

DC To DC Comparison Chart

Manufacturer	REDARC	Intervolt	CTEK	Projecta	Thunder	Sterling Power	GSL Electronics	Enerdrive	Victron	TJM	KINGS	Voltech
12 Volt Models	BCDC1206 BCDC1220 BCDC1220-IGN BCDC125D BCDC1240D BCDC1250D	DC1225ACK-RP	D2505E	IDC25 IDC45	TDR02020	BB1230 BB1260 BBW12120	DBIC1224-1230 NGBC1240 NGBC1212	EN3DC40+	Orion-TR 12/12-18 Orion-TR 12/12-30 (Isolated Models)	0327IMDC25A	AKEP-DC20A_01 AKEP-DC25A_01	DK-25 SCM300 SBC-5926
24 Volt Models	BCDC2420 BCDC2420-LV					BB122470 (12-24V) BB242435 (24-24V) BB242125 (24-12V)	DBIC1224-1230 24V input /12V output	EN3DC30-24	Orion-TR 12/24-40 Orion-TR 24/24-45 Orion-TR 24/12-20 Orion-TR 24/24-42 (Isolated Models)			
Lithium Models	LFP2420 LFP2420-LV	DC1225ACK-RP	D2505E	IDC25L		BB123670 (12-36V) BB124870 (12-48V)	DBIC1224-1230 NGBC1240	EN3DC40+	All of the above			DK-25
Model Selected for Comparison	BCDC1220D 25A COMPARISON	DC1225ACK-RP 25A COMPARISON	D2505E 20A COMPARISON	IDC25 25A COMPARISON	TDR02020 20A COMPARISON	BB1230 30A COMPARISON	DBIC1224-1230 30A COMPARISON	EN3DC40+ 40A SET AT 25A	Orion-TR 12/12-30 30A COMPARISON	0327IMDC25A 25A COMPARISON	AKEP-DC25A_01 25A COMPARISON	DK-25 25A COMPARISON
Selectable Battery Types	WET, CALCIUM,AGM,GEL & LifePO4	WET, CALCIUM,AGM,GEL & LifePO4	WET, CALCIUM,AGM,GEL & LifePO4	WET, CALCIUM,AGM,GEL	WET, CALCIUM,AGM,GEL	WET, CALCIUM,AGM,GEL & LifePO4 (all Models)	WET, CALCIUM,AGM,GEL & LifePO4	WET,AGM,GEL & LifePO4	WET, CALCIUM,AGM,GEL & LifePO4	WET, CALCIUM,AGM,GEL	WET, CALCIUM,AGM,GEL	WET, CALCIUM,AGM,GEL & LifePO4
Buck and Boost Voltage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dual Battery Isolating	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Alternator Input Voltage Range (V) (Operating range)	9 - 32 VDC	9 - 16 VDC	11.5 - 23V	9V - 32 VDC	12.2-16 VDC	11 - 20V 20-30	11.5 - 30 VDC	10.5 - 16V (12V) 21 - 32V (24V)	10-17V	9V - 32 VDC	11.9 - 25V (Ign Sens) 12.8 - 25V (Non Ign)	11 - 32 V
Minimum Input Start-up Voltage (V) (Needs to see this before it starts charging from alternator)	13.2V (Non Ign) 12.0V (Ign Sens) 26.4V (Non Ign) 24.0V (Ign Sens)	13.0V (non Ign) 12.8V (Ign Sens)	13.1V (Non Ign) 11.8V (Ign Sens)	13.4V (Non Ign) 12.2V (Ign Sens) 26.8V (Non Ign) 24.4V (Ign Sens)	13.1VDC	13.3V (Non Ign) 13.9V (Ign Sens) custom set lower	11.5V	13.2V (Non Ign) 12.2V (Ign Sens) 26.4V (Non Ign) 24.0V (Ign Sens)	You Set (Fully customisable)	13.4V (Non Ign) 12.2V (Ign Sens) 26.8V (Non Ign) 24.4V (Ign Sens)	13.8V (Non Ign) 12.2V (Ign Sens)	13.2V (Non Ign) 12.0V (Ign Sens) 26.3 (Non Ign) 25.2V (Non Ign)
Maximum Input Current (Amps)	NS	35 A	25A	40A	NS	120 amps for 120 amp model	40A	50A	NS	40A	NS	NS
Output Voltage - Nominal Voltage	12 VDC	12 VDC	12 VDC	12 VDC	12VDC	12, 24, 35, 48 VDC	12 VDC	12 VDC	12 VDC	12 VDC	12 VDC	12VDC
Maximum Regulated Charge Voltage (V)	15.3V	NS	15.8V	15.4V	15.2V	15.5V adjustable 12V only model	14.8V	15.5V	15V	15.4V	NS	14.8V
Maximum Possible Output Voltage (V)	33V	NS	NS	15.4V	16V	NS	14.8V	16V	15V	15.4V	NS	16V
Rated Output Current (A) (Constant Current)	25A	25A @ 50°C	20A	25A	20A	30 A	30A	Selectable 5 - 50A (Default 40 Amps)	30A	25A	25A	25A
