

Engineering Specification of C300R 1000~3000VA

C300R-010-B

C300R-015-B

C300R-020-B

C300R-030-B

INPUT

Cold Start	yes, default frequency=50Hz	yes, default frequency=50Hz	yes, default frequency=50Hz	yes, default frequency=50Hz
Acceptable Input Voltage	176VAC-288VAC	176VAC-288VAC	176VAC-288VAC	176VAC-288VAC
Phase	Single phase with ground	Single phase with ground	Single phase with ground	Single phase with ground
Transfer Voltage Range - Normal	220/230/240Vac	220/230/240Vac	220/230/240Vac	220/230/240Vac
-Line low threshold	176VAC/184VAC/192VAC (±4%)	176VAC/184VAC/192VAC (±4%)	176VAC/184VAC/192VAC (±4%)	176VAC/184VAC/192VAC (±4%)
-Line low comeback	186VAC/194VAC/202VAC (±4%)	186VAC/194VAC/202VAC (±4%)	186VAC/194VAC/202VAC (±4%)	186VAC/194VAC/202VAC (±4%)
-Line Boost threshold	198VAC/207VAC/216VAC (±4%)	198VAC/207VAC/216VAC (±4%)	198VAC/207VAC/216VAC (±4%)	198VAC/207VAC/216VAC (±4%)
-Line Boost comeback	206VAC/215VAC/255VAC (±4%)	206VAC/215VAC/255VAC (±4%)	206VAC/215VAC/255VAC (±4%)	206VAC/215VAC/255VAC (±4%)
-Line back threshold	233VAC/243VAC/254VAC (±4%)	233VAC/243VAC/254VAC (±4%)	233VAC/243VAC/254VAC (±4%)	233VAC/243VAC/254VAC (±4%)
-Line back comeback	225VAC/236VAC/246VAC (±4%)	225VAC/236VAC/246VAC (±4%)	225VAC/236VAC/246VAC (±4%)	225VAC/236VAC/246VAC (±4%)
-Line high threshold	264VAC/276VAC/288VAC (±4%)	264VAC/276VAC/288VAC (±4%)	264VAC/276VAC/288VAC (±4%)	264VAC/276VAC/288VAC (±4%)
-Line high comeback	254VAC/266VAC/278VAC (±4%)	254VAC/266VAC/278VAC (±4%)	254VAC/266VAC/278VAC (±4%)	254VAC/266VAC/278VAC (±4%)
Transfer Voltage Range - Wide Range	220/230/240Vac	220/230/240Vac	220/230/240Vac	220/230/240Vac
-Line low threshold	154VAC/161VAC/168VAC (±4%)	154VAC/161VAC/168VAC (±4%)	154VAC/161VAC/168VAC (±4%)	154VAC/161VAC/168VAC (±4%)
-Line low comeback	164VAC/171VAC/178VAC (±4%)	164VAC/171VAC/178VAC (±4%)	164VAC/171VAC/178VAC (±4%)	164VAC/171VAC/178VAC (±4%)
-Line Boost threshold	198VAC/207VAC/216VAC (±4%)	198VAC/207VAC/216VAC (±4%)	198VAC/207VAC/216VAC (±4%)	198VAC/207VAC/216VAC (±4%)
-Line Boost comeback	206VAC/215VAC/255VAC (±4%)	206VAC/215VAC/255VAC (±4%)	206VAC/215VAC/255VAC (±4%)	206VAC/215VAC/255VAC (±4%)
-Line back threshold	233VAC/243VAC/254VAC (±4%)	233VAC/243VAC/254VAC (±4%)	233VAC/243VAC/254VAC (±4%)	233VAC/243VAC/254VAC (±4%)
-Line back comeback	225VAC/236VAC/246VAC (±4%)	225VAC/236VAC/246VAC (±4%)	225VAC/236VAC/246VAC (±4%)	225VAC/236VAC/246VAC (±4%)
-Line high threshold	264VAC/276VAC/288VAC (±4%)	264VAC/276VAC/288VAC (±4%)	264VAC/276VAC/288VAC (±4%)	264VAC/276VAC/288VAC (±4%)
-Line high comeback	254VAC/266VAC/278VAC (±4%)	254VAC/266VAC/278VAC (±4%)	254VAC/266VAC/278VAC (±4%)	254VAC/266VAC/278VAC (±4%)
Surge Protection Rating (Energy Joules)	L-N: 320V 460J/6500A	L-N: 320V 460J/6500A	L-N: 320V 460J/6500A	L-N: 320V 460J/6500A
Input Frequency Range - Normal	45-55Hz / 55-65Hz (±0.1 Hz)	45-55Hz / 55-65Hz (±0.1 Hz)	45-55Hz / 55-65Hz (±0.1 Hz)	45-55Hz / 55-65Hz (±0.1 Hz)
Input Frequency Range - Generator	40 Hz - No limit	40 Hz - No limit	40 Hz - No limit	40 Hz - No limit
Generator Set	Support	Support	Support	Support

