency classes for elevators, this plays an altogether important role alongside factors such as control cabin lighting, drive control, displays and other components.

UPS contribution to energy efficiency
Through a consistent policy of optimization, EFFEKTA succeeded with its ‚MTD Industry' version of UPS to develop an uninterruptible power supply system with a very low level of autonomous power consumption, positioning it by as much as 70% below the standard power consumption level of standard UPS units on the market. Just how decisive this contribution to cost-savings can be in the classification of the energy efficiency of an elevator becomes clear when you take a look at the relatively tight template limits that define this. An elevator in efficiency class A must consume less than 50 Watts when stationary. For efficiency class B, maximum power consumption is set at 100 Watts – so a reduction of 20 Watts can constitute an important factor in obtaining a better classification.

Having said that, with MTD Industry, EFFEKTA has done more than achieve maximum efficiency in terms of power consumption. The entire design of the UPS opens up opportunities for conserving resources. For example, the control unit and batteries on this UPS are housed separately. This simple plug-in design makes it easier to replace the battery without the need to replace the electronic control unit at the same time. The replaced battery packs are reconditioned in the plant and are then capable for further operation.

EFFEKTA®

MTD Industry
UPS for elevators

The MTD industry for lifts is an EFFEKTA special production. This line-interactive UPS is specifically designed for the requirements of elevator controls.

The low internal power consumption of less than 10 watts helps operators of elevators to achieve a more favorable energy rating.

The batteries are housed in an external enclosure and can be replaced during operation. The entire UPS is extremely compact and prepared for wall mounting.

Details

Front view

Rear view

Battery (on the left) and USV (on the right)

Characteristics

- UPS classification VI-SY-333 (IEC 62040-3)
- Output Power: 1200VA / 800W
- Input voltage: 230 (162-290) VAC, 50Hz
- Output modified sine
- Autonomy time: about 3 minutes at 80% load
- Batteries: 2 x 12V / 9Ah
- Maintenance-free sealed lead-acid batteries

Special features

- Automatic bypass
- Separately removable battery holder
- Messages via relay: Bypass status
- Messages via optocoupler: Battery LOW UPS fault
- Programmable functions on input: External On/Off, Test mode

Specifications

MTD industry - UPS for elevators			
Power		Power in VA	1200
		Power in W	800
Autonomy time		80% load	3min.
		50% load	12min.
Input		Input voltage range	230VAC / 162 – 290VAC
		Input frequency range	50Hz
		Boost (AVR) switching threshold	207VAC ± 5% / 213VAC ± 5%
		Undervoltage warning value llen	170VAC ± 5% / 176VAC ± 5%
		Buck (AVR) switching threshold	253VAC ± 5% / 247VAC ± 5%
		Overvoltage warning value	280VAC ± 5% / 274VAC ± 5%
Output		Output voltage	230VAC
		Voltage tolerance (Battery Mode)	± 10% RMS
	Frequency-tolerance	Synchronisation	45-55Hz
		Battery Mode	50 +1Hz
		Power factor	0.9
		Voltage form	Modified sine wave
		Efficiency	>97% (Normal mode, fully charched batteries)
DC start-up		Black start	Yes
Switch time		typical	2 ~ 6msec.
Battery		Nominal voltage	2 x 12VDC
		Blocks x nominal capacity/block	2 x 12VDC, 9Ah
		Type	Maintenance free sealed lead-acid battery
		Life time	5 years, (depends on environment) optional 10 years
Display		LED	UPS status: Alert, battery fault, battery mode, normal mode
Interface			Relay contacts: Battery low, fault, external On/Off, normal/battery mode, bypass mode, test mode
Environment		Temperature	0°C – 40°C
		Humidity	0-95% non-condensing
		Operating height	0 – 1500m
		Acoustic Noise	< 50dB @ 1m
Mechanic		Casing	Steel casing for wall mounting
		Protection class	IP 20
	Dimensi-ons	UPS	200 x 155 x 280mm (D x W x H)
		Batterypack	180 x 155 x 160mm (D x W x H)
	Weight	UPS	5.65kg
		Batterypack max.	6.95kg
Terminals		Input	1 x IEC (10A)
		Output	1 x IEC (10A)
Safety/protection		Standards	EN 62040-1
		EMC	EN 62040-2 class C2
		Norms	CE

Also available with lithium batteries

lithium

USV MXO RM 1000

The MXO RM 1000 UPS with removable dust filter can also be used in harsh environmental conditions such as in elevator shafts.

It is an online continuous converter with a high power factor of 0.9 and a high efficiency of over 90%, which can also be switched to an even more economical ECO mode.

Specially developed for the lift industry, the MXO RM 1000 offers programmable outputs as standard as well as a connection for an emergency off switch (EPO).

Detail views

MXO RM 1000 with dust filter removed

MXO RM 1000 rear side

Options for advanced communication and highest availability:

- SNMP / web or relay card for monitoring in network environments
- Additional battery modules to increase the autonomy time to several hours
- External manual bypass for scheduled UPS maintenance or UPS replacement without shutdown
- Special designs available for industrial applications (connections / special housings, etc.)

