

**TRUSTEC**<sup>®</sup>  
energy products

**E-HYB**  
mobil

trust creates energy<sup>™</sup>



the new, compact energy technology for every area

[www.trustec-energy.eu](http://www.trustec-energy.eu)



## TRUSTEC E-HYB mobil - the flexible energy storage system

the new **TRUSTEC E-HYB** is characterized by its modular technical equipment options



„S“-Version

Depending on the needs and requirements, the **TRUSTEC E-HYB** mobil can be individually modified



„W“-Version

## TRUSTEC E-HYB mobil - the compact energy storage system

- ideal for **new vehicles**, combustion engines and e-vehicles
- as a **vehicle retrofit**
- **only 1 TRUSTEC E-HYB mobil can be changed** for a 230V power supply with a wide range of possible uses
  - Assembly, service and measuring vehicles (portable for the construction site)
  - Emergency and surveillance vehicles of all kinds
  - Ambulance
  - Buses, motorhomes
  - Working platforms
  - Boats
  - House / office security energy
  - 230V emergency power energy / UPS function
  - from mains / vehicle / generator / solar

The new **TRUSTEC E-HYB** mobil offers:

- Safe 230V pure sine wave up to 3000W from battery, vehicle, mains, additional battery, solar (industry: 400V to 10.5kW)
- Finished, tested complete electrical installation
- Plug connections, quick installation and quick use in various vehicles  
voltage input from: vehicle, AC mains, solar, external additional battery.  
Output: 2 (or 4) x Schuko sockets 230 V AC (only in conjunction with insulation monitor, standard equipment = 1 Schuko socket), 12 / 24V 20A, 2 x 5V USB
- Maximum electrical personal protection through TRUSTEC insulation monitor plus FI, plus circuit breaker in accordance with VDE
- Battery meter to display volts, amperes, capacity and remaining time of power

## TRUSTEC E-HYB mobil - the variable energy storage system

The **TRUSTEC E-HYB** has a modular structure, is supplied in 4 different basic versions and can be adapted according to customer requirements - from the basic to the full version -

Folgende Anpassungsmöglichkeiten stehen zur Auswahl:

- **Versions:**
  - „W“-Version - for mounting on the wall
    - vertical wall mounting
    - horizontal wall mounting
  - „S“-Version - standing device
- **TRUSTEC battery-technology:**
  - Pure Lead High Loadt, Aentron Lithium plus external auxiliary battery
- **Inverter power:**
  - 1,2kW, 2kW or 3kW (Industry: 400V up to 10,5kW)
- **Control panel:**
  - Display CR16B - function display of the inverter / charger operation such as voltage, load, fault
- **Comfort features:**
  - Display CR20C - programmable, can be removed and can be installed as a remote control with the associated 7.5m cable, ALTERNATIVE: Bluetooth dongle with smartphone use
  - Battery meter to display volts, amperes, capacity and remaining time of power
- **Personal protection:**
  - Insulation monitor
    - 2 or 4 Schuko sockets - only in conjunction with insulation monitor, Standard equipment = 1 Schuko socket
- **DC charging voltage:**
  - 12V or 24V vehicle system
- **Solar charging equipment:**
  - Output from 40-430Wp



„S“-Version  
Battery internal



„W“-Version  
vertical



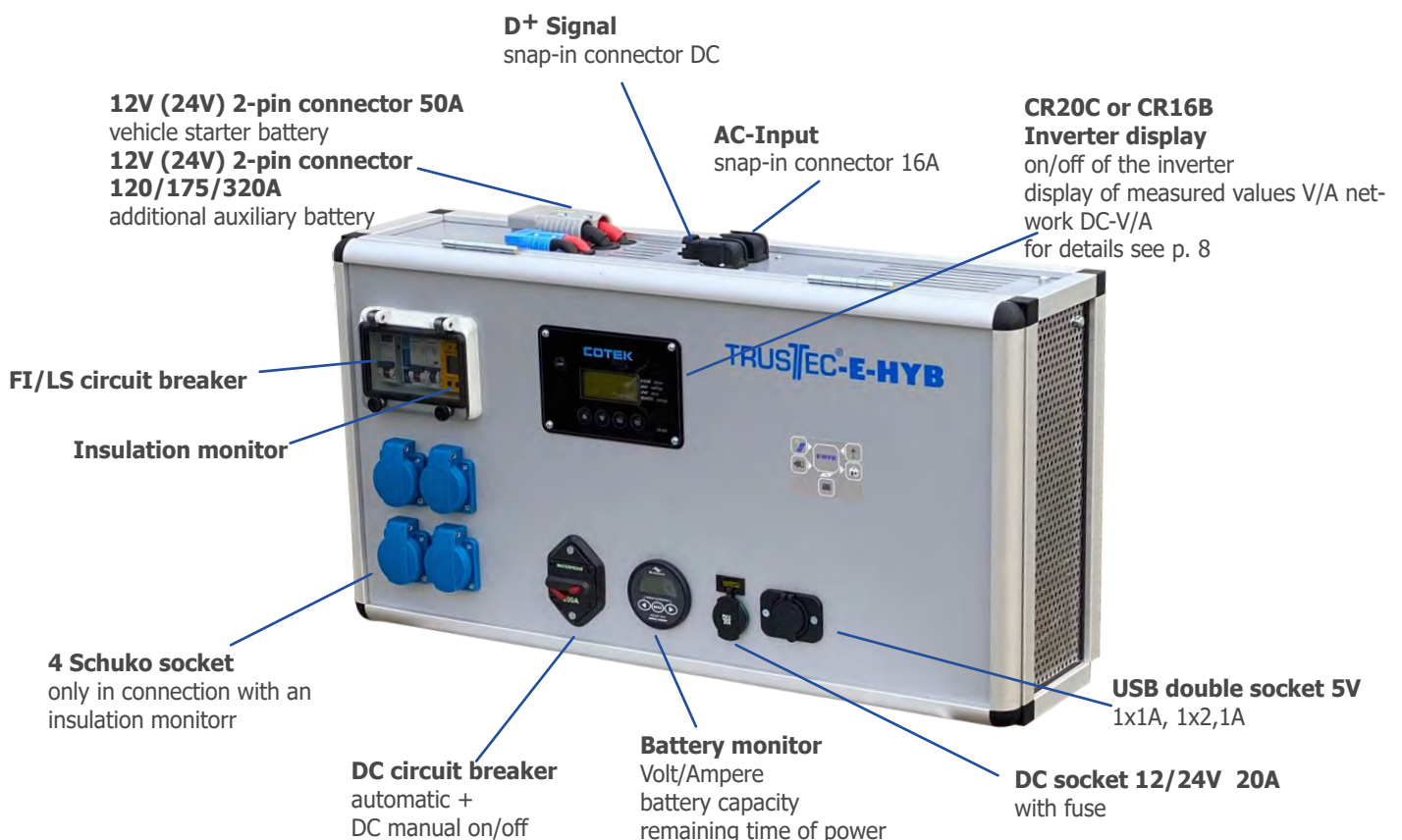
„S“-Version  
Battery external



„W“-Version  
horizontal



the universal complete 230V energy unit  
in a robust aluminum profile housing  
highest electrical safety - individual - convenient  
the "wall" device



