# C3500 Series

700-850 WATT AC/DC-DC/DC-BATTERY CHARGERS SINGLE OUTPUT

### **FEATURES**

- DC input 18 640 V
- AC input 1 or 3-phase, 47 400 Hz
- DC output 5-400V
- · Continuous short circuit protection
- · Overvoltage protection with auto restart
- · Thermal shutdown with auto restart
- · Industrial grade components
- · Compact and robust design





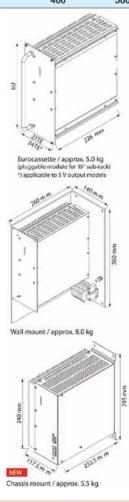
700 W				850 W							
				INPU	INPUT VDC				OUT	OUTPUT VDC	
18 <i>-</i> 36 VDC	OUTPUT AMPS	36 – 75 VDC	45 – 90 VDC	80 -160 VDC	160 - 320 VDC	320 – 380 1) VDC	320 – 640 3) VDC	OUTPUT AMPS	ADJ.	RANGE	
C 3520	80	C 3530	C 3540	C 3550	C 3570	C 3580 Z	C 3570 G	100	5	4.5 – 5.5	
C 3521	55	C 3531	C 3541	C 3551	C 3571	C 3581 Z	C 3571 G	65	9	8 – 10	
C 3522	50	C 3532	C 3542	C 3552	C 3572	C 3582 Z	C 3572 G	56	12	11 – 13	
C 3523	40	C 3533	C 3543	C 3553	C 3573	C 3583 Z	C 3573 G	45	15	14 – 16	
C 3524	27	C 3534	C 3544	C 3554	C 3574	C 3584 Z	C 3574 G	30	24	23 – 26	
C 3525	23	C 3535	C 3545	C 3555	C 3575	C 3585 Z	C 3575 G	27	28	26 – 30	
C 3529	12	C 3539	C 3549	C 3559	C 3579	C 3589 Z	C 3579 G	14	48	45 – 55	
C 3526	10	C 3536	C 3546	C 3556	C 3576	C 3586 Z	C 3576 G	12	60	58 - 68	
C 3527	5.3	C 3537	C 3547	C 3557	C 3577	C 3587 Z	C 3577 G	6.5	110	100 – 130	
C 3527 J	3.5	C 3537 J	C 3547 J	C 3557 J	C 3577 J	C 3587 ZJ	C 3577 GJ	4	200	190 – 200	
C 3528	2.8	C 3538	C 3548	C 3558	C 3578	C 3588 Z	C 3578 G	3.5	220	200 – 250	
C 3528 J	1.7	C 3538 J	C 3548 J	C 3558 J	C 3578 J	C 3588 7.I	C 3578 GJ	2	400	380 - 400	

## **AC/DC POWER SUPPLIES**

850W								
INPUT VAC, 1-PHASE			IIN		OUT	OUTPUT VDC		
115 ± 20%	230 + 15% - 20%	115 ± 20% 230 + 15% -20%	3X200 + 15% - 20%	3X400 + 15% - 20%	3X480 + 15% - 20%	OUTPUT AMPS	ADJ.	RANGE
C 3560	C 3580	C 3590	C 3560 V	C 3580 V	C 3590 V	100 ²)	5	4.5 – 5.5
C 3561	C 3581	C 3591	C 3561 V	C 3581 V	C 3591 V	65	9	8 – 10
C 3562	C 3582	C 3592	C 3562 V	C 3582 V	C 3592 V	56	12	11 – 13
C 3563	C 3583	C 3593	C 3563 V	C 3583 V	C 3593 V	45	15	14 – 16
C 3564	C 3584	C 3594	C 3564 V	C 3584 V	C 3594 V	30	24	23 – 26
C 3565	C 3585	C 3595	C 3565 V	C 3585 V	C 3595 V	27	28	26 – 30
C 3569	C 3589	C 3599	C 3569 V	C 3589 V	C 3599 V	14	48	45 – 55
C 3566	C 3586	C 3596	C 3566 V	C 3586 V	C 3596 V	12	60	58 – 68
C 3567	C 3587	C 3597	C 3567 V	C 3587 V	C 3597 V	6.5	110	100 – 130
C 3567 J	C 3587 J	C 3597 J	C 3567 VJ	C 3587 VJ	C 3597 VJ	4	200	190 – 200
C 3568	C 3588	C 3598	C 3568 V	C 3588 V	C 3598 V	3.5	220	200 – 250
C 3568 J	C 3588 J	C 3598 J	C 3568 VJ	C 3588 VJ	C 3598 VJ	2	400	380 – 400