EFFEKTA®

Characteristics

- UPS classification VFI-SS-111 according to IEC 62040-3
- Extraordinary compact design
- UPS Software for all common operating systems
- Incl. RS232 / USB and expansion slot

Special Features

- Excellent power factor of 1.0
- Rack Tower Design: Can be used as a standalone unit as well as a 19”-rack mount unit
- Low noise due to intelligent fan control
- LC-Display
- Removable dust filter
- Connection for emergency power off switch (EPO)
- Programmable outputs

Specifications

Model		MXO RM 1000
Power	Power in VA/W	1000/900
Autonomy time	Standardbestückung in Min.	4/13
	100/50% load	on request
(cos. phi 0,7)	With internal batteries in minutes	VFI-SS-111 according to IEC 62040-3
	Longer autonomy times	1-phase / 1-phase
Technology	Online double conversion	220/230/240 VAC
	Phases	140-290 VAC
	Input	50/60 Hz (auto sensing)
	Input voltage range	220/230/240 VAC
	Input frequency range	±1%
	Output	50 Hz / 60 Hz ± 1 Hz
	Voltage regulation	none
	Frequency range	max. 10 ms
	Transfer time	< 125% für 10 Min., < 150% für 30 Sek.
	Transfer time ECO-mode	Sine wave
	Overload capability	max. 90%
	Voltage form	max. 97%
Efficiency	Normal mode	maintenance free lead-acid battery
	ECO mode	5 years (optional 10 years)
	Battery	36 VDC
	Design life	app. 4 hours to 90% capacity depending on the equipment
	Nominal DC-voltage	RS232, USB, EPO
	Recharging time	Optional for SNMP-card
	Communication	LC-Display and LED
	Slot for further communication cards	2HE x 438 x 410
	Display	14,2
	Dimensions /	IP20 (optional higher protection class possible)
Weight	(HxWxD in mm)	IEC (10A)
	Weight in kg	8 x IEC C13 (10A)
	Protection	0°C – 40°C, 20°C recommended
	Terminals	0-90 % RH @ 0- 40°C (non condensing)
	Output	50 dB (A)@1m
Environmental	Sicherheit	EN 62040-1
	conditions	EN 62040-2
	Humidity	CE
	Acoustic noise	
Standards	Safety	
	EMC	
	Approval	

EFFEKTA®

Line-Interactive
MTX series

- **Output rating 800 - 3000 VA** – 5 power levels
- **Line-Interactive technology** for device protection
- **Power factor of 0.9** for optimum performance
- **Quiet operation** for an office environment
- **Battery extensions** – for greater autonomy

Versatile, safe and quiet

The MTX range sets new standards with an efficiency rating of 97 percent, a sine output, an input voltage range of 162 to 290 VAC and scope for remote shut-down via EPO contact. The UPS units in this range are all equipped with line-interactive technology and are very efficient, with a power factor of 0.9.

All devices in the MTX range can be connected up to as many as eight power consumers, protecting them reliably from undervoltage or overvoltage, even when operated in mains power mode.

Photos from left to right: Rear view MTX 800 /1100, 1500, 2000, 3000 VA (Models MTX 800 and 1100 share the same design shape)

Everything under control

The integrated inverter protects devices from overvoltage by limiting the output voltage. It also delivers sinusoidal voltage. This ensures that sensitive devices can continue to operate perfectly. Thanks to integrated automatic self tests, early detection of errors and hot-swap capability, a UPS in the MTX range is the ideal way to protect equipment reliably. All important functions and the status of batteries are shown the integrated, illuminated and clearly legible LC display.

Communicative & expandable

It is no problem at all to read out operating data and to program an MTX UPS via the standard RS-232 and USB port. The management software provided for all commonly used operating systems enable each of the eight UPS power outputs to be programmed individually. With the optional SNMP / relay card, an MTX UPS can also be incorporated in a network, and can be queried remotely. To provide uninterruptible power for even longer, you can extend the capacity of your MTX UPS units by adding external battery packs, available as optional extras.

Specifications

- Excellent power factor of 0.9
- Equiped with RS-232 and USB port as standard
- ECO mode (The ECO mode is enabled as soon as the batteries are charged)
- Intelligent battery test with a display for any battery replacement that may be needed
- Quiet and therefore ideally suited for office environments
- Programmable outputs
- External battery packs can be added to all models to extend their operating period
- User-friendly LCD display
- Early detection of faults (9 warnings / 12 error messages)

Characteristics

- UPS Classification VFI-SS-311 (IEC 62040-3)
- Line-interactive technology
- Additional input voltage range, sine wave output
- High efficiency (> 97%)
- Automatic restart when mains power is restored
- Cold start function (starting in battery mode)
- Hot-Swap (Batteries can be replaced while the system is operating)
- Automatic frequency detection
- Slot for another optional adapter: relay contacts or SNMP card
- Management software for all common OS
- 36 months warranty

LC display with easy-to-access information about the central functions of the UPS unit

EFFEKTA®

Specifications

Company reserves the right to make errors and changes.