**Installed in the E-Hyb mobil W:**

**COTEK SC-Inverter** with 1,2kW, 2kW or 3kW; PowerSharing;  
UPS function; Charge 50/100/150A, quiet running; optional smartphone control

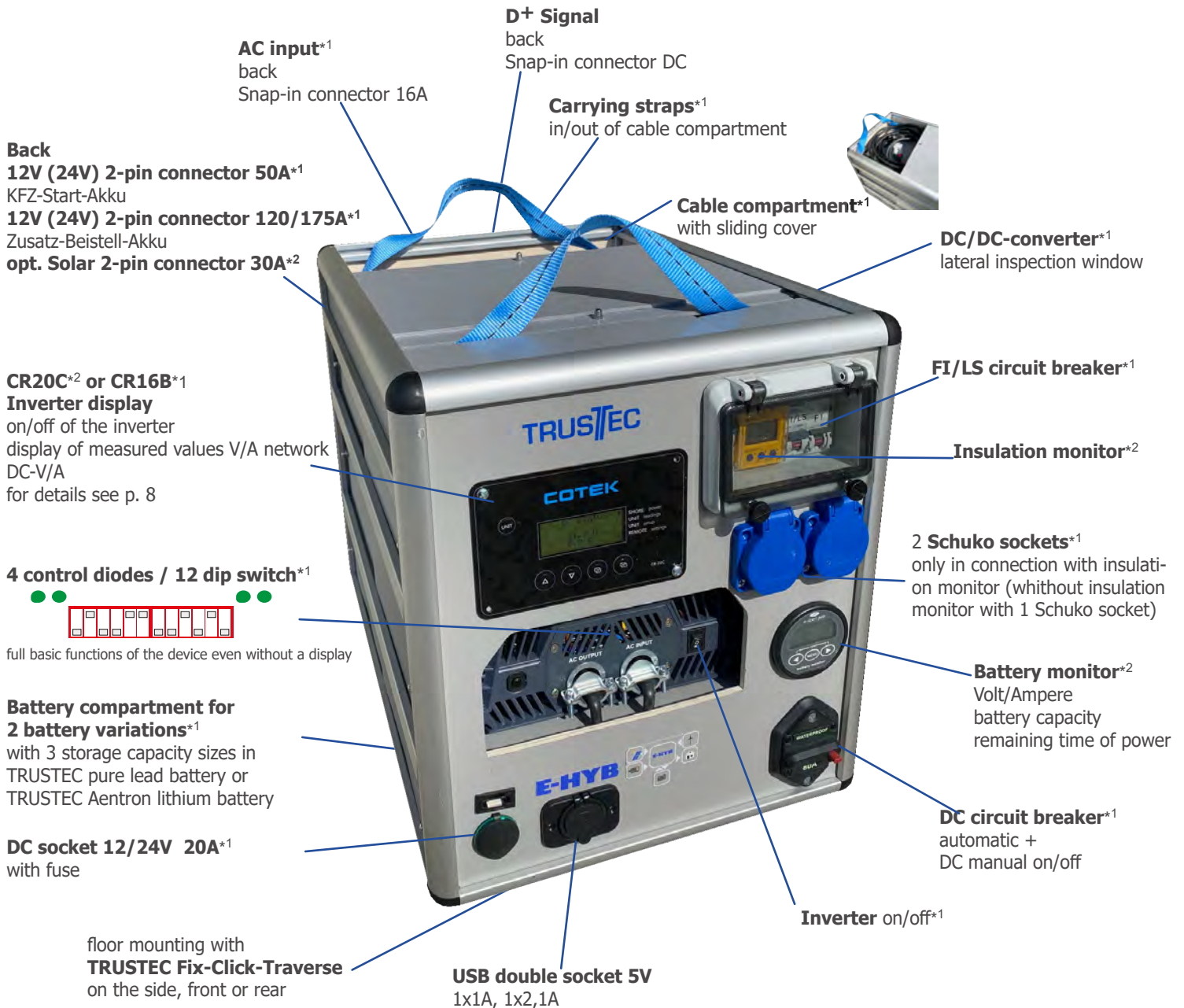
**DC/DC converter** optional for battery charging of EURO6 vehicles

**D+Signal control**

**Solar charge controller**



the universal complete 230V energy unit with robust aluminum profile  
highest electrical safety - individual - comfortable  
the "stand" device  
with integrated battery



\*1 basic version  
\*2 comfort version

## **TRUSTEC E-HYB mobil - der variable energy storage system**

The **TRUSTEC - E-HYB** mobil is an electrical system and contains all desired electronic technologies that serve the mobile power supply and electrical safety.

### **only 5 parts for car installation**

- **TRUSTEC E-HYB mobil** - with selected equipment, ready to plug in
- **connector cable** to starter battery plus and minus, standard equipment
- **DEFA cable set to the AC network** - outdoor cable / wall socket / indoor Schuko socket - optional
- **TRUSTEC FixClick-Traverse** for secure attachment to the wall or floor
- **connector cable to D<sup>+</sup> signal** to detect engine running - D<sup>+</sup> simulator optional

The **TRUSTEC - E-HYB** mobil can be plugged in and used in a wide variety of vehicles depending on the power requirements of daily use.

