



# DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

**Introductory Note:** *This document contains summaries of typical electrical and mechanical specifications for the Deltran family of battery charger products. The contents of these specifications are not intended to either make or imply any specific guarantee or warranty with respect to either the physical configuration or performance of any of the battery charger products listed herein. Battery charger designs are subject to change without notice. It is the responsibility of the end user to determine whether a specific battery charger is appropriate for use in any application. This includes determining and resolving any compatibility issues that may exist between a specific battery charger and a specific battery, whether those issues arise as a result of fundamental characteristics of either item or from exposure due to the intended application. To that end, it is recommended that the end user should contact technical representatives from the manufacturer of each product to assist in making that determination.*

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## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Battery Tender<sup>®</sup> Junior (12 &amp; 6 Volt)</b>		
Charger Specification Summary		
<b>Deltran Part Number:</b>	<b>021-0123</b>	<b>021-0127</b>
<b>Nominal Output:</b>		
<b>Voltage:</b>	<b>12 Volts</b>	<b>6 Volts</b>
<b>Current:</b>	<b>0.75 Amps</b>	<b>0.75 Amps</b>
<b>Input Voltage:</b>	115 VAC	
<b>Input Frequency:</b>	60 Hz	
Maximum Input Current:	0.43 Arms	0.23 Arms
Nominal Efficiency:	60%	60%
Nominal Power Factor:	0.78	0.78
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	9 Watts	5.5 Watts
Maximum Current: During Bulk Charge	0.75 Amps	0.75 Amps
Absorption Voltage:	14.4 VDC = (2.37 vpc)	7.2 VDC = (2.37 vpc)
Note: Since the Battery Tender <sup>®</sup> Junior is a 2-step charger; the absorption voltage is the switchover point from bulk charge to float charge.		
Equalization Voltage:	NA	
Float Voltage:	13.2 VDC = (2.2 vpc)	6.6 VDC = (2.2 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	6 to 6.2 VDC (2 to 2.07 vpc)
<b>Electrical Isolation:</b>		
Input / Output:	1500 VAC	
Input / Chassis:	1500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	3.313 in(85 mm)L x 2.313 in(59 mm)W x 1.875 in(48 mm)H	
<b>Weight:</b>	1 lb.	
<b>Carton Size: (Plastic Clam Shell)</b>	7.5 in(191 mm)L x 3.75 in(96 mm)W x 9.25 in(235)H	
<b>Shipping Weight:</b>	2 lbs.	
<b>Enclosure:</b>	94V0 Flame Retardant Plastic	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	YES	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 1** Specification Sheet: Battery Tender<sup>®</sup> Junior