MTX		800	1100	1500	2000	3000
Power	Power in VA	800	1100	1500	2000	3000
	Power in W	720	990	1350	1800	2700
Autonomy time 100% / 50% load (cos. phi 0,7)	With internal batteries in minutes	7 / 17	5 / 12	7 / 17	5 / 12	6 / 14
	Internal batteries + 1 x battery pack	19 / 45	13 / 31	25 / 60	19 / 45	20 / 48
	Longer autonomy times on request					
Technology	Line-Interactive	VI-SS-311 in accordance with IEC 62040-3				
Phase	Input / Output	1-phase / 1-phase				
Input	Nominal voltage	208/220/230/240 VAC				
	Input voltage range	170-280 VAC				
	Input frequency range	50/60 Hz (Auto-Sensing)				
Output	Output voltage	208/220/230/240 VAC				
	Voltage Regulation	±1,5%				
	Frequency Range	50 Hz or 60 Hz ± 1 Hz				
	Transfer time	2-6 ms typical / 10 ms max.				
	Overload Capability (Line Mode)	< 120% 5 min.				
	Overload Capability (Battery Mode)	< 110% 1 min.				
	Voltage form	sine wave				
Efficiency	Utility mode	max. 97%				
Battery	Type	Maintenance free lead-acid battery				
	Life time	5 years, optional 10 years				
	Charging current (max)	1,5 A				
	Hot-Swappable	ja				
	Recharging time	ca. 6 h / 90% capacity				
Communication	Interface	RS232, USB, EPO				
	Slot for further communication cards	Optional relay contacts or SNMP card				
	Display	Multi language LC-Display				
Dimensions / Weight	Dimensions UPS (H x W x D in mm)	240 x 145 x 376		240 x 145 x 484		338 x 190 x 427
	Dimensions battery pack (HxBxT in mm) optional	240 x 145 x 397				338 x 190 x 416
	Weight (UPS)	12,7 kg	13,1 kg	20,4 kg	21,6 kg	30,5 kg
	Weight (battery pack)	depending on the quantity of batteries				
	Protection	IP 20 (optionally higher protection class possible)				
Terminals	Input	IEC (10 A)			IEC (16 A)	
	Output	8 x IEC C13 (10 A)				8xIEC C13 10A 1xIEC C19 16A
Environmental conditions	Temperature	0°C – 40°C, 20°C recommended				
	Humidity	0-90 % RH @ 0- 40°C (non condensing)				
	Acoustic Noise	Normal mode nearly noiseless <45 dB Battery-mode / charging < 55dB				
Safety / Enclosure	Safety	EN 62040-1				
	EMC	EN 62040-2, class C2				
	Certifications	CE				

EFFEKTA®

Online double conversion

MCI series

The MCI is EFFEKTA®'s newest online double-conversion UPS with power factor 0.9. It is equipped with an electronic bypass and is to be applied with supersensitive and critical applications like servers, workstations, measurement technology or industrial plants

For full control and monitoring, it provides each one USB and RS232 interface and can be supplemented via its slot by optional communication cards.

All models can be extended in the autonomy time through external battery packs. The XL versions increase this possibility by larger chargers.

Rear view

MCI 700 / 1000

MCI 2000

MCI 3000

Options for extended communication and maximum availability:

- SNMP/web or relay card for monitoring in network environments
- Additional battery modules to provide an uninterruptible power supply for up to several hours
- External manual bypass for planned UPS maintenance work or replacement of the UPS unit without shutting it down
- Extended warranty arrangements

Characteristics

- UPS Classification VFI-SS-111 (IEC 62040-3)
- Online double-conversion
- All models with expandable batteries
- XL version with stronger charger
- Wide input voltage range (110-300VAC)
- Excellent power factor of 0.9
- Microprocessor controlled
- Automatic frequency detection
- With sinusoidal output switchable to ECO mode
- USB and RS232 as standard
- Slot for another optional adapter
- Management software for all popular OS
- 24 months' warranty

Specifications

MCI		700	1000	2000	3000
Power	Power in VA	700	1000	2000	3000
	Power in W	630	900	1800	2700
Autonomy time 100% / 50% load (cos. phi 0,7)	With internal batteries in minutes	11 / 25	7 / 15	7 / 15	6 / 13
	Internal batteries + 1 x battery pack	40 / 84	26 / 55	35 / 74	23 / 48
	Longer autonomy times on request (XL)				
Technology	Online double conversion	VFI-SS-111 in accordance with IEC 62040-3			
Phase	Input / Output	1-phase / 1-phase			
Input	Nominal voltage	220/230/240 VAC			
	Input voltage range	110-300 VAC			
	Input frequency range	50/60 Hz (Auto-Sensing)			
Output	Output voltage	220/230/240 VAC			
	Voltage Regulation	±2%			
	Frequency Range	50 Hz or 60 Hz ± 1 Hz			
	Transfer time	none			
	Overload Capability (Line Mode)	< 110% für 1 min. / < 150% für 30 sec.			
	Voltage form	sine wave			
Efficiency	ECO mode	max. 94 %			
Battery	Type	Maintenance free lead-acid battery			
	Life time	5 years, optional 10 years			
	Charging current (max)	1,5 A Standard / 8 A XL-Version			
	Recharging time	ca. 6 h / 90% capacity / XL depending on the equipment			
Communication	Interface	RS232, USB, EPO			
	Slot for further communication cards	Optional relay contacts or SNMP card			
	Display	LC-Display			
Dimensions / Weight	Dimensions (H x W x D in mm)	220 x 145 x 400	347 x 192 x 460		
	Dimensions of battery extension (HxBxT in mm) optional	220 x 145 x 400	347 x 192 x 460		
	Weight USV (Standard / XL)	13 kg / 7 kg	31 kg / 13 kg		
	Weight battery pack	depending on the quantity of batteries			
	Protection	IP 20 (optionally higher protection class possible)			
Terminals	Input	IEC (10 A)	IEC (16 A)		
	Output	3 x IEC C13 (10 A)	6 x IEC C13 (10 A)	8 x IEC C13 (10 A) 1 x IEC C19 (16 A)	
Environmental conditions	Temperature	0°C – 40°C, 20°C recommended			
	Humidity	0-90 % RH @ 0- 40°C (non condensing)			
	Acoustic Noise	< 50 dB			
Safety / Enclosure	Safety	EN 62040-1			
	EMC	EN 62040-1			
	Certifications	CE			

EFFEKTA®

BASE series

Offline UPS for elevator controls

- **Extremely compact design**
- **Inexpensive UPS**
- **Very low weight**
- **Suitable for shaft wall mounting**

The small dimensions of this compact UPS are designed to minimize space, making the EFFEKTA BASE the ideal UPS for elevator controls.