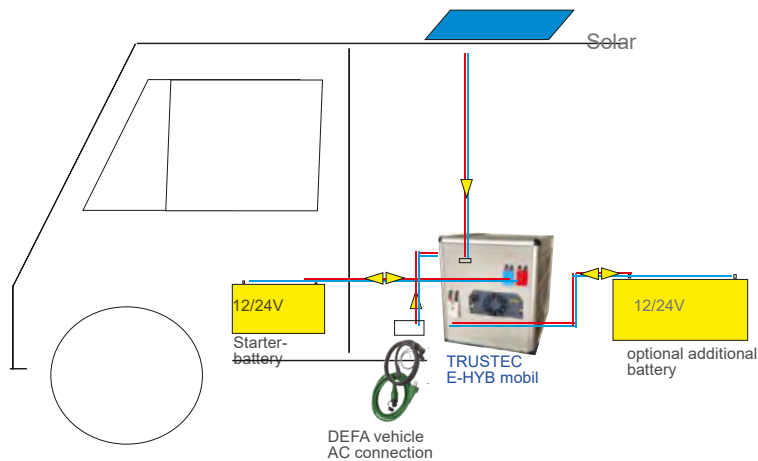
The device equipment, which can be modified in terms of power, system voltage, storage capacity, battery technology and battery charging technology, consists of:

- **COTEK SC pure sine wave inverter/charger - 1200W, 2000W or 3000W** (industry 400V to 10,5 kW)  
AC mains connection, charging technology "battery technology open", power sharing
- **TRUSTEC battery technology with new, excellent long-term performance features**  
Pure lead or lithium in IP65 in an aluminum press housing, as well as a very useful plug-in connection of an external additional battery, DC circuit breaker for direct restart in the event of overload, optional device battery capacity display with USB or RS232 interface
- **TRUSTEC charging converter**  
For universal battery charging 12/12V, 12/24V, 24/12V or 24/24V  
Car battery deep discharge protection, car start-up battery recharging, solar charge controller in various capacities for optimal control, we recommend our D + simulator: DC charging when the engine is running
- **TRUSTEC insulation monitor**  
the perfect electronic personal protection:  
circuit breaker, FI, insulation monitor, so that personal protection inside and outside the vehicle is ensured even when it is wet and multiple consumers are used at the same time in accordance with VDE regulations
- **Housing (standing device)**  
the housing is an aluminum frame construction from a German manufacturer consisting of:  
- Aluminium floor  
- Cable compartment on top and side surfaces made of foam PVC sheets with sliding technology

in the cable compartment stored are:

- 2 hand straps (pre-assembled)
- Connection cable 230V AC mains cable with snap-in connector (rear)
- DC/DC vehicle connection cable 16qmm, 3m, 50A plug, fuse 60A, connection cable eyelet M6
- DC/DC additional battery connection cable 35, 50 or 75mm<sup>2</sup> (depending on inverter power), 2m long
- DC fuse (power and voltage designed accordingly)

The comfortable construction in the frame construction and control of the COTEK SC combi inverter allows individual elements of the device to be exchanged and to adapt to any later, new battery technologies even after years.



## TRUSTEC-Fix-Click-Traverse



only 6 work steps - approx. 1 hour

- **start battery plug-in cable** - screw on to the battery pole with fuse
- drill a **25mm hole** in the vehicle wall
- screw in **DEFA vehicle socket** IP65 with 1.5m inner cable
- screw on the **DEFA indoor Schuko socket**
- screw on the **TRUSTEC-Fix-Click-Traverse** click in **E-HYB** = firm
- **connect the cable:** 1x battery plug cable, 1x vehicle ground plug cable, 1x AC plug in E-HYB and DEFA Schuko socket, 1x DEFA outdoor cable 5m in house socket, 1x connect D + plug-in cable

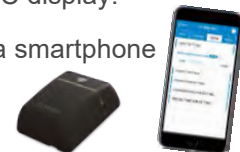
**switch on E-Hyb - DONE!**  
**CE-certified**



It can be used in a variety of ways, in vehicles of all types and as a stationary energy storage system.  
**Installation in the vehicle is quick and inexpensive,**  
as the **TRUSTEC E-HYB** is delivered **ready to plug in and functional**.




## TRUSTEC E-HYB mobil equipment

Basic	alternative / optional
<p style="text-align: center;"><b>COTEK SC-Inverter/Charger</b></p> <p>continuous output 1200W (approx. 1380W 1min./2000W 15sec.),  2000W (approx. 2300W 1min./4000W 1sec.)  oder 3000W (approx. 3450W 1min./6000W 2sec.)  bi-directional converter  AC grid connection  AC power sharing = selectable amps from the power grid and power sharing  AC/DC battery  Charging technology 50A / 100A with variable and freely adjustable charging characteristics  RS232 communication interface  bluetooth for smartphone communication can be plugged in as an accessory  fan, load and temperature controlled  (for details, see also the TRUSTEC general catalog)</p>	
<p><b>simple, solid operation</b>  on/off toggle switch, 3 control diodes  fixed setting of the inverter and charging functions via DIP switches  1 Schuko socket (2 and more sockets only in connection with an insulation monitor)  1 IEC socket for mains AC input  20A 12V output socket  5V USB connection  FI/LS circuit breaker  DC circuit breaker with manual switching</p> <p><b>COTEK CR16B display</b>  switching the device on/off  display of the operating functions of the inverter and charger  removable and installation with 7.5m cable in the vehicle</p>	<p><b>COTEK CR20C display</b>  switching the device on/off (instead of the toggle switch)  display of the measured values  convenient setting/programming of inverter, current flow and charger functions, PowerSharing, night mode  approx. 50 displays / selections / detailed settings in total  <b>also open to future battery technologies</b></p> <p>removable and installation with 7.5m cable in the vehicle, front locking cover optional</p> <p>alternative to the COTEK CR20C display:  <b>COTEK Bluetooth Dongle</b>  for controlling the inverter with a smartphone</p>
<p>Our TRUSTEC pure lead battery is characterized by the following advantages:</p> <ul style="list-style-type: none"> <li>• at high discharge currents, the battery is cycle stable up to 80% DOD</li> <li>• rapid discharge allowed for a short time</li> <li>• fast high-current charging permitted</li> <li>• compact, narrow and robust design with position-neutral function</li> </ul>	
<p>The TRUSTEC Aentron lithium battery is ideally suited for professional high-performance operation:</p> <ul style="list-style-type: none"> <li>• integrated BMS (battery management system)</li> <li>• fast charging 70% SoC in 20 min.</li> <li>• configurable in parallel</li> <li>• dust, splash and waterproof according to IP66</li> <li>• compact and robust design</li> </ul>	