## **BATTERY CHARGERS**

DATTER CHARGERO								
850W								
PUT VAC, 1-PH/	ASE	IN	PUT VAC, 3-PH/	ASE		OUTPUT VDC		
230 + 15% - 20%	115 ± 20% 230 + 15% - 20%	3X200 + 15% - 20%	3X400 + 15% - 20%	3X480 + 15% - 20%	OUTPUT AMPS	Nom. Battery Voltage	RANGE	
B 3581	B 3591	B 3561 V	B 3581 V	B 3591 V	50	12	12 – 16	
B 3582	B 3592	B 3562 V	B 3582 V	B 3592 V	28	24	24 – 32	
B 3584	B 3594	B 3564 V	B 3584 V	B 3594 V	15	48	48 – 64	
B 3586	B 3596	B 3566 V	B 3586 V	B 3596 V	12	60	60 – 80	
B 3587	B 3597	B 3567 V	B 3587 V	B 3597 V	7	110	110 – 145	
B 3588	B 3598	B 3568 V	B 3588 V	B 3598 V	3.5	220	220 - 290	
	230 + 15% -20% B 3581 B 3582 B 3584 B 3586 B 3587	230 + 15% -20%  230 + 15% -20%  B 3581  B 3581  B 3591  B 3582  B 3592  B 3584  B 3594  B 3586  B 3596  B 3587  B 3597	230 + 15% 230 + 15% 230 + 15% 250 + 15% 250 + 15% 200 +	PUT VAC, 1-PHASE INPUT VAC, 3-PH.  230 + 15%	PUT VAC, 1-PHASE INPUT VAC, 3-PHASE  230 + 15%	PUT VAC, 1-PHASE INPUT VAC, 3-PHASE  230 + 15%	PUT VAC, 1-PHASE         INPUT VAC, 3-PHASE         OUTPUT AMPS           230 + 15% -20%         3X200 + 3X400 + 15% 15% 15% 15% 15% 15% 15% 15%         15% 15% 15% 15% 10% 15% 15% 15% 10%         NOM. AMPS         NOM. BATTERY VOLTAGE           B 3581         B 3591         B 3561 V         B 3581 V         B 3591 V         50         12           B 3582         B 3592         B 3562 V         B 3582 V         B 3592 V         28         24           B 3584         B 3594         B 3564 V         B 3584 V         B 3594 V         15         48           B 3586         B 3596         B 3566 V         B 3586 V         B 3596 V         12         60           B 3587         B 3597         B 3567 V         B 3587 V         B 3597 V         7         110	



## **Euro Series**

### EURO OPTION SPECIFICATIONS

## OPTIONS INPUT

Option "i" (inrush current limiting): A thermistor is connected in series with the input lines which changes its resistance from high to low when it gets hot. It does not reduce the current surge if the input power is interrupted for a short period of time not allowing the thermistor to cool down. Thermistors are fitted as standard to all mains input models except for 1-phase input of models > 2.5kW. Thermistors are available up to 45A. For higher input current an electronic inrush current limitation can be offered.

Option "ie" electronic inrush current limiting An electronic circuit limits the inrush current.

Option "sd" (series diode): A series diode protects the module against input voltage of wrong polarity (additional power losses).

Option "ad" (anti-parallel diode): To avoid the power losses of a series diode a diode is provided with opposite polarity in parallel to the input blowing an internal or external fuse if the module is connected to a supply with wrong polarity.

Option "au" (auto-ranging) For standard dual AC input models the range of 115/230Vac is to be selected by connecting the input line to different pins on the connector. With auto-ranging the unit senses the input voltage and provides automatically the correct connection.

Option "p" (power fail): A signal (logic or relay) is given if the input voltage (AC or DC) drops below the specified limit. In AC input units we sense the rectified input voltage so that a power fail alarm will not be triggered if at light loads mains power returns before the input capacitors are substantially discharged.

Option "r" (relay): A relay instead of a logic signal is provided for failure indication.

#### OUTPUT

Option "dd" (decoupling diode): For redundant operation the outputs of two or more units are paralleled behind de-coupling diodes so that an internal fault of one module does not affect the operation of the others. These diodes cause power losses.

Option "cs" (active current sharing): An additional control circuit provides active current sharing via an interconnecting wire between converters that operate in parallel. Active current sharing should be used for multi-output units operating in parallel.