Characteristics

- UPS classification VFD-SX-333 acc. to IEC 62040-3
- Offline technology
- Compact design
- Modified sinewave output
- USB port
- 24 month warranty

Specifications

BASE series		
Power	Nominal power in VA	800
	Nominal power in W	480
Autonomy time	At typical PC-load in minutes	3
Technology	Offline	VFD-SY-333 according to IEC 62040-3
Phases	Input / Output	1-phase / 1-phase
Input	Nominal voltage	230 VAC
	Input voltage range	180-270 VAC
	Input frequency	50/60 Hz (automatically sensing)
Output	Output voltage	230 VAC
	Voltage tolerance	±10%
	Frequency range	50 Hz / 60 Hz ± 1 Hz
	Switch over time	2-6 ms typical / 10 ms max.
	Voltage waveform	modified sine wave
Battery	Type	maintenance-free sealed lead fleece batteries
	Expected life time	ca. 5 years
	Recharging time	ca. 8 h / 90% capacity
Communication	Interfaces	USB (Type B)
	Display	2 LEDs
Dimensions / weight	Dimensions ups (HxWxD in mm)	207 x 82,5 x 228
	Weight	3,1 kg
	Protection class	IP 20
Connections	Input/Output	1 x IEC / 2 x IEC
Environmental conditions	Temperature	0°C – 40°C, 20°C recommended
	Humidity	0-90 % RH @ 0- 40°C (not condensing)
	Operation noise	nearly noiseless <40 dB (A)
protection / standards	Security	EN 62040-1
	EMC	EN 62040-2
	Approvals	CE

EFFEKTA®

Line-Interactive
Office-Series

- **Off-mode charging**
- **Easy usage** with touch screen
- **400-1000 VA noiseless,** without fan
- **Automatic restart** after power returned

EFFEKTA®s OFFICE is suitable to protect your office equipment like PCs and peripherals from power outages. It is available in sizes 400, 600, 800, 1000, 1500 and 2000VA. With the compact dimensions of these UPS it finds its place even in the smallest office in your company or at home. The availability of the power is significantly improved and operation could not be simpler. All relevant information is displayed on a backlit LCD display with touch screen.

Characteristics

- UPS classification VI-SY-333 (IEC 62040-3)
- Line-Interactive technology
- Compact design
- Output modified sine wave
- Cold start function (starting in battery mode)
- Microprocessor control
- Automatic frequency detection
- Automatic Voltage Regulation (AVR) with Boost and Buck function
- USB interface as standard
- Management software
- 12 months warranty

Specifications

Office		400	600	800	1000	1500	2000
Power	Power in VA	400	600	800	1000	1500	2000
	Power in W	240	360	480	600	900	1200
Autonomy time	PC load	5 min	12 min	15 min	25 min	35 min	30 min
Technology	Line-Interactive	VI-SY-333 in accordance with IEC 62040-3					
Phase	Input / Output	1-phase / 1-phase					
Input	Nominal voltage	230 VAC					
	Input voltage range	170-280 VAC					
	Input frequency range	50/60 Hz (Auto-Sensing)					
Output	Output voltage	230 VAC					
	Voltage Regulation	±10%					
	Frequency Range	50 Hz or 60 Hz ± 1 Hz					
	Transfer time	4-6 ms typical / 10 ms max.					
	Voltage form	modified sine wave					
Battery	Type	Maintenance free lead-acid battery					
	Life time	5 years					
	Charging current (max)	1,0 A					
	Recharging time	ca. 8 h / 90% capacity					
Communication	Interface	USB, RS232 (RS variant)					
	Display	LC Display					
Dimensions / Weight	Dimensions (H x W x D in mm)	142 x 105 x 300			182 x 130 x 320		
	Weight	3,7 kg	4,4 kg	5 kg	8,2 kg	10,4 kg	10,6 kg
	Protection	IP 20					
Terminals	Input	IEC (10 A)					
	Output	4 x IEC C13 (10 A)					
Environmental conditions	Temperature	0°C – 40°C, 20°C recommended					
	Humidity	0-90% RH @ 0- 40°C (non condensing)					
	Acoustic Noise	nearly noiseless <40 dB				<45 dbA	
Safety / Enclosure	Safety	EN 62040-1					
	EMC	EN 62040-2, class C2					
	Certifications	CE					

EFFEKTA®

DC UPS DIN rail **DCH series**

Reliability and availability in a small space. The DCH series power supplies with UPS function are the most compact of its kind and impress with extraordinary overload behavior. They are characterized by a variety of applications and their robust IP 20 housing is the perfect solution for all DIN rail applications. By the power boost mode, the DCH offers 300% of the rated power for 4 seconds or 200% for 4 minutes. Thus, it can be used as a reliable overload protection and is ideally suitable for consumers with high inrush currents, such as electric motors.

Also available with lithium batteries

lithium

Optionally temperature-controlled charging: External temperature sensor for optimal temperature controlled charging voltage.

One device for many battery types: Since the user can select several predefined charging curves via jumper, the DCH series is suitable for all types of batteries. Standard open and sealed AGM or lead-acid batteries can be used. Ni-Cd and Li-ion batteries can be used optionally. Recharging is done via automatic 4-step battery charge according to IUoU. A “boost” charge is selectable.

Wide range of applications: A variety of certifications (including UL 60950-1, CE) enables the global use of the DCH series as well as in areas where specific standards are required.

Extensive diagnostics: Errors are detected early through comprehensive measurements, such as: battery not connected, sulfated battery, short circuit, reverse polarity of the connections or suitability of the type of battery (voltage test).

Wide input voltage range: The DC UPS can be operated in an extremely wide input voltage range of 90 to 305 V.