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Battery Tender<sup>®</sup> Plus (12 &amp; 6 Volt)</b>					
Charger Specification Summary					
Deltran Part Number:	021-0128-1	021-0128-2	021-0128-3	021-0128-4	021-0144
<b>Nominal Output:</b>					
Voltage:	12 Volts	12 Volts	12 Volts	12 Volts	6 Volts
Current:	1.25 Amps	1.25 Amps	1.25 Amps	1.25 Amps	1.25 Amps
Input Voltage:	115 VAC	220 VAC	230 VAC	240 VAC	115 VAC
Input Frequency:	60 Hz	50 Hz	50 Hz	50 Hz	60 Hz
Maximum Input Current:	0.36 Arms	0.19 Arms	0.18 Arms	0.17 Arms	0.18 Arms
Nominal Efficiency:	55%	55%	55%	55%	55%
Nominal Power Factor:	0.8	0.8	0.8	0.8	0.8
<b>Charger Output:</b>					
Maximum Power: (+/- 3%) @ 25 °C	18 Watts				9 Watts
Maximum Current: During Bulk Charge	1.25 Amps				1.25 Amps
Absorption Voltage:	14.4 VDC = (2.4 vpc)				7.2 VDC = (2.4 vpc)
Absorption to Float Transition:	Charge Current drops: <b>below 0.1 Amp</b> or Absorption Charge <b>Duration exceeds 6 Hours</b> , or if battery voltage does not reach Absorption Charge level <b>within 72 hours.</b>				
Equalization Voltage:	NA				
Float Voltage:	13.2 VDC = (2.2 vpc)				6.6 VDC = (2.2 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)				6 to 6.2 VDC (2 to 2.07 vpc)
<b>Output Regulation:</b>					
Line (Typical):	Less than 1% at 120VAC				
<b>Electrical Isolation:</b>					
Input / Output:	1500 VAC				
Input / Chassis:	1500 VAC				
Output / Chassis:	500 VAC				
Operating Temp:	-20°C to 50°C				
Dimensions:	4.875 in(124 mm)L x 3.25(83 mm)W x 2.875 in(73 mm)H				
Weight:	2.7 lbs.				
Carton Size:	6 in(153 mm)L x 6 in(153 mm)W x 6 in(153 mm)H				
Shipping Weight:	3 lbs.				
Enclosure:	Powder Coated Aluminum Chassis				
<b>Special Features:</b>					
Short Circuit Protection:	YES				
Reverse Polarity Protection:	YES				
Spark Proof:	YES				
Temperature Compensation:	YES = -3.5mV/ °C/Cell				
Agency Listings: UL, ETL, CSA, etc.	Selected models are listed to UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900				

**Table 2** Specification Sheet: Battery Tender<sup>®</sup> Plus (12V and 6V)



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Battery Tender® Plus (8 Volt)</b>	
Charger Specification Summary	
<b>Deltran Part Number:</b>	<b>021-0152</b>
<b>Nominal Output:</b>	
<b>Voltage:</b>	<b>8 Volts</b>
<b>Current:</b>	<b>1.25 Amps</b>
<b>Input Voltage:</b>	115 VAC
<b>Input Frequency:</b>	60 Hz
Maximum Input Current:	0.18 Arms
Nominal Efficiency:	55%
Nominal Power Factor:	0.8
<b>Charger Output:</b>	
Maximum Power: (+/- 3%) @ 25 °C	12 Watts
Maximum Current: During Bulk Charge	1.25 Amps
Absorption Voltage:	9.6 VDC = (2.4 vpc)
Absorption to Float Transition:	<b>Charge Current drops: below 0.1 Amp or Absorption Charge Duration exceeds 6 Hours, or if battery voltage does not reach Absorption Charge level within 72 hours.</b>
Equalization Voltage:	NA
Float Voltage:	8.8 VDC = (2.2 vpc)
Charge Reset: Battery Voltage Threshold	8 to 8.14 VDC (2 to 2.07 vpc)
<b>Output Regulation:</b>	
Line (Typical):	Less than 1% at 120VAC
<b>Electrical Isolation:</b>	
Input / Output:	1500 VAC
Input / Chassis:	1500 VAC
Output / Chassis:	500 VAC
<b>Operating Temp:</b>	-20°C to 50°C
<b>Dimensions:</b>	4.875 in(124 mm)L x 3.25(83 mm)W x 2.875 in(73 mm)H
<b>Weight:</b>	2.7 lbs.
<b>Carton Size:</b>	6 in(153 mm)L x 6 in(153 mm)W x 6 in(153 mm)H
<b>Shipping Weight:</b>	3 lbs.
<b>Enclosure:</b>	Powder Coated Aluminum Chassis
<b>Special Features:</b>	
Short Circuit Protection:	YES
Reverse Polarity Protection:	YES
Spark Proof:	YES
Temperature Compensation:	YES = -3.5mV/ °C/Cell
Agency Listings: UL, ETL, CSA, etc.	Selected models are listed to UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900