Derates Charge Current from	NS	50°C	30°C 16A 50°C 13A	Starts to derate at 74°C and will stop at 100°C (94°C still is 64amps)	60°C	NS	40°C 1A°C	from 45°C 1/2 Current at 50°C	Derate 3% per °C above 40°C	Starts to derate at 74°C and will stop at 100°C (94°C still is 64amps)	60°C	17mi per °C above 30°C
Time Delay Function (if known in seconds)	20 seconds	120 seconds	5 seconds	NS	1 second	30 second ramp up	NS	5 seconds	NS	NS	NS	NS
Isolates The Auxiliary Battery at (V)	4V	12.0V (non Ign) 11.8V (Ign Sense)	NS	12.8V (Non Ign) 11.9V (Ign Sens)	12.2	NS	NS	12.8V (Non Ign) 12V (Ign Sens) 25.6V (Non Ign) 24V (Ign Sens)	7V	12.8V (Non Ign) 11.9V (Ign Sens)	11.9 - 25V (Ign Sens) 12.8 - 25V (Non Ign)	11.5V (Ign Sens) 12.6V (Non Ign)
Isolates The Start Battery at (V)	12.7V (Non Ign) 11.9V (Ign Sens) 25.4V (Non Ign) 23.8V (Ign Sens)	12.8V (Non Ign) 11.5V (Ign Sense)	12.8V (Non Ign) 11.4V (Ign Sens)	12.8V (Non Ign) 11.9V (Ign Sens)	12.2V	13V (Non Ign) 10V (Ign Sens)	11.5V	12V	You Set (Fully customisable)	12.8V (Non Ign) 11.9V (Ign Sens)	NS	11V
Minimum Auxiliary Battery Voltage (Cannot see the Auxiliary battery below this voltage)	NS	5V	NS	2.0V	1.5v	NS	9V	8V	7.5V	2.0V	5V	NS
IP Rating	IP65	IP67	IP65	IP67	Splash resistant (not IP rated)	IP21	Polymer Encapsulated (not IP rated)	IP32	IP43	IP67	NS	IP67
Ambient Operating Temperature Range	-10°C to +80°C	-20°C to +85°C	NS	-10°C to +85°C	0°C to +60°C	-20°C to +50°C	0°C to +70°C	-20°C to +60°C	-20°C to +55°C	-10°C to +80°C	-10°C - 50°C	-20°C - 85°C
Maximum Output Power (WATTS)	375W	NS	NS	385W	240W	800W	NS	775W	430W @ 25°C	385W	NS	375W
Solar Specifications												
Solar Input	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
MPPT / PWM	MPPT	MPPT	MPPT	MPPT	MPPT	✗	PWM & MPPT	MPPT	✗	MPPT	MPPT	MPPT
Solar Input Voltage VOC	9 - 32V 12V Models 9 - 28V 24V Models	18 - 28 VOC Max	18-23V	28 VDC	13 - 25 VOC	✗	16V to 32 VOC	14.5 - 45V	✗	28 VOC	9 - 25V	15 - 41 V
Maximum Solar Panel Input (Watts)	NS	Unlimited	50 - 300W	385W	300W	✗	30 - 300W	+ 23V 500W (800 Max) +17.5V-6V 750W (800W Max)	✗	385W	360W	18V 450W 24V 600W
Minimum Solar Start up Voltage (Needs to see this voltage from the panel before charging)	9.0V	18 VDC	NS	9.0V	13.1V	✗	0.8V above charging battery voltage	14.5V	✗	9.0V	14.5V	15V
Charge from Solar + Alternator (BOTH/PREF ALT/PREF SOLAR)	PREF SOLAR	ONE OR THE OTHER	BOTH	BOTH	N/A	✗	PREF ALT	PREF ALT	✗	BOTH	NS	PREF ALT
Features												
Ignition Sensing	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Reverse Polarity Protection	✓	✓	✓	✓	✓	✗	NO - SOLAR YES	✓	✓	✓	YES	✓
Anti Spark Protection	✓	NS	✓	✓	✓	✓	YES (Solar)	NS	✓	✓	NS	✓
Over Voltage Protection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Overtemp Protection (onboard)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Battery Temp Sensor (as opposed to onboard temp above)	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Memory Of Last Charge Stage	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Reduces Float Voltage	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Remote Monitor Option / Included	OPTIONAL LED	INCLUDED	✗	OPTIONAL (DBM100)	✗	OPTIONAL	OPTIONAL	Blue Tooth App	OPTIONAL (DBM100)	✗	NS	NS