Reliable technology: The components of the DCH series represent a highly reliable and efficient technology with an MTBF of> 300,000 h according to IEC61709.

Effective technology: Thanks to the use of advanced technology, the DCH series reaches an efficiency of more than 91%.

Communication and control: Electrically isolated relay contacts are available to monitor the power supply. Further communication interfaces: MODBUS devices > 400W, Integration and configuration via separate software, Interface for parallel operation: redundancy or capacity expansion on certain models possible (see specifications).

effekta.com

Specifications

DCH			12 V, 3 A	12 V, 6 A	12 V, 10 A	12 V, 35 A
Input	Rated voltage [VAC]		115-230-277	115-230-277	115/230-277	115/230-277
	Voltage range [VAC]		90 - 305	90 - 305	90 - 305	90-135, 180-305
Output (Normal mode)	Rated voltage [VDC]		12	12	12	12
	Rated current [A]		3	6	10	35
	Power max. [W]		36	72	120	420
	Efficiency (@ 50% In)		≥89%	≥89%	≥89%	≥90%
	Redundant operation / power enhancement available		No	No	No	Yes
Output (Battery mode/ charging mode	Voltage range [VDC] @ In		10 - 14,4	10 - 14,4	10 - 14,4	10 - 14,4
	Peak current [A]	4 seconds	9	18	30	105
		4 minutes	6	12	20	70
	Deep discharge protection [VDC]		9,5 ± 0,5	9,5 ± 0,5	9,5 ± 0,5	9,5 ± 0,5
	Charge current adjustment range		10-100%	10-100%	10-100%	10-100%
Communication	Relay contacts		Messages: normal power or backup operation, discharged or defective battery			
	Aux Output (RJ 45)		No	No	No	Optional
Mechanical/ environment	Dimensions WxHxD [mm]		115x65x135	115x65x135	115x65x135	115x150x135
	Weight [kg]		0,60	0,60	0,60	1,55
	Operating temperature		-25 ~ +70°C	-25 ~ +70°C	-25 ~ +70°C	-25 ~ +70°C
	Humidity (non condensing)		95%	95%	95%	95%

DCH			24 V, 3 A	24 V, 5 A	24 V, 10 A	24 V, 20 A
Input	Rated voltage [VAC]		115-230-277	115-230-277	115/230-277	115/230-277
	Voltage range [VAC]		90 - 305	90 - 305	90-135/180-305	90-135, 180-305
Output (Normal mode)	Rated voltage [VDC]		24	24	24	24
	Rated current [A]		3	5	10	20
	Power max. [W]		72	120	240	480
	Efficiency (@ 50% In)		≥89%	≥89%	≥83%	≥90%
	Redundant operation or power enhancement available		Nein	Nein	Nein	Ja
Output (Battery mode/ charging mode	Voltage range [VDC] @ In		22 - 28,8	22 - 28,8	22 - 28,8	22 - 28,8
	Peak current [A]	4 seconds	9	15	30	60
		4 minutes	6	10	20	40
	Deep discharge protection [VDC]		19,5 ± 0,5	19,5 ± 0,5	19,5 ± 0,5	19,5 ± 0,5
	Charge current adjustment range		10-100%	10-100%	10-100%	10-100%
Communication	Relay contacts		Messages: normal power or backup operation, discharged or defective battery			
	Aux Output (RJ 45)		No	No	No	Optional
Mechanical/ environment	Dimensions WxHxD [mm]		115x65x135	115x65x135	115x100x135	115x150x135
	Weight [kg]		0,60	0,60	0,85	1,55
	Operating temperature		-25 ~ +70°C	-25 ~ +70°C	-25 ~ +70°C	-25 ~ +70°C
	Humidity (non condensing)		95%	95%	95%	95%

DCH			48 V, 5 A	48 V, 10 A
Input	Rated voltage [VAC]		115/230-277	115/230-277
	Voltage range [VAC]		90-135/180-305	90-135/180-305
Output (Normal mode)	Rated voltage [VDC]		48	48
	Rated current [A]		5	10
	Power max. [W]		240	480
	Efficiency (@ 50% In)		≥83%	≥91%
	Redundant operation or power enhancement available		No	Yes
Output (Battery mode/ charging mode	Voltage range [VDC] @ In		44 - 57,6	44 - 57,6
	Peak current [A]	4 seconds	15	30
		4 minutes	10	20
	Deep discharge protection [VDC]		39 ± 1,0	39 ± 1,0
	Charge current adjustment range		10-100%	10-100%
Communication	Relay contacts		Messages: normal power or backup operation, discharged or defective battery	
	Aux Output (RJ 45)		No	Optional
Mechanical/ environment	Dimensions WxHxD [mm]		115x100x135	115x150x135
	Weight [kg]		0,85	1,55
	Operating temperature		-25 ~ +70°C	-25 ~ +70°C
	Humidity (non condensing)		95%	95%

Standards and certifications

Conformity: IEC / EN 60335-2-29
Chargers: EN60950 / UL 60950-1

EEC EMC Directive; 2006/95 / EC

DIN 41773 (charging cycle)