**Table 3** Specification Sheet: Battery Tender® Plus (8V)



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>International Battery Tender®</b>	
Charger Specification Summary	
<b>SOFTWARE:</b>	<b>STANDARD</b>
<b>Deltran Part Number:</b>	<b>022-0139</b>
<b>Nominal Output:</b>	
<b>Voltage:</b>	<b>12 Volts</b>
<b>Current:</b>	<b>1.25 Amps</b>
<b>Input Voltage: (Universal Input)</b>	<b>100 to 240 VAC</b>
<b>Input Frequency:</b>	47 to 62 Hz
Maximum Input Current:	0.25 Arms @ 100 VAC 0.10 Arms @ 240 VAC
Nominal Efficiency:	85%
Nominal Power Factor:	0.9
<b>Charger Output:</b>	
Maximum Power: @ 25 °C	18 Watts (+/- 2%) Watts
Maximum Current: During Bulk Charge	1.25 Amps (+/- 2%)
Absorption Voltage:	14.4 VDC = (2.4 vpc)
Absorption to Float Transition:	<b>Charge Current drops to below 0.1 Amps. OR 6 to 8 hours elapse.</b>
Equalization Voltage:	NA
Float Voltage:	13.2 VDC = (2.4 vpc)
Charge Reset: Battery Voltage Threshold:	12 to 12.5 VDC (2 to 2.08 vpc)
<b>Output Regulation:</b>	
Line (Typical):	Less than 1%
<b>Electrical Isolation:</b>	
Input / Output:	2500 VAC
Input / Chassis:	2500 VAC
Output / Chassis:	500 VAC
<b>Operating Temp:</b>	-20°C to 50°C
<b>Dimensions:</b>	5.4 in (137 mm)L x 2.9 in (74 mm)W x 1.6 in (41 mm)H
<b>Weight:</b>	<b>0.7 lbs including integral DC output cord with Quick Disconnect (QDC)</b>
<b>Clamshell Size:</b>	10.25 in (261 mm)L x 3.5 in (89 mm)W (at base) x 10.5 in (267 mm)H
<b>Shipping Weight:</b>	<b>Less than 2 lbs., (1.5 lbs in Clamshell with accessory cords)</b>
<b>Enclosure:</b>	94VO Flame Retardant Polymer
<b>Special Features:</b>	
Short Circuit Protection:	YES
Reverse Polarity Protection:	YES
Spark Proof:	YES
Temperature Compensation:	YES
Agency Listings: UL, ETL, CSA, etc.	The International Battery Tender bears the CE mark and it is listed to both UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900

**Table 4** Specification Sheet: International Battery Tender®



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>5 Bank Battery Tender® Battery Management System</b>				
Charger Specification Summary				
<b>SOFTWARE:</b>	<b>Sealed/VRLA/GRT/AGM</b>			
<b>Deltran Part Number:</b>	<b>021-0133</b>	<b>021-0146-2</b>	<b>022-0146-3</b>	<b>022-1046-4</b>
<b>Nominal Output: Per Bank (5 Separate Outputs)</b>				
<b>Voltage:</b>	<b>12 Volts</b>			
<b>Current:</b>	<b>2.0 Amps</b>			
<b>Input Voltage:</b>	115 VAC	220 VAC	230 VAC	240 VAC
<b>Input Frequency:</b>	60 Hz	50 Hz	50 Hz	50 Hz
Total Max Input Current:	2.9 Arms	1.6	1.55	1.5
Nominal Efficiency:	55%	55%	55%	55%
Nominal Power Factor:	0.8	0.8	0.8	0.8
<b>Charger Output: Per Bank:</b>				
Maximum Power: @ 25 °C	29 Watts (+/- 2%) Watts			
Maximum Current: During Bulk Charge	2.0 Amps (+/- 2%)			
Absorption Voltage:	14.75 VDC = (2.46 vpc)			
Absorption to Float Transition:	<b>Charge Current drops to below 0.1 Amps. OR 8 hours elapse.</b>			
Equalization Voltage:	NA			
Float Voltage:	13.5 VDC = (2.4 vpc)			
Charge Reset: Battery Voltage Threshold:	12 to 12.5 VDC (2 to 2.08 vpc)			
<b>Output Regulation:</b>				
Line (Typical):	Less than 1%			
<b>Electrical Isolation:</b>				
Input / Output:	2500 VAC			
Input / Chassis:	2500 VAC			
Output / Chassis:	500 VAC			
<b>Operating Temp:</b>	-20°C to 50°C			
<b>Dimensions:</b>	12.125 in (308 mm)L x 7.875 in (200 mm)W x 7.875 in (200 mm)H			
<b>Weight:</b>	16 lbs.			
<b>Shipping Carton</b>	18 in (458 mm)L x 12 in (305 mm)W x 12 in (305 mm)H			
<b>Shipping Weight:</b>	20 lbs.			
<b>Enclosure:</b>	Powder Coated Aluminum			
<b>Special Features:</b>				
Short Circuit Protection:	YES			
Reverse Polarity Protection:	YES			
Spark Proof:	YES			
Temperature Compensation:	YES			
Agency Listings: UL, ETL, CSA, etc.	The Battery Tender® Battery Management System is designed to meet both UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900			