## TRUSTEC E-HYB mobil Ausstattung

Basic	 alternative / optional
<p align="center"><b>TRUSTEC DC/DC converter</b></p> <p>guarantee the optimal full charge of the device batteries from the vehicle starter battery, additional battery or alternator, without discharging the starter battery too deeply.            When the E-HYB batteries are charged externally from the mains, they are also recharged to the starter battery. DC charging technology can be operated via transparent sliding windows on the side if required. (standing device)            Our new <b>D+ Simulator</b> switches the DC / DC converter on/off when the engine is running.</p>	
<p><b>TRUSTEC DC/DC converter</b>            DC/DC 12/12 50A            (Basic equipment for stand version with internal battery "S-Bi")</p>	<p><b>TRUSTEC DC/DC converter</b>            DC/DC 12/12 50A            DC/DC 24/12 25A            DC/DC 24/24 25A            DC/DC 12/24 25A - standard for lithium battery            solar charge regulator 10/26/21/26A</p>
<p>In the basic version, the <b>TRUSTEC E-HYB mobil</b> is equipped with a combination FI / LS load circuit breaker in accordance with VDE under a safety flap</p>	<p>For 230V outdoor work, only a <b>TRUSTEC Insulation Monitor</b> with the required relay for the AC mains connection offers optimal personal protection</p> 
	<p><b>Battery monitor</b>            to display the current flows in and out of the battery.            V/A battery status in% with approx. remaining running time with remaining energy available with the same load profile</p> 
<p align="center"><b>DC plug connections</b>            20A DC 12/24V vehicle socket            5V USB double socket            50A vehicle power cable            12071757320A additional battery            D+ signal snap-in connector</p>	

## „W“-Version

Wall version  
in vertical or horizontal design

Insulation monitor  
FI/LS circuit breaker



4 Schuko sockets

TRUSTEC Fix-Click-Traveler



USB double  
socket 5V  
1x1A, 1x2,1A

Ground screw  
opt. Ground plug

D+ Signal  
snap-in connector DC

AC-Input  
snap-in connector

12V (24V) connector  
2pole 50A  
starter battery

12V (24V) connector  
2pole 120/175/320A  
additional battery pack

DC circuit breaker  
Automat +  
DC manual on/off



TRUSTEC pure lead battery

Also available with Fix-Click-Traveler for quick  
removal / insertion

## „S“-Version

„Stand“ version  
also available with Fix-Click-Traveler



TRUSTEC Aentron Lithium Battery



E-HYB carrying straps  
placed in the device

FI/LS  
Insulation Monitor

Battery Monitor

DC circuit breaker  
with on/off switch



AC In

DC/DC converter

Inverter level

Battery level



DC connector 50A  
vehicle battery 12  
and/or 24V

Inverter-  
ventilation

DC connector 120/175A  
additional battery

## ADVANTAGES of a TRUSTEC - E-HYB mobil

### Plug In in different vehicles

- vehicle plug-in connection cable
- Schuko plug to DEFA external socket
  - > 1 device with electrical safety can be used in any other vehicle, depending on the daily work area
  - > **TRUSTEC E-Hyb mobil** can be quickly taken out of the vehicle to the workplace
    - our **TRUSTEC Fix-Click-Traversal** enables quick removal and insertion

### Fast installation highest security / few steps

- all technologies are pre-assembled in the **TRUSTEC E-HYB mobil** with FI and load circuit breaker
- battery connection cable with 50/120/175/320A flat plug and DC fuse as well as DEFA external socket
- optional **insulation monitor** with the highest level of personal protection (2 or 4 instead of 1 Schuko socket)
- the inverter/charger control panel CR16B or the optional inverter / charger control panel CR20C can be removed with 4 screws and placed up to 7.5m away as required. (cover plate for **TRUSTEC E-HYB mobil** optionally available)
- device is CE certified / technical components E-Mark

### Battery equipment can be individually selected for every application

- for light sporadic power supply in the vehicle, the **TRUSTEC E-Hyb mobil** can be connected to a vehicle starter or additional battery
- for sometimes tougher short-term use with **TRUSTEC pure lead batteries**
- for tough professional use with **TRUSTEC Aentron lithium battery** in aluminum press housing IP65
- **TRUSTEC E-HYB mobil** is always connected to the additional car battery or starter battery, this energy can also be used. For the starter battery, an optional deep discharge protection via DC / DC converter and 1A recharge is integrated in the "Be" (external battery) versions; in the "S-Bi" version (internal battery) this is standard
- the DC/DC converter always guarantees optimal vehicle charging of the **TRUSTEC E-HYB mobil** battery (from 12V or optionally 24V). The charging converter is switched on via the D<sup>+</sup> signal (D<sup>+</sup> sensor optional) when the engine is running
- in the case of battery aging, any battery technology can be installed - so this memory is a timeless investment

### COTEK inverter equipment ingenious SC technology

- pure sine current | continuous power 1200W, 2000W or 3000W | overload protection | high load capacity for starting currents
- network connection | Power sharing (AC current limitation and supplementation with DC current) | DIP switch setting or optional integrated remote control (7m cable)
- charge level with 3 programs plus 1x freely adjustable battery charge values also for future technologies

### Battery monitor optional

- adjustable to different battery capacities
- shows remaining battery capacity, current flow and voltage

### Additional equipment

- USB charging socket 2x5V 1A / 2.1A - as standard
- 12V socket 20A - standard
- solar charge regulator and solar clamp connection - optional
- automatic load circuit breaker for battery protection - as standard

### Aluminum frame housing

- robust, durable, with shoulder straps and fastening straps
- with access sliding technology in the side walls (standing device)
- connection cable compartment on top with sliding cover
- service-friendly
- **TRUSTEC Fix-Click-Traversal** as standard with the "W" version, optional with the "S" version and additional battery

### stationary use

- with the connection of solar modules, **TRUSTEC E-HYB mobil** can also be operated as a stationary safety energy storage device

die SC series of the COTEK Inverters offers a UPS function

## TRUSTEC pure lead battery



also available with  
**TRUSTEC Fix-Click-Traversal**  
for quick removal/insertion

### Features and Benefits:

- designed for 15 years of operation (25°)
- with high discharge currents in COTEK inverter operation, cycle-stable up to 80% DOD
- rapid discharge allowed for a short period of time
- fast high-current charging permitted
- very good performance values in extremely high and low temperature ranges. -40°C - +65°C, safety vent valve
- CE and UL certified
- compact, narrow and robust design with position-neutral function
- concealed, massive screw connection
- low weight in relation to performance
- low self-discharge of 0.5% / month
- optionally, the mounting housing can also be supplied portable with **TRUSTEC Fix-Click Traversal** for safe and quick assembly, whether vertical, horizontal, lying or standing, the battery is thus optimally protected against damage in the vehicle - optionally also with DC fuse and connection -Plug 50/120/175 / 320A