Shows Charge Stages on Unit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Timers on Bulk & Absorption Stages	✓	✓	✓	✓	Yes	✓	✗	✓	✗	✓	✓	✗
Standby Current Draw	<8mA	<10mA	NS	9.5-10.5mA	3mA	1 mA	3mA	<50mA	<1mA	9.5-10.5mA	20-30mA	NS
Recommended Input Fuse Rating	40A	40A	30A	50A	30A	NS	40A (12V) 20A (24V)	70A (12V) 40A (24V)	60A	50A	50	NS
Recommended Output Fuse Rating	40A	30A	30A	50A	30A	NS	40A	60A (12V)	60A	50A	50	NS
Dimensions Length Width Depth (mm)	165Lx120Wx37D	112Lx112Wx75D	192Lx110Wx65D	150Lx122Wx40D	175Lx130Wx50D	190Lx160Wx50D	162Lx175Wx32.3D	242Lx172Wx74D	130Lx186Wx80D	150Lx122Wx40D	142Lx125.6Wx33.5D	158Lx115Wx53D
Weight (grams)	1000g	690g	700g	800g	NS	1200g	500g	3950g	1800g	800g	750g	800
Country Of Manufacture (if Known)	Australia	Australia	NS	China	China	Taiwan	Australia	Australia	China	China	NS	China
Warranty	2 Years	2 Years	2 Years	2 Years	1 Year	2 Years	3 Years	2 Years (+3Y Pro Rata after 2)	5 Years	3 Years	12 Months	2 Years
Charge Information												
Stages of Charge	3 Stage Charge	3 Stage Charge	5 Stage Charge	3 Stage Charge	8 Stage from Alternator 3 stage from Solar	4 Stage Charge	3 Stage Charge	2 Stage / 3 Stage Selectable	3 Stage Charge	3 Stage Charge	3 Stage Charge	6 Stage Charge
Charge Voltages (BULK/ABSORPTION/FLOAT)												
AGM	(A) NS/14.6/13.6 (A) NS/14.6/13.3	14.7/14.6/13.6 14.1/14.2/13.5	14.7/14.7/13.6 NS	14.4/14.4/13.7 14.5/14.5/13.8	14.5/14.4/13.7 14.5/14.5/13.8	14.6V/14.6V/13.7V NS/14.4V/13.5V	NS/14.4V/13.5V NS/14.4V/13.5V	NS/14.6V/13.6V NS/14.4V/13.7V	Fully Customisable Fully Customisable	14.4/14.4/13.7 14.1/14.1/13.7	NS/14.6V/13.3V NS/14.2V/13.3V	14.4V/14.4V/13.6V 14.4V/14.4V/13.6V
GEL	(B) NS/15.0/13.3 (C) NS/15.0/13.8	14.5/14.4/13.4 14.9/14.8/13.8	14.4/14.4/13.6 NS	14.7/14.7/13.7 15.4/15.4/13.7	14.5/14.5/13.8 14.5/14.5/13.8	14.4V/14.4V/13.6 15.0V/15.0V/13.6V	NS/14.6V/13.5V NS/14.8V/13.5V	NS/14.6V/13.5V Custom Program	Fully Customisable Fully Customisable	14.7/14.7/13.7 15.4/15.4/13.7	NS/14.2V/13.3V NS/15.3V/13.3V	14.6V/14.6V/13.6V 14.8V/14.8V/13.6V
WET/FLOODED	(E) NS/14.5/13.6	14.6/14.4	14.2/14.2/13.3	N/A	N/A	14.4V/14.4V/13.8V	NS/14.6V/13.5V	Custom Program	Fully Customisable	N/A	N/A	14.4V/14.4V/13.6V
LITHIUM												
Customisable Charge Curve Option	✗	✗	✗	✗	✗	✓	✗	✗	✓	✗	✗	✗
Maintenance or Pulse Mode	✗	✓	✓	✗	✓	✓	✗	✗	✗	✗	✗	✗
Power Supply Mode	✗	✓	✗	✗	✓	✓	✗	✗	✓	✗	✗	✗
Equalization/Desulphation Mode	✗	✗	✓	YES 15.4V (Calcium mode Only)	15.2V	✓	✗	YES 15.5V (Flooded only)	Fully Customisable	YES 15.4V (Calcium mode only)	✗	✗

NOTES:

* This information has been gathered from the manufacturers' user manuals, packaging, websites and brochures. Each manufacturer was contacted to confirm the information was accurate and MOST responded.

* 12 Volt Shed and War Bonnet Pty Ltd takes no responsibility for the information supplied. Please contact us directly at email: admin@12voltshed.com.au if you see any errors or if you have any questions or concerns.

* Whilst testing has been done on some models, 12 Volt Shed has not independently tested each unit against the manufacturers specifications. We do from time to time conduct product reviews where we post more detailed information.

NS - NOT STATED BY MANUFACTURER N/A - NOT AVAILABLE