**Table 5** Spec Sheet: 5 Bank Battery Tender® Battery Mgmt System



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>10 Bank Battery Tender® Battery Management System</b>				
Charger Specification Summary				
<b>SOFTWARE:</b>	<b>Sealed/VRLA/GRT/AGM</b>			
<b>Deltran Part Number:</b>	<b>021-0134</b>	<b>021-0147-2</b>	<b>022-0147-3</b>	<b>022-1047-4</b>
<b>Nominal Output: Per Bank (10 Separate Outputs)</b>				
<b>Voltage:</b>	<b>12 Volts</b>			
<b>Current:</b>	<b>2.0 Amps</b>			
<b>Input Voltage:</b>	115 VAC	220 VAC	230 VAC	240 VAC
<b>Input Frequency:</b>	60 Hz	50 Hz	50 Hz	50 Hz
Total Max Input Current:	5.8 Arms	3.2	3.1	3.0
Nominal Efficiency:	55%	55%	55%	55%
Nominal Power Factor:	0.8	0.8	0.8	0.8
<b>Charger Output: Per Bank:</b>				
Maximum Power: @ 25 °C	29 Watts (+/- 2%) Watts			
Maximum Current: During Bulk Charge	2.0 Amps (+/- 2%)			
Absorption Voltage:	14.75 VDC = (2.46 vpc)			
Absorption to Float Transition:	<b>Charge Current drops to below 0.1 Amps. OR 8 hours elapse.</b>			
Equalization Voltage:	NA			
Float Voltage:	13.5 VDC = (2.4 vpc)			
Charge Reset: Battery Voltage Threshold:	12 to 12.5 VDC (2 to 2.08 vpc)			
<b>Output Regulation:</b>				
Line (Typical):	Less than 1%			
<b>Electrical Isolation:</b>				
Input / Output:	2500 VAC			
Input / Chassis:	2500 VAC			
Output / Chassis:	500 VAC			
<b>Operating Temp:</b>	-20°C to 50°C			
<b>Dimensions:</b>	16.25 in (413 mm)L x 7.875 in (200 mm)W x 7.875 in (200 mm)H			
<b>Weight:</b>	22 lbs.			
<b>Shipping Carton</b>	18 in (458 mm)L x 12 in (305 mm)W x 12 in (305 mm)H			
<b>Shipping Weight:</b>	27 lbs.			
<b>Enclosure:</b>	Powder Coated Aluminum			
<b>Special Features:</b>				
Short Circuit Protection:	YES			
Reverse Polarity Protection:	YES			
Spark Proof:	YES			
Temperature Compensation:	YES			
Agency Listings: UL, ETL, CSA, etc.	The Battery Tender® Battery Management System is designed to meet both UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900			