**This newly optimized pure lead technology differs significantly from previous lead technologies in terms of performance, resilience and expected longevity**

Cycle life approx. at 25°C and direct charging  
30% discharge 3000 Zyklen  
50% discharge 1500 Zyklen  
80% discharge 1000 Zyklen



# TRUSTEC PURE LEAD BATTERY

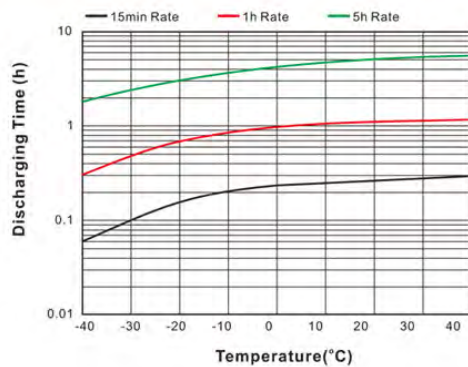


Solid technical basic data at 25° for the power sizes 38Ah, 62Ah, 100Ah, 150Ah and 200Ah, which ensure a safe long-term power supply in the vehicle and stationary sector.

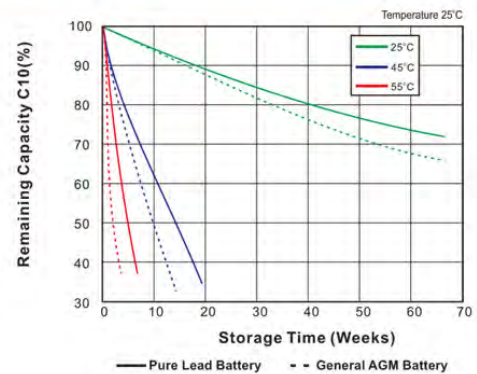
Amperage and wattage with inverter minimum voltage of 10.5 - 12V for continuous																															
Cap.	WHD in mm	Kg		5 Min	10 Min	15 Min	20 Min	30 Min	45 Min	60 Min	120 Min	180 Min	240 Min	300 Min	480 Min	600 Min	1200 Min														
38Ah	186x99x301	12,5	A/W		92	1011	73	810	61	683	46	520	33	376	26	186	16	186	10	117	8	94	6	71	4	48	3	36	2,1	26	
62Ah	267x97x299	19,5	A/W	226	2486	155	1705	127	1410	101	1131	75	848	53	604	42	267	23	267	16	187	13	153	11	131	7,4	89	6,2	75	3,2	39
100Ah	287x108x406	31,5	A/W	351	3861	255	2805	200	2220	166	1859	122	1379	85	969	65	418	36	418	26	304	20	236	17	202	12	144	10	121	5,2	63
150Ah	277x125x559	48,5	A/W	474	5214	369	4059	301	3341	254	2845	184	2079	136	1550	106	650	56	650	41	480	33	389	26	309	18	216	15	182	7,8	95
200Ah	320x125x571	61,0	A/W	525	5775	429	4719	370	4107	316	3539	232	2622	167	1904	131	835	72	835	52	608	41	484	34	405	23	276	20	242	10,5	128

Reading example: 2000W load inverter can run NonStop until shutdown at 10.5V for approx List does not harm the TRUSTEC pure lead technology, but direct recharging is necessary

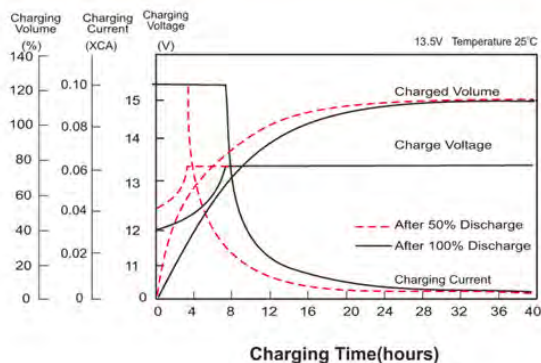
## Effect of Temperature on Discharging Time



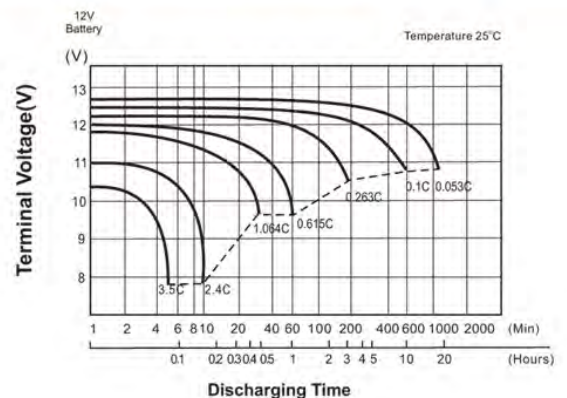
## Self Discharge Characteristics



## Charging Characteristics



## Discharging Characteristics



## TRUSTEC Aentron lithium battery



### Standard energy module scalable, safe, plug & play

#### Features and Benefits:

- lithium-ion battery technology
- compact and robust design
- die-cast aluminum housing
- dust and water protection according to IP66
- for extreme conditions from -20°C to + 60°C
- 360° mechanical integration
- configurable in parallel
- integrated BMS (batterie management system)
- fast charging. 70% SoC in 20min
- freely scalable modular system <60VDC with a capacity of up to 8kWh and more
- high energy and power density
- intrinsically safe - electrical separation during transport and in the event of a fault • SOC - state of charge by LED
- SOC - **State Of Charge** by LED
- Plug & Play: communication CANbus
- recyclable and reusable
- Made in Germany