OUTPUT

Power				
-Power(kVA) max	1.0	1.5	2.0	3.0
-Power(kW) max	0.9	1.4	1.8	2.7
-Power Factor	0.9	0.9	0.9	0.9
Output Voltage				
-Waveform	Pure sinewave	Pure sinewave	Pure sinewave	Pure sinewave
-Nominal voltage	220VAC/230VAC/240VAC	220VAC/230VAC/240VAC	220VAC/230VAC/240VAC	220VAC/230VAC/240VAC
-Voltage regulation (Bat. Mode)	± 5 %	± 5 %	± 5 %	± 5 %
-Voltage distortion (typical)	< 3% THD, linear load	< 3% THD, linear load	< 3% THD, linear load	< 3% THD, linear load
	< 6% THD, non-linear load	< 6% THD, non-linear load	< 6% THD, non-linear load	< 6% THD, non-linear load
Output Frequency				
-Synchronization range	45-55Hz / 55-65Hz	45-55Hz / 55-65Hz	45-55Hz / 55-65Hz	45-55Hz / 55-65Hz
-Battery mode	50/60±0.1 Hz	50/60±0.1 Hz	50/60±0.1 Hz	50/60±0.1 Hz
Transfer Time				
-Line mode to battery mode (Normal mode)	2 ~ 6 ms	2 ~ 6 ms	2 ~ 6 ms	2 ~ 6 ms
-Line mode to battery mode (Generator mode)	13 ms (max.)	13 ms (max.)	13 ms (max.)	13 ms (max.)
Full Load Efficiency				
-Normal Line mode with battery full charged	>97%	>97%	>97%	>97%
-Buck mode with battery full charged	>95%	>95%	>95%	>95%
-Boost mode with battery full charged	>92%	>92%	>92%	>92%
-Battery mode @ 12Vdc/Battery	>82%	>82%	>82%	>82%
Overload Capability (Line Mode)	110%~118% : 3 min	110%~118% : 3 min	110%~118% : 3 min	110%~118% : 3 min
	119%~160% : 0.2 s	119%~160% : 0.2 s	119%~160% : 0.2 s	119%~160% : 0.2 s
Overload Capability (Battery Mode)	≥110% ±6% : 30 s	≥110% ±6% : 30 s	≥110% ±6% : 30 s	≥110% ±6% : 30 s
	≥120% ±6% : 0.1 s	≥120% ±6% : 0.1 s	≥120% ±6% : 0.1 s	≥120% ±6% : 0.1 s
Crest Ratio	3:1	3:1	3:1	3:1

BATTERY

Rating/Type	12VDC/7Ah	12VDC/9Ah	12VDC/7Ah	12VDC/9Ah
Quantity	3	3	6	6
DC Voltage	36VDC	36VDC	72VDC	72VDC
Back-up Time (full load)	4.5 minutes	3 minutes	4.5 minutes	3 minutes
Battery-Low Voltage	32.4VDC, 10.8V/pcs	32.4VDC, 10.8V/pcs	64.8VDC, 10.8V/pcs	64.8VDC, 10.8V/pcs
Battery Shutdown Voltage	28.8VDC, 9.6V/pcs	28.8VDC, 9.6V/pcs	57.6VDC, 9.6V/pcs	57.6VDC, 9.6V/pcs