**Table 6** Spec Sheet: 10 Bank Battery Tender® Battery Mgmt System



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Portable Power Tender</b>	
Charger Specification Summary	
<b>SOFTWARE:</b>	<b>STANDARD</b>
<b>Deltran Part Number:</b>	<b>022-0142</b>
<b>Nominal Output:</b>	
Voltage:	<b>12 Volts</b>
Current:	<b>5 Amps</b>
<b>Input Voltage: (Factory Selectable)</b>	<b>100 to 250 VAC</b>
<b>Input Frequency:</b>	47 to 62 Hz
Maximum Input Current:	1.38 Arms @ 100 VAC 0.45 Arms @ 250 VAC
Nominal Efficiency:	80%
Nominal Power Factor:	0.7
<b>Charger Output:</b>	
Maximum Power: @ 25 °C	62.5 Watts (+/- 5%) Watts
Maximum Current: During Bulk Charge	5.0 Amps (+/- 5%)
Absorption Voltage:	14.5 VDC = (2.42 vpc)
Absorption to Float Transition:	<b>Charge Current drops to below 0.1 Amps. OR 6 to 8 hours elapse.</b>
Equalization Voltage:	NA
Float Voltage:	13.2 VDC = (2.2 vpc)
Charge Reset: Battery Voltage Threshold:	12 to 12.5 VDC (2 to 2.08 vpc)
<b>Output Regulation:</b>	
Line (Typical):	1%
<b>Electrical Isolation:</b>	
Input / Output:	2500 VAC
Input / Chassis:	2500 VAC
Output / Chassis:	500 VAC
<b>Operating Temp:</b>	-20°C to 50°C
<b>Dimensions:</b>	7.75 in (197 mm)L x 5.38 in (137 mm)W x 4.88 in (124 mm)H
<b>Weight:</b>	3.2 lbs. (1.45 kg)
<b>Carton Size:</b>	10.0 in (254 mm)L x 8.0 in (204 mm)W x 8.0 in (204 mm)H
<b>Shipping Weight:</b>	5.0 lbs. (2.27 kg)
<b>Enclosure:</b>	Anodized Aluminum Chassis
<b>Special Features:</b>	
Short Circuit Protection:	YES
Reverse Polarity Protection:	YES
Spark Proof:	YES
Temperature Compensation:	NO
Agency Listings: UL, ETL, CSA, etc.	The Portable Tender is designed to meet the listing requirements for the CE mark, UL-1236, and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900