## TRUSTEC AENTRON LITHIUM BATTERY






	12V	24V	48V only in E-Hyb industrial design
Type	12Vdc-R	24Vdc-R	48Vdc-R
module capacity	139 Ah	81,2 Ah	40,6 Ah
module energy	2004 Wh	2046 Wh	2046 Wh
continuous discharge power max.	2400W@200A	4800W@200A	9600W@200A
nominal input voltage	14,4 Vdc	25,2 Vdc	50,4 Vdc
operating voltage	12 Vdc <==> 16 Vdc	21 Vdc <==> 28 Vdc	42 Vdc <==> 56 Vdc
energy density	120,4 Wh/Kg		
chemistry	Lithium-Ionen - Li-NMC - 3,6 V DC - 2,9 Ah		
temperature range	-20°C bis +60°C - discharg / 0°C up to +50°C - charge		
Humidity / operating altitude	5 up to 95% / < 4.000m		
configuration / communication	parallel / CANbus		
security surveillance	BMS - module and cell row monitoring		
functions	Overcharge / deep discharge protection, temperature monitoring, passive balancing (150mA), heating (optional)		
charging cycles	approx. 3.000 cycles at 80% depth of discharge at + 20°C		
degree of protection (dust/water)	IP 66		
dimensions (LxWxH)	442,5 310 x 115 mm		
weight	approx. 22 Kg		
housing type	die-cast aluminum		
certificates & standards	UN 38,3, CE, RoHS, UL94 VO, DNV-GL, IEC 62619, IEC 62620, UN-ECE-R10, EN 61000-6-2:2005, EN 61000-6-3:2007, IEC-62133		

## Technical Data

### TRUSTEC E-Hyb technology in 4 different housing variants




#### TRUSTEC E-Hyb mobil basic equipment in blue

can be individually equipped with 3 different SC combination inverter sizes, insulation monitor, battery, and much more in grey

			
	<b>TRUSTEC E-Hyb mobil W-v-Be</b> wall-mounted vertical battery external <b>TRUSTEC E-Hyb mobil W-h-Be</b> wall-mounted horizontal battery external	<b>TRUSTEC E-Hyb mobil S-Be</b> stand-alone battery external	<b>TRUSTEC E-Hyb mobil S-Bi</b> stand-alone-battery internal 62Ah/744Wh
<b>COTEK SC-Combi inverter</b>	<b>1200W / 2000W / 3000W</b>	<b>1200W / 2000W / 3000W</b>	<b>1200W / 2000W / 3000W</b>
Option1: SC 1200-212/224	230V pure sine 1200VA cont. / 101-115% 1 Min / 2400VA 2Sec. / charge <50A - adjustable <12/25/37/50A (24V=50%)		
Option2: SC 2000-212/224	230V pure sine 2000VA cont. / 101-115% 1 Min / 4000VA 2Sec. / charge <100A -adjustable <25/50/75/100A (24V=50%)		
Option3: SC 3000-212/224	230V pure sine 3000VA cont. / 101-115% 1 Min / 6000VA 2Sec. / charge <150A -adjustable <37/75/112/150A (24V=50%)		
Network connection	yes		
PowerSharing	yes (setting to permissible amperes AC grid draw)		
Quiet running (Night mode)	yes		
Bypass Relais A/Sec.	30A / 250V / 0Sec.		
Input V AC // DC	180-264VAC 50Hz: 50-53Hz / 60Hz: 57-63Hz / 16A max // 12V DC: 10,5-16,5V / 24V DC: 21-33V		
Temperature-Sensor	yes		
UPS function	yes		
12/24V DC-output	20A / socket		
Standby approx. watts	SC 1200-212 0,4A / SC 2000-212 0,4A / SC 3000-212 0,6A (24V version: 0,2A / 0,2A / 0,3A)		
without load approx. watts	SC 1200-212 3A 12,5V / SC 2000-212 4A 12,5V / SC 3000-212 5A 12,5V (24V version: 1,5A / 2A / 2,5A)		
display	CR16B for service vehicle / optional CR20C with detailed display & load programming for motorhomes & others		
Inverter ventilation	vertical: top&bottom horizontal: left&right	air intake at the front / air outlet at the rear	
<b>electrical protection</b>			
SC-Series DC in/out	Over- undervoltage, reverse polarity internal fuse / battery charge temperature sensor on battery		
SC-Series AC in/out	16A circuit breaker, short circuit, overload		
AC load circuit breaker	16A		
Fi personal protection in the vehicle	yes		
Insulation monitor	optional in fuse compartment, more than one socket, 230V outdoor work, commercial use		
Certifications COTEK SC series	SC1200 & SC2000: EN62368-1 / Emark CISPR25, ISO7637-2 / EN55032 ClassA; EN55024 ClassA; EN61000-3-2, 3-3; EN61000-4-2, 3, 4, 5, 6, 8, 11 SC3000: EN62368-1; Emark CISPR25, ISO7637-2; ISO11452-2 / EN55032 ClassA; EN55035 ClassA; EN61000-3-2, 3-3; EN61000-4-2, 3, 4, 5, 6, 8, 11		
<b>E-Hyb Battery</b>			
Internal battery Wh use	Pure lead or lithium on request	-	Pure lead 63Ah 600Wh optional lithium 2kWh 1800Wh
optional external battery pure lead	Aluminum protective mounting housing 80%DOD / 38Ah=N364Wh/62Ah=N595Wh/100Ah=N960Wh/150Ah=N1440Wh/200Ah=N1920Wh		
optional external battery Aentron Lithium	1-4 x TRUSTEC Aentron Lithium 2kWh 12V / 24V		
DC load circuit breaker	Ampere rating according to the integrated inverter power and voltage		
Battery Monitor	optional V / A / remaining battery energy		
<b>DC/DC converter</b>	is individually adapted from the following types for the internal technology used and vehicle voltage		
12/12V for 12V vehicle starter battery	E-Hyb charge 50A from alternator		E-Hyb charge 50A from alternator
12/24V for 12V vehicle starter battery	alternatively for 24V 25A E-Hyb lithium battery		alternatively for 24V 25A E-Hyb lithium battery
24/12V 25A	alternatively for installation of 12V E-Hyb in 24V vehicles		alternatively for installation of 12V E-Hyb in 24V vehicles
24/24V 25A	alternatively E-Hyb in 24V vehicle		alternatively E-Hyb in 24V vehicle
D <sup>+</sup> Signal sensor	optional: 4m cable 3x0.5mm² with snap-in connector (required if D <sup>+</sup> signal is not provided by the vehicle)		
Solar charge regulator 12V/24V	optional: MPP technology 50V / 12V battery: 10A <165Wp, 15A <250Wp, 21A <350Wp, 26A <430Wp or SR technology 50V / 24V battery = 10A <300Wp		