Emission standard for industrial environments: EN 61000-6-4

Immunity for industrial environments: EN 61000-6-2

Immunity to electrical fast transient (burst): EN 61000-4-4 / EC

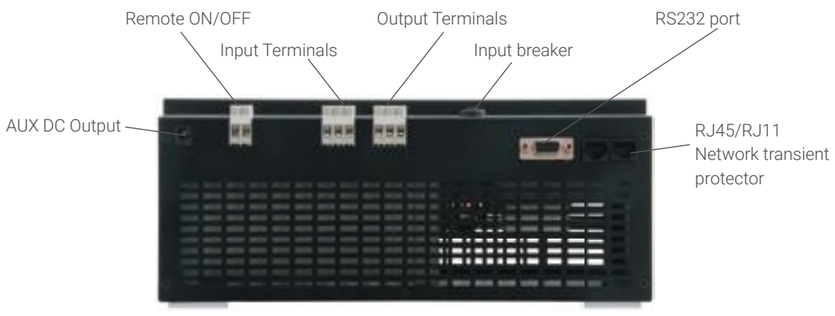
Immunity to Surge (Surge): EN 61000-4-5

EFFEKTA®

ACH-850 **AC-USV** for DIN rail

The ACH-850 is a 850 VA UPS for DIN rail mounting, which protects sensitive loads from power disturbances or power failures in industrial environments or in automation.
The integrated batteries are easily accessible and replaceable.
Thanks to the DIN rail connection, the ACH-850 can be easily installed in control panels, cabinets and containers, making it perfect for industrial applications. Input and output are hardwired to terminals.

Detail view (connections)



Characteristics

- UPS classification VFD-SY-333 according to IEC 62040-3
- Output modified sinewave
- Designed for DIN rail mounting
- Remote power on/off
- Fixed connection via terminals
- Incl. RS232-interface
- 24 months warranty

Special features

- Wide operating temperature range (0-50°C)
- Cold start function and overvoltage protection
- Compact industrial design
- User-friendly LED indicators
- Noiseless (without fan)

Model		ACH-850
Power	Nominal power in VA/W	850VA / 510W
Backup Autonomy	Minutes	4 minutes at typical load (70%) and 8 minutes at 50%
Technology	Classification	VFD-SY-333 according to IEC 62040-3
Phase	Input / output	1-phase / 1-phase
Input	Nominal voltage	230VAC
	Voltage range	165 - 276VAC
	Input frequency	50 Hz / 60Hz (Auto Sensing)
Output	Output voltage	230VAC ± 5%
	Output frequency	50 ± 0.3Hz (Battery mode)
	Transfer time	2-4 msec. typical
	Wave form	Modified sine wave
Battery	Type	maintenance-free lead-fleece accumulators
	Expected service life	5 years (optional 10 years)
	Recharge Time	to 90% in 8 hours
Communication	Interfaces	RS232, optional SNMP / Modbus / Relay boxes
	Indicators	3 status LEDs for operation and alarms
Dimensions / weight	Dimensions (HxWxD in mm)	126* x 282 x 120** (*incl. connectors, **incl. DIN rail attachment)
	Weight in kg	5
	Protection	IP20
Connections	Input	Terminals
	Output	Terminals
Environmental condi-ti-ons	Temperature	0~50°C
	Humidity	<90% (non condensing)
	Audible noise	<40dB (1m)
Safety/standards	Safety	EN 61000-3
	EMC	EN 62040 1 / EN 62040-2
	Certifications	CE

Scope of application:

- Programmable logic controllers
- Robotics / Industrial Automation / Factory Automation / Conveyor Equipment
- Multimedia, Telecommunication
- Elevator control systems

EFFEKTA®

Batteries

BT series

Our long-standing experience with emergency power systems and uninterruptible power supply units is our guarantee for the highest quality and reliability of EFFEKTA® batteries.

EFFEKTA® batteries are modern AGM (Absorbent Glass Mat) accumulators. Low levels of self-discharge are achieved by bonding the electrolyte in glass-fibre mat. A recharge is needed every six months unless the accumulator was stored at temperatures in excess of 20°C. AGM batteries are leak proof and can be installed in almost any location.

Advantage

- Fully maintenance-free
- Excellent high-current capability
- Classified as non-dangerous in accordance with IATA
- Cycle-resistant
- Robust construction
- Location-independent
- Valve-regulated plastic container as overload protection

Ideally suited for use in

- Uninterruptible power supplies (UPSs)
- Telecommunications systems
- Fire alarm and safety systems
- Medical equipment