**Table 7** Specification Sheet: Portable Power Tender





## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Lightweight On Board (Power Tender) 6V, 12V, 24V, STD</b>			
Charger Specification Summary			
<b>SOFTWARE:</b>	<b>STANDARD</b>		
<b>Deltran Part Number:</b>	<b>022-0089-1, -2</b>	<b>022-0076-1, -2</b>	<b>022-0086-1, -2</b>
<b>Nominal Output:</b>			
<b>Voltage:</b>	<b>6 Volts</b>	<b>12 Volts</b>	<b>24 Volts</b>
<b>Current:</b>	<b>6 Amps</b>	<b>6 Amps</b>	<b>3 Amps</b>
<b>Input Voltage: (Factory Selectable)</b>	with -1 part number suffix <b>90 to 132 VAC</b> with -2 part number suffix <b>180 to 264 VAC</b>		
<b>Input Frequency:</b>	47 to 62 Hz		
<b>Maximum Input Current:</b>	0.80 Arms @ 90 VAC 0.40 Arms @ 180 VAC	1.61 Arms @ 90 VAC 0.81 Arms @ 180 VAC	
<b>Nominal Efficiency:</b>	80%		
<b>Nominal Power Factor:</b>	0.6		
<b>Charger Output:</b>			
<b>Maximum Power: @ 25 °C</b>	35 Watts (+2, -5) Watts	70 Watts (+2, -5) Watts	
<b>Maximum Current: During Bulk Charge</b>	6.0 Amps (+/- 10%)		3.0 Amps (+/- 10%)
<b>Absorption Voltage:</b>	7.2 VDC = (2.4 vpc)	14.5 VDC = (2.42 vpc)	28.8 VDC = (2.4 vpc)
<b>Absorption to Float Transition:</b>	Charge Current drops: <b>below 3.0 Amps.</b>		<b>below 1.0 Amp.</b>
<b>Equalization Voltage:</b>	NA		
<b>Float Voltage:</b>	6.6 VDC = (2.2 vpc)	13.2 VDC = (2.2 vpc)	26.4 VDC = (2.2 vpc)
<b>Charge Reset: Battery Voltage Threshold:</b>	6 to 6.2 VDC (2 to 2.07 vpc)	12 to 12.5 VDC (2 to 2.08 vpc)	24 to 24.5 VDC (2 to 2.04 vpc)
<b>Output Regulation:</b>			
<b>Line (Typical):</b>	1%		
<b>Electrical Isolation:</b>			
<b>Input / Output:</b>	2500 VAC		
<b>Input / Chassis:</b>	2500 VAC		
<b>Output / Chassis:</b>	500 VAC		
<b>Operating Temp:</b>	-20°C to 50°C		
<b>Dimensions:</b>	5 in(127)L x 4.9 in(125)W x 2 in(51)H		
<b>Weight:</b>	21 oz.		
<b>Carton Size:</b>	6 in(153 mm)L x 6 in(153 mm)W x 6 in(153 mm)H		
<b>Shipping Weight:</b>	2 lbs.		
<b>Enclosure:</b>	Powder Coated Aluminum Chassis		
<b>Special Features:</b>			
<b>Short Circuit Protection:</b>	YES		
<b>Reverse Polarity Protection:</b>	YES		
<b>Spark Proof:</b>	NO		
<b>Temperature Compensation:</b>	NO		
<b>Agency Listings: UL, ETL, CSA, etc.</b>	Selected models are listed to UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900		

**Table 8** Spec Sheet: LWOB Power Tender (6V, 12V, 24V Standard)



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Lightweight On Board (Power Tender) 6V, 12V, 24V, AGM</b>			
Charger Specification Summary			
<b>SOFTWARE:</b>	<b>Sealed/VRLA/GRT/AGM (Valve Regulated Lead Acid / Gas Recombinant Technology /Absorbed Glass Matte)</b>		
<b>Deltran Part Number:</b>	<b>022-0072-1, -2</b>	<b>022-0071-1, -2</b>	<b>022-0073-1, -2</b>
<b>Nominal Output:</b>			
<b>Voltage:</b>	<b>6 Volts</b>	<b>12 Volts</b>	<b>24 Volts</b>
<b>Current:</b>	<b>6 Amps</b>	<b>6 Amps</b>	<b>3 Amps</b>
<b>Input Voltage: (Factory Selectable)</b>	with -1 part number suffix <b>90 to 132 VAC</b> with -2 part number suffix <b>180 to 264 VAC</b>		
<b>Input Frequency:</b>	47 to 62 Hz		
Maximum Input Current:	0.80 Arms @ 90 VAC 0.40 Arms @ 180 VAC	1.61 Arms @ 90 VAC 0.81 Arms @ 180 VAC	
Nominal Efficiency:	80%		
Nominal Power Factor:	0.6		
<b>Charger Output:</b>			
Maximum Power: @ 25 °C	35 Watts (+2, -5) Watts	70 Watts (+2, -5) Watts	
Maximum Current: During Bulk Charge	6.0 Amps (+/- 10%)		3.0 Amps (+/- 10%)
Absorption Voltage:	7.5 VDC = (2.48 vpc)	14.9 VDC = (2.48 vpc)	29.8 VDC = (2.48 vpc)
Absorption to Float Transition:	Absorption Charge <b>Duration is Fixed at 8 Hours.</b>		
Equalization Voltage:	NA		
Float Voltage:	6.8 VDC = (2.27 vpc)	13.6 VDC = (2.27 vpc)	27.2 VDC = (2.27 vpc)
Charge Reset: Battery Voltage Threshold:	6 to 6.2 VDC (2 to 2.07 vpc)	12 to 12.5 VDC (2 to 2.08 vpc)	23 to 24 VDC (1.92 to 2.0 vpc)
<b>Output Regulation:</b>			
Line (Typical):	1%		
<b>Electrical Isolation:</b>			
Input / Output:	2500 VAC		
Input / Chassis:	2500 VAC		
Output / Chassis:	500 VAC		
<b>Operating Temp:</b>	-20°C to 50°C		
<b>Dimensions:</b>	5 in(127)L x 4.9 in(125)W x 2 in(51)H		
<b>Weight:</b>	21 oz.		
<b>Carton Size:</b>	6 in(153 mm)L x 6 in(153 mm)W x 6 in(153 mm)H		
<b>Shipping Weight:</b>	2 lbs.		
<b>Enclosure:</b>	Powder Coated Aluminum Chassis		
<b>Special Features:</b>			
Short Circuit Protection:	YES		
Reverse Polarity Protection:	YES		
Spark Proof:	NO		
Temperature Compensation:	NO		
Agency Listings: UL, ETL, CSA, etc.	Selected models are listed to UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900		