## technical data

			
	<b>TRUSTEC E-Hyb mobil W-v-Be</b> wall-mounted vertical battery external <b>TRUSTEC E-Hyb mobil W-h-Be</b> wall-mounted horizontal battery external	<b>TRUSTEC E-Hyb mobil S-Be</b> stand-alone battery external	<b>TRUSTEC E-Hyb mobil S-Bi</b> stand-alone-battery internal 62Ah/744Wh
<b>Plug connections</b>			
AC plug input	automatic continuous charging if mains connection / snap-in plug - vibration-proof		
AC Schuko output	4	2	2
DC battery 2-pole	120A / 175A / 320A design according to inverter power and voltage 12/24V		
DC start battery 2-pole	50A		50A
DC-D <sup>+</sup> socket locked	1		1
5V USB double socket	2		
DC solar plug	optional: input-output locked / vibration-proof		
grounding plug / screw	optional: 2m 10mm <sup>2</sup> yellow / green with plug - locked / vibration proof for E-Hyb change (standard: earthing screw M4)		
<b>Plug-in cable accessories</b>			
DC cable supply battery 2m	35, 50, 70 mm <sup>2</sup> with DC fuse depending on inverter power and voltage 12 / 24V (optional extension)		
DC cable start battery 3m	16mm <sup>2</sup> , 3m, 50A plug		16mm <sup>2</sup> , 3m, 50A plug
AC connection	3x1,5mm <sup>2</sup> with Schuko and click plug 2m		
ground chassis cable 2m	10mm <sup>2</sup> yellow / green with ring eyelet / with yellow / green plug - locked		
<b>dimensions WxHxD in mm approx.</b>			
with SC 1200-212/224	„v“ 365x700x175 / „h“ 700x365x175	360x420x535	360x420x535
with SC 2000-212/224	„v“ 365x700x175 / „h“ 700x365x175	360x420x535	360x420x535
with SC 3000-212/224	„v“ 435x730x190 / „h“ 730x435x190	425x433x535	425x433x535
technology access	front flap with locking screw	sliding openings on both sides and cable compartment with shoulder straps on top	
<b>weight approx.</b>			
with SC 1200-212/224	18,5 Kg	14 Kg	33 Kg with 0,6kWh Pure Lead Battery 29 Kg with 2kWh Lithium Battery
with SC 2000-212/224	19,9 Kg	16 Kg	35 Kg with 0,6kWh Pure Lead Battery 31 Kg with 2kWh Lithium Battery
with SC 3000-212/224	23,5 Kg	22 Kg	40 Kg with 0,6kWh Pure Lead Battery 35 Kg with 2kWh Lithium Battery
<b>accessories</b>			
Fix-Click-Traversal	profile above: 20x60x365 - below U-claw	floor click bracket in front 20x60x370 / rear U-claw	
start battery charge output	20A integrated charger fully automatically regulated with 10mm <sup>2</sup> 3m cable		
carrying straps		cable compartment on top contains 2 carrying straps	
Vehicle AC connection cable set DEFA	with 5m mains connection cable orange 3x2.5mm <sup>2</sup> , external wall plug with flap IP65, 1.5m internal cable, Schuko socket		
Solar module mounting set	120W, day 440Wh, LWH 120 (1400) x550x35mm / 190W, day 740 Wh, LWH 1500 (1650x680x35mm / bracket, adhesive, cable, roof duct		
<b>TRUSTEC auxiliary battery</b>			
<b>TRUSTEC pure lead battery</b>			
62Ah	Benefit: 0.59kWh,> 10.5V: 15min = 1522W, 30min = 896W, 1h = 500W BTH 299x97x267mm, 19.9 kg, aluminum mounting housing		
100Ah	Benefit: 0.96kWh,> 10.5V: 15min = 2404W, 30min = 1468W, 1h = 798W BTH 405x108x287mm, 31.5 kg, aluminum mounting housing		
150Ah	Benefit: 1.44kWh,> 10.5V: 15min = 3618W, 30min = 2217W, 1h = 1272W BTH 559x125x277mm, 48.5 kg, aluminum mounting housing		
200Ah	Benefit: 1.92kWh,> 10.5V: 15min = 4444W, 30min = 2788W, 1h = 1572W BTH 571x125x320mm, 61 kg, aluminum mounting housing		
<b>TRUSTEC Aentron Lithium battery</b>			
1kWh“T”24V 60A	Benefit: 0.8kWh,> 21V (80% DOD): 40min = 1200W max, 1h = 800W max		
2kWh“T”12V 200A	Benefit: 1.6kWh,> 10.5V (80% DOD): 40min = 2400W max, 1h = 1600W max		
2kWh“T”24V 200A	Benefit: 1.6kWh,> 21V (80% DOD): 40min = 2400W max, 1h = 1600W max		
10kWh“T”24V 200A	Benefit: 8kWh,> 21V (80% DOD): 40min = 4800W max, 1h = 4800W max, 2h = 4000W max, 3h = 2000W max 4h = 2600W max 8h = 1000W max		

## Inverter Charger

Power Sharing (= mains power + battery power in parallel)

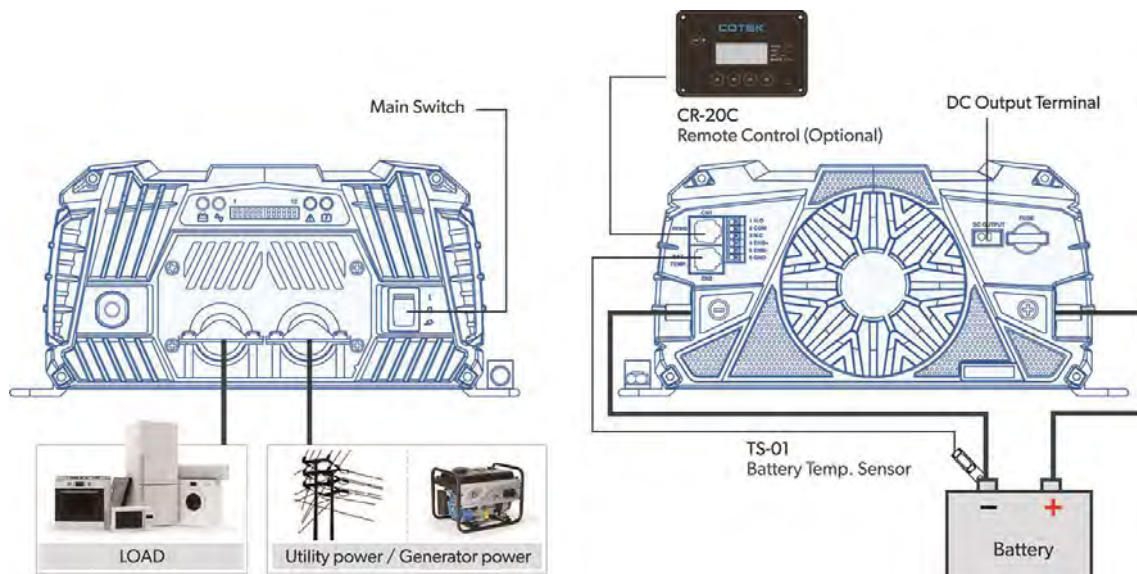
Energy Generation  
Power Support



1200/2000/3000 W high frequency pure sine wave inverter/charger

### Features and Benefits:

- Bi-directional inverter and charger
- compact size - high integration = easy installation
- equalization function for the batteries
- advanced protection functions
- RS 232 communication interface
- intelligent software for energy management
- optional remote control for administration and control
- safety standards: EN 62368-1
- E-mark: CISPR 25 und ISO7637-2 certified
- EMC-standards: EN55032 ClassA, EN55024 ClassA, EN61000-3-2, 3-3, EN61000-4-2, 3,4,5,6,8,11