Option "csi" (current sharing interrupt): Option "csi" will effect the removal of the "cs" signal. Should there be an instance where a unit is not supplying the load, then the effect of its "cs" signal is removed, and the load voltage is unaffected by this condition.

Option "h1" (inhibit): A terminal connected to the negative input line also shuts off the converter. This can also be used in conjunction with a thermal trip which shuts the unit down.

Option "**h2**" (inhibit): Operation of the unit is inhibited if a voltage signal (5V/10mA) is applied in reference to the negative line of the (main) output.

Option "**rco**" (reducing current limiting at over temperature) A circuit reduces the current limiting level at higher temperature (to be specified).

Option "d" (DC-ok, one output): A logic signal is given if the output voltage (main output in multi-output systems) is below the specified limit.

Option "m" (DC-ok, all outputs): In multi-output systems a logic signal is provided if the voltage of any output is below the specified limit.

Option "ac" (AC ok) A logic signal connected to relay contacts is given if the output voltage of an inverter is below the specified limit.

Option "y" (sys-reset): This logic signal is a combination of power fail and DC-ok as specified for VME systems.

Option "r" (relay): A relay instead of a logic signal is provided for failure indication."

#### **PROGRAMMING & MONITORING**

PROGRAMMING SERIES 200-5800, 6600					
	By external signal, 0-10Vdc	eu1			
Of output voltage	By external signal, 4-20mA	eu2			
from 0 to 100%	By 270° potentiometer	eu3			
	By 10 turn potentiometer	eu4			
	By external signal, 0-10Vdc	ei1			
Of output current	By external signal, 4-20mA	ei2			
from 0 to 100%	By 270° potentiometer	ei3			
	By 10 turn potentiometer	ei4			
Isolating amplifier for p	iso				
Programming via interface RS232 or IEEE488					

MONITORING SERIES 200-5800, 6600				
Of output voltage	By external signal, 0-10Vdc	mu1		
from 0 to 100%  Of output current	By external signal, 4-20mA	mu2		
	By external signal, 0-10Vdc	mi1		
from 0 to 100%	By external signal, 4-20mA	mi2		
Isolating amplifier for	iso			
Programming via inte	erface RS232 or IEEE488			

CHARGER PROGRAMMING	ALL SERIES)	
Temperature compensa	ted charging voltage(sensor not included)	tc
Temperature sensor	Not interchangeable due to fixed resistor values	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Interchangeable, IC controlled	ts2
Automatic selection of charging characteristic (float / equalize charge) with timer		
Additionally: Manual selection of charging characteristic		
Additionally: Boost chartime delayed return to n	ge operation (manually activated with ormal operation)	ch3

## **Euro Series**

### EURO OPTION SPECIFICATIONS

PROGRAMMING / MONITORING- SER	IES 6400	
Programming of output voltage and current from 0-100%	By external signal, 0-10Vdc	<b>e</b> 1
including isolation	By external signal, 4-20mA	<b>e2</b>
Programming of output voltage	By 270° potentiometer	eu3
from 0-100%	By 10 turn potentiometer	eu4
Programming of output current	By 270° potentiometer	ei3
from 0-100%	By 10 turn potentiometer	ei4
Monitoring of output voltage	By external signal, 0-10Vdc	m1
and current from 0-100% including isolation	By external signal, 4-20mA	m2
Remote on/off programming	By external signal, 0-10Vdc	em1
and monitoring of output voltage and current from	By external signal, 4-20mA	em2
0-100% including isolation	Via RS232 and IEEE488	em3
Improved tolerance	Between reference (external signal) and measured value / between measured value and displayed signal: voltage 0.2% and current 0.5%.	tol

#### **ENVIRONMENT**

Option "t" (tropical protection):The unit is given additional protection by a heavy coat of varnish on the printed circuit board(s) and components.

Option "c" (extended temperature range):The circuit is designed and tested for operation at an ambient temperature as low as -40 °C.

Option "ms" (increased mechanical strength): Screws are secured by Locktite and heavy components are fastened by ties and/or glue. Modules with the "ms" option meet the standard EN61373 regarding shock and vibration.

#### **MECHANICS**

Standard mounting "Eurocassette" pluggable module for 19" sub-racks 84TE

Option "w" (wall mounting): Module is screwed against a mounting plate for installation in a cabinet. The load connections are typically a terminal block.

Option "cha" (chassis mount) Module is designed for installation to a structure or within cabinet. Screw type connectors are supplied with the module.

Option "din" (DIN rail mount) Module is designed for DIN rail mounting to a structure or within Cabinet. Screw type connectors are supplied with the module.