**Table 9** Spec Sheet: LWOB Power Tender (6V, 12V, 24V AGM)



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Lightweight On Board (Power Tender) 12V GEL</b>	
Charger Specification Summary	
<b>SOFTWARE:</b>	<b>GEL</b>
<b>Deltran Part Number:</b>	<b>022-0083-1, -2</b>
<b>Nominal Output:</b>	
Voltage:	<b>12 Volts</b>
Current:	<b>6 Amps</b>
<b>Input Voltage: (Factory Selectable)</b>	with -1 part number suffix <b>90 to 132 VAC</b> with -2 part number suffix <b>180 to 264 VAC</b>
<b>Input Frequency:</b>	47 to 62 Hz
Maximum Input Current:	1.61 Arms @ 90 VAC 0.81 Arms @ 180 VAC
Nominal Efficiency:	80%
Nominal Power Factor:	0.6
<b>Charger Output:</b>	
Maximum Power: @ 25 °C	70 Watts (+2, -5) Watts
Maximum Current: During Bulk Charge	6.0 Amps (+/- 10%)
Absorption Voltage:	14.1 VDC = (2.35 vpc)
Absorption to Float Transition:	Charge Current drops: <b>below 3.0 Amps.</b>
Equalization Voltage:	NA
Float Voltage:	13.2 VDC = (2.2 vpc)
Charge Reset: Battery Voltage Threshold:	12 to 12.5 VDC (2 to 2.08 vpc)
<b>Output Regulation:</b>	
Line (Typical):	1%
<b>Electrical Isolation:</b>	
Input / Output:	2500 VAC
Input / Chassis:	2500 VAC
Output / Chassis:	500 VAC
<b>Operating Temp:</b>	-20°C to 50°C
<b>Dimensions:</b>	5 in(127)L x 4.9 in(125)W x 2 in(51)H
<b>Weight:</b>	21 oz.
<b>Carton Size:</b>	6 in(153 mm)L x 6 in(153 mm)W x 6 in(153 mm)H
<b>Shipping Weight:</b>	2 lbs.
<b>Enclosure:</b>	Powder Coated Aluminum Chassis
<b>Special Features:</b>	
Short Circuit Protection:	YES
Reverse Polarity Protection:	YES
Spark Proof:	NO
Temperature Compensation:	NO
Agency Listings: UL, ETL, CSA, etc.	Selected models are listed to UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900