Models view

BT 12-5

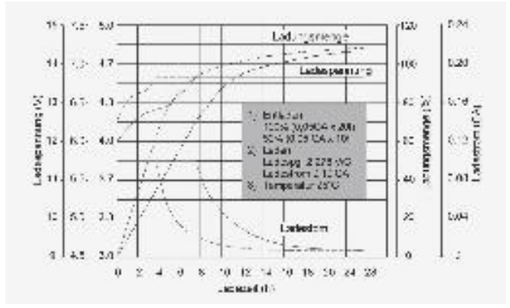
BT 12-7

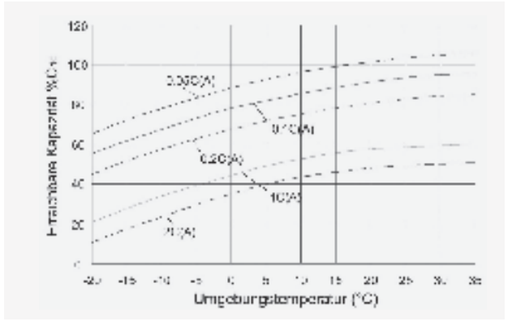
BT12-18

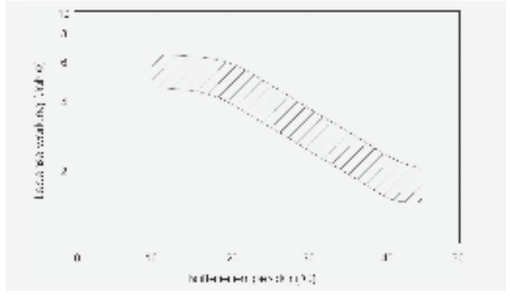
BT 12-28

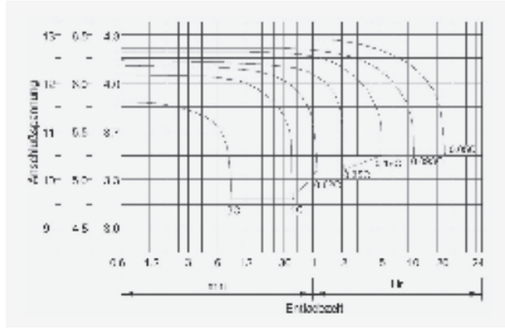
Specifications

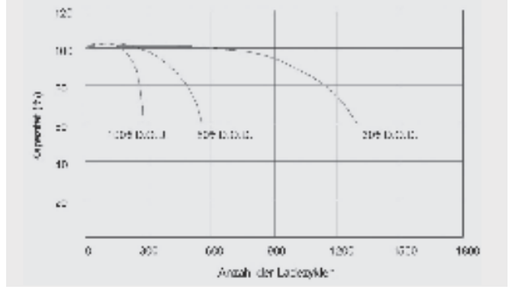
Type	Voltage in (V)	Capacity in Ah (C20)	L (mm)	W (mm)	H (mm)	H (mm) Max.	Weight in kg	Terminal
12 V types								
BT 12-1,2	12	1,2	97	43	52	58	0,6	F1
BT 12-2,3	12	2,3	178	34,5	60,5	66,5	0,97	F1
BT 12-2,8	12	2,8	104,5	47,5	69,5	69,5	1	F2/F1
BT 12-3,2	12	3,2	134,5	67	59,5	65,5	1,3	F1
BT 12-5	12	5	90	70	101	107	1,7	F2/F1
BT 12-7 (VdS)	12	7	151	65	95	101	2,26	F2 / S type: F1
BT 12-9,5K	12	9,5	151	65	95	101	2,63	F2
BT 12-12	12	12	151	98	95	101	3,6	F2
BT 12-18	12	18	181	77	167	167	5	F3
BT 12-18i	12	18	181	77	167	167	5	F13
BT 12-20	12	20	181	77	167	167	5,9	F3 / F13
BT 12-28	12	28	166	175	125	125	8,6	F13
BT 12-28S	12	28	166	126	174	174	8,6	F11
6 V types								
BT 6-3,2	6	3,2	134	34	60,5	66,5	0,65	F1
BT 6-12	6	12	151	50	95	100	1,8	F2 / F1

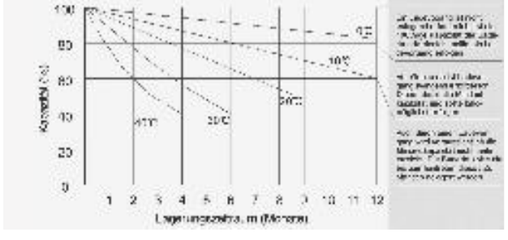












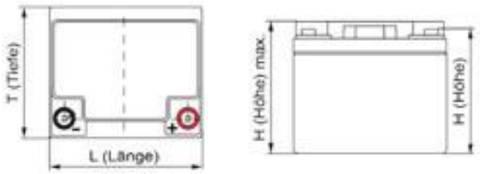
BTLi (12 V / 7-200 Ah)

lithium

Features of LiFePO4 battery

Features of LiFePO4 battery

- Longer Cycle Life: Offers up to 20 times longer cycle life and five times longer float/calendar life than lead acid battery, helping to minimize replacement cost and reduce total cost of ownership.
- Lighter Weight: About 40% of the weight of a comparable lead acid battery. A ‚drop in' replacement for lead acid batteries.
- They use a built-in battery management system (BMS) for maximum reliability.
- Higher Power: Delivers twice power of lead acid battery, even high discharge rate, while maintaining high energy capacity.



- Wider Temperature Range: -20°C~60°C.
- Superior Safety: Lithium Iron Phosphate chemistry eliminates the risk of explosion or combustion due to high impact, overcharging or short circuit situation

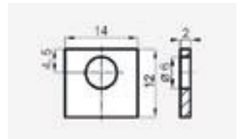
Specifications														
Electrical Characteristics														
Nominal Voltage		12,8 V												
Nominal Capacity (Ah)		7	9	12	20	33	40	50	55	60	75	100	150	200
Energy (Wh)		89,6	115,2	153,6	256	422	512	640	704	768	960	1280	1920	2560
Internal Resistance (AC ≤mΩ)		60	60	50	50	40	30	30	30	30	50	20	20	20
Cycle Life		>2000 Zyklen @ 1C 100%DOD												
Months Self Discharge		3 %												
Standard Charge		100% @05C												
Charge Voltage		96~99% @1C												
Charge Mode														
Charge Current		14.6±0.2V												
Max. Charge Current		0.2C –14.6V, danach 14.6V, Ladestrom bis 0.02C (CC/CV)												
Charge Cut-off Voltage		4A	4,5A	6A	10A	18A	20A	25A	28A	30A	40A	50A	60A	60A
Standard Discharge		7A	9A	12A	20A	33A	40A	50A	55A	60A	75A	100A	120A	120A
Continuous Current		14.6V±0,2V												
Max. Pulse Current														
Discharge Cut-off Voltage		4A	4,5A	6A	10A	18A	20A	25A	28A	30A	38A	50A	60A	60A
Environmental		7A	9A	12A	20A	33A	40A	50A	55A	60A	75A	100A	120A	120A
Charge Temperature		10V												
Discharge Temperature														
Storage Temperature		0°C – 55°C												
Mechanical		-20°C – 60°C												
Case		-20°C – 45°C												
Dimensions														
in mm		Acrylnitril-Butadien-Styrol (ABS)												
(± 1–2 mm)	Length	151	151	151	181,5	166	197	257	257	260	260	330	483	522
	Width	65	65	98	77	175	165	132	132	168	168	173	170	240
	Hight	93,5	93,5	95	167,5	125	170	190	190	208	208	212	224,5	218
	Hight max.	99	99	101	167,5	125	170	200	200	214	214	220	238,5	224
Approx. Weight		0,93	1,0	1,9	2,6	4,2	5,4	7	7,4	8,4	9,3	13,1	21,3	24,2
Terminals (you can find sketches in the following chart)		A	A	A	B	B	C	C	C	C	C	D	D	D