Charger				
-FAST Charging voltage	41.1 ~ 42.3VDC, 13.7~14.1V/pcs	41.1 ~ 42.3VDC, 13.7~14.1V/pcs	82.2 ~ 84.6VDC,13.7~14.1V/pcs	82.2 ~ 84.6VDC,13.7~14.1V/pcs
-Float Charging voltage	40.8 ~ 41.4VDC, 13.6~13.8V/pcs	40.8 ~ 41.4VDC, 13.6~13.8V/pcs	81.6 ~ 82.8VDC, 13.6~13.8V/pcs	81.6 ~ 82.8VDC, 13.6~13.8V/pcs
-Charging current (max)	1.5A	1.5A	1.5A	1.5A
-Charging time	3h charge to 90%	3h charge to 90%	3h charge to 90%	3h charge to 90%
Features				
EPO Function	YES	YES	YES	YES
Load Segments Control	YES	YES	YES	YES
Swappable LCD Direction	YES	YES	YES	YES
Rack-Tower 2-in-1 Design	YES	YES	YES	YES
Extended Run Time	YES	YES	YES	YES
Easy Battery Replacement	YES	YES	YES	YES
INDICATOR & ALARM				
Display	LCD Display	LCD Display	LCD Display	LCD Display
Battery mode	Beeps every four second	Beeps every four second	Beeps every four second	Beeps every four second
Battery low	Sounding every second	Sounding every second	Sounding every second	Sounding every second
Overload	Sounding every second	Sounding every second	Sounding every second	Sounding every second
Fault	Continuous beeping	Continuous beeping	Continuous beeping	Continuous beeping
INTERFACE				
RS232	Standard, supports WinPower Software	Standard, supports WinPower Software	Standard, supports WinPower Software	Standard, supports WinPower Software
USB	Standard, supports WinPower Software	Standard, supports WinPower Software	Standard, supports WinPower Software	Standard, supports WinPower Software
Intelligent Slot	SNMP / AS400 Card	SNMP / AS400 Card	SNMP / AS400 Card	SNMP / AS400 Card
Network Transient Protection	RJ45	RJ45	RJ45	RJ45
AC Outlets	IEC C13 x8	IEC C13 x8	IEC C13 x8	IEC C13 x8 + IEC C19 x1
MECHANICAL				
WxHxL (mm)-UPS	438x86.5x430	438x86.5x430	438x86.5x600	438x86.5x600
Net Weight-UPS	16/22.1kg	16/22.1kg	29.5/41.1kg	29.5/41.1kg
Operating Altitude	0-1500 meters, @ 0~40 °C 1501-3000 meters, @ 0~35 °C	0-1500 meters, @ 0~40 °C 1501-3000 meters, @ 0~35 °C	0-1500 meters, @ 0~40 °C 1501-3000 meters, @ 0~35 °C	0-1500 meters, @ 0~40 °C 1501-3000 meters, @ 0~35 °C
Operating Temperature Range	0°C ~ 40 °C	0°C ~ 40 °C	0°C ~ 40 °C	0°C ~ 40 °C
Relative Humidity	0 ~ 95% (No condensing)	0 ~ 95% (No condensing)	0 ~ 95% (No condensing)	0 ~ 95% (No condensing)
Audible Noise （Line mode）	<40dB @ 1meter	<40dB @ 1meter	<40dB @ 1meter	<45dB @ 1meter
Audible Noise （Battery mode）	<45dB @ 1meter	<45dB @ 1meter	<45dB @ 1meter	<50dB @ 1meter
REGULATIONS				
- Conduction Emission	IEC 62040-2	IEC 62040-2	IEC 62040-2	IEC 62040-2
- Radiation Emission	IEC 62040-2	IEC 62040-2	IEC 62040-2	IEC 62040-2
- ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
- RS	IEC 61000-4-3	IEC 61000-4-3	IEC 61000-4-3	IEC 61000-4-3
- EFT	IEC 61000-4-4	IEC 61000-4-4	IEC 61000-4-4	IEC 61000-4-4
- Surge	IEC 61000-4-5	IEC 61000-4-5	IEC 61000-4-5	IEC 61000-4-5
- CS	IEC61000-4-6	IEC61000-4-6	IEC61000-4-6	IEC61000-4-6
- MS	IEC61000-4-8	IEC61000-4-8	IEC61000-4-8	IEC61000-4-8
- DIPS	IEC61000-4-11	IEC61000-4-11	IEC61000-4-11	IEC61000-4-11
- Low Frequency Signal	IEC61000-2-2	IEC61000-2-2	IEC61000-2-2	IEC61000-2-2
- Harmonic	IEC61000-3-2	IEC61000-3-2	IEC61000-3-2	IEC61000-3-2
- Safety	EN 62040-1-1	EN 62040-1-1	EN 62040-1-1	EN 62040-1-1