**Table 10** Spec Sheet: LWOB Power Tender (12V GEL)



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>High Frequency SuperSmart<sup>®</sup> (Golf Cart Style) 12V, 24V STD</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>STANDARD</b>	
<b>Deltran Part Number:</b>	<b>022-0081-1, -2</b>	<b>022-0077-1, -2</b>
<b>Nominal Output:</b>		
<b>Voltage:</b>	<b>12 Volts</b>	<b>24 Volts</b>
<b>Current:</b>	<b>20 Amps</b>	<b>20 Amps</b>
<b>Input Voltage: (Factory Selectable)</b>	with -1 part number suffix <b>90 to 132 VAC</b> with -2 part number suffix <b>180 to 264 VAC</b>	
<b>Input Frequency:</b>	47-62 Hz	
Maximum Input Current:	5.25 Arms @ 90 VAC 2.63 Arms @ 180 VAC	10.5 Arms @ 90 VAC 5.25 Arms @ 180 VAC
Nominal Efficiency:	85%	
Nominal Power Factor:	0.75	
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	300 Watts (275 W typical)	600 Watts (550 W typical)
Maximum Current: During Bulk Charge	20 Amps	
Absorption Voltage: (Terminates when charge current drops below 3 amps.)	14.5 VDC = (2.42 vpc)	28.8 VDC = (2.40 vpc)
Equalization Voltage:	NA	
Float Voltage:	13.2 VDC = (2.2 vpc)	26.4 VDC = (2.2 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	24 to 24.5 VDC (2 to 2.04 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	2500 VAC	
Input / Chassis:	2500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	12.0 in(305 mm)L x 7.5 in(191 mm)W x 3.27 in(84 mm)H	
<b>Weight:</b>	<10 lb.	
<b>Carton Size:</b>	16.5 in(420 mm)L x 16.0 in(407 mm)W x 11.0 in(280 mm)H	
<b>Shipping Weight:</b>	11 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 11** Spec Sheet: HF SuperSmart<sup>®</sup> Charger (12V, 24V Standard)



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>High Frequency SuperSmart<sup>®</sup> (Golf Cart, Style) 12V, 24V AGM</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>Sealed/VRLA/GRT/AGM (Valve Regulated Lead Acid / Gas Recombinant Technology /Absorbed Glass Matte)</b>	
<b>Deltran Part Number:</b>	<b>022-0119-1, -2</b>	<b>022-0102-1, -2</b>
<b>Nominal Output:</b>		
<b>Voltage:</b>	<b>12 Volts</b>	<b>24 Volts</b>
<b>Current:</b>	<b>20 Amps</b>	<b>20 Amps</b>
<b>Input Voltage: (Factory Selectable)</b>	with -1 part number suffix <b>90 to 132 VAC</b> with -2 part number suffix <b>180 to 264 VAC</b>	
<b>Input Frequency:</b>	47-62 Hz	
Maximum Input Current:	5.25 Arms @ 90 VAC 2.63 Arms @ 180 VAC	10.5 Arms @ 90 VAC 5.25 Arms @ 180 VAC
Nominal Efficiency:	85%	
Nominal Power Factor:	0.75	
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	300 Watts	600 Watts
Maximum Current: During Bulk Charge	20 Amps	
Absorption Voltage:	14.9 VDC = (2.48 vpc)	29.8 VDC = (2.48 vpc)
Equalization Voltage Limit:	15.6 VDC = (2.60 vpc)	31.2 VDC = (2.60 vpc)
Equalization Constant Current:	2 Amps	
Float Voltage:	13.6 VDC = (2.27 vpc)	27.2 VDC = (2.27 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	24 to 24.5 VDC (2 to 2.04 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	2500 VAC	
Input / Chassis:	2500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	12.0 in(305 mm)L x 7.5 in(191 mm)W x 3.27 in(84 mm)H	