Typical Applications

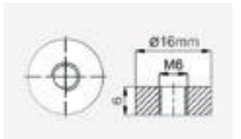
- Wheelchairs and scooters
- Solar/wind energy storage
- Emergency power for small UPS and elevator control systems
- Golf trolleys & buggies

Connection Types

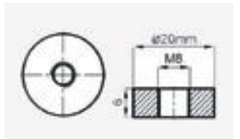

Typ A



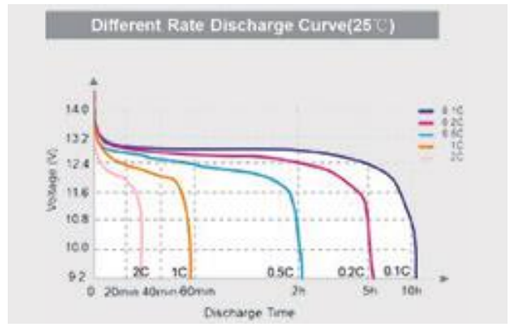
Typ B

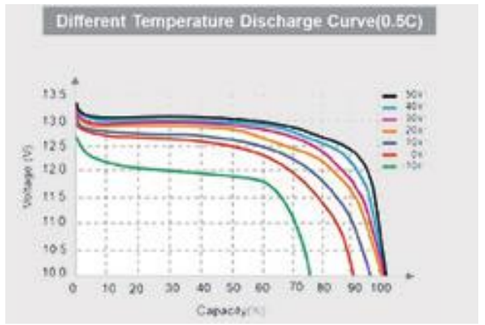


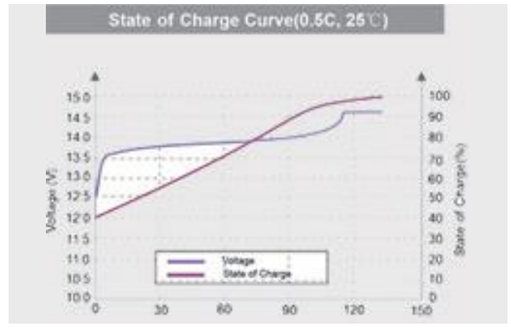
Typ C

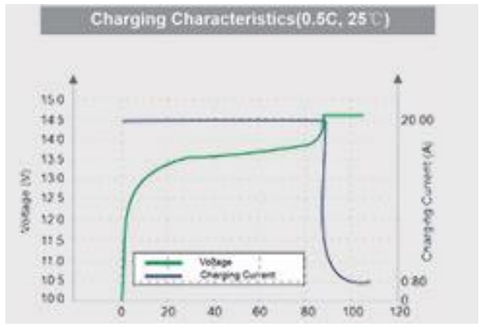


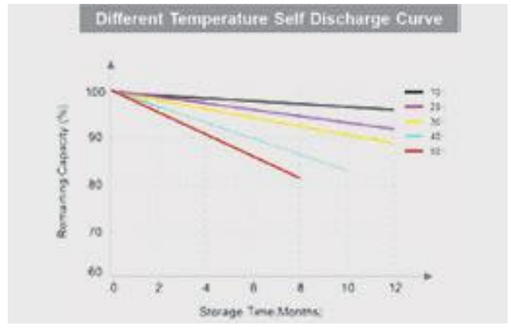
Typ D

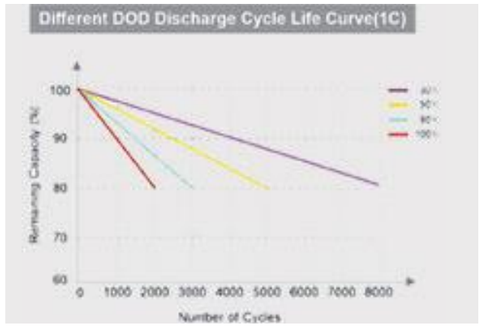












EFFEKTA®
innovating power.

Germany | headquarter
EFFEKTA Regeltechnik GmbH
Rheinwaldstraße 34
D-78628 Rottweil
Phone: +49 741 174 51 0
Fax: +49 741 174 51 22
Email: info@effekta.com

Austria | distribution, service Austria
EFFEKTA Regeltechnik GmbH
Franz Eigl Straße 14
A-3910 Zwettl / Austria
Phone: +43 2822 200 18 10
Fax: +43 2822 200 18 20
Email: sales@effekta.at

Spain | distribution, service Spain
EFFEKTA SPAIN S.L.
C/.Larrondo Beheko Etorbidea
Edificio 3, Nave P-9
48180 Loiu (Vizcaya)
Phone: +34 94 453 80 06
Email: comercial@effekta.es

Hungary | production
EFFEKTA Kft.
Dorozsmai ut 35
H-6728 Szeged / Hungary
Phone: +36 62 542 030
Fax: +36 62 548 541
Email: office@effekta.hu

effekta.com