## HIGH PERFORMANCE COMBINED INVERTER

Model			SC 1200		SC 2000		SC 3000	
Type			-212	-224	-212	-224	-212	-224
Inverter mode	Input	Nominal Voltage	12 VDC	24 VDC	12 VDC	24 VDC	12 VDC	24 VDC
		Input Voltage Range VDC (±0,5V)	10,5 - 16,5	21 - 33	10,5 - 16,5	21 - 33	10,5 - 16,5 ±0,3V	21 - 33
		Input Over-Voltage Protection (±0,5V)	16,5 VDC	33 VDC	16,5 VDC	33 VDC	16,5 VDC ±0,3V	33 VDC
		Input Over-Voltage Warning (±0,5V)	15,5 VDC	31 VDC	15,5 VDC	31 VDC		
		Input Under-Voltage Protection (±0,5V)	10,5 VDC	21 VDC	10,5 VDC	21 VDC	10,5 VDC ±0,3V	21 VDC
		Input Under-Voltage Warning (±0,5V)	11,0 VDC	22 VDC	11,0 VDC	22 VDC		
		Input current (max.)	132 A	66 A	260 A	130 A	390 A	195 A
		No Load Current	< 3,0A@2,5V	< 1,5A@25V	< 4,0A@12,5V	< 2,0A@25V	< 5,0A@12,5V	< 2,5A@25V
		Stand-by Current	< 0,4 A	< 0,2 A	< 0,4 A	< 0,2 A	< 0,6 A	< 0,3 A
	Output	Continuous Output Power	1200 VA ± 3%		2200 VA ± 3%		3000 VA ± 3%	
		Surge Power	Load 101% ~ 115% (1 Min)					
			2400 VA (2 Sec)		4000 VA (2 Sec)		6000 VA (2 Sec)	
		Frequency	50/60 Hz ± 0,3 Hz (user-selectable)					
		Output Voltage	200 / 220 / 230 / 240 ± 3%					
		max. Efficiency (Full Load)	89 %	90 %	89 %	90 %	89 %	90 %
		Output Waveform	Pure sine wave (THD <5% @ 12.5V / 25V / 115VAC, linear load) (THD <3% @ 12.5V / 25V / 230VAC, linear load)					
		INV AC Output	6 A max		10 A max		15 A max	
		AC Output	22 A max		26 A max		30 A max	
	Safety	Input protection	Overvoltage, undervoltage, polarity reversal (internal fuse)					
		AC output protection	short circuit / overload					
		AC input protection	16 Amp circuit breaker					
		Temperature protection	turn off					
		Battery temperature protection	via an RJ11 connector to the battery temperature sensor					
Charger mode	AC Input	Nominal voltage / frequency	230 VAC, 50/60 Hz (user-selectable)					
		Input voltage range	180 ~ 264 VAC					
		Input frequency range	50Hz:47 ~ 53 Hz / 60Hz:57 ~ 63Hz					
		Rated current	3,9 A (@230VAC)		7,9 A (@230VAC)		11,7 A (@230VAC)	
		Efficiency (max.)	>88%				>87%	
		AC input	16 A max					
		Power factor correction	>0,95 (max)					
	Auxiliary DC output	Output voltage	Battery voltage					
		Output current	20 A max					
	DC Output	Charging current range	12,5/25/37,5/50A	6,25/12,5/18,75/25A	25/50/75/100A	12,5/25/37,5/50A	37,5/75/112,5/150A	18,75/37,5/56,25/75A
		max. output current	14,4VDC@Gel-Type	28,8VDC@Gel-Type	14,4VDC@Gel-Type	28,8VDC@Gel-Type	14,4VDC@Gel-Type	28,8VDC@Gel-Type
		Battery temperature compensation	-25mV per °C	-50mV per °C	-25mV per °C	-50mV per °C	-25mV per °C	-50mV per °C
		Battery control (3-stage battery chargers)	Bulk / Absorption / Float					
	Signal and Control	Remote control (optional)	CR-20C / CR-16B / CR-8					
		Remote control terminal	controls the inverter ON/OFF operation					
		Dry contact terminal	by a relais					
	Bypass relay	Relay Specification	30 Amp / 250 VAC					
		Transfer time	0 sec					
Operating temperature range	Full load	-20°C ~ 50°C*			-20°C ~ 40°C*			
	Power de-rating	40W/°C, 51~60°C			60W/°C, 41~60°C		40W/°C, 41~60°C	
	Storage	-30°C ~ 70°C						
Operating humidity range		max 93%, non-condensing						
Cooling		temperature and load controlled fan						
Power-Sharing-Function		Inverter mode / charging mode / power distribution / power generator / power support						
mechanical specification	Dimensions (LxWxH)	386x251x116 mm			453x251x116 mm			
	Net weight	4,55 Kg			6 Kg		8 Kg	
Safetyt and EMS	Safety Standards	EN 62368-1						
	E-mark	CISPR 25 certified, ISO7637-2				& ISO11452-2		
	EMC Standards	EN55032 ClassA*, EN55024 ClassA*, EN61000-3-2, 3-3; EN61000-4-2, 3, 4, 5, 6, 8, 11				EN55032 ClassA*, EN55035 ClassA*, EN61000-3-2, 3-3; EN61000-4-2, 3, 4, 5, 6, 8, 11		

# energy technology for every area



## trust creates energy™

### our further delivery program



#### COTEK Inverters & Chargers

- pure sine wave inverters in perfection
- high performance combi inverter
- advanced battery chargers



#### DEFA cable and plug IP44 / 65

- ideal, highly secure 230V cable connection technology inside and outside
- Smallest external plug with cover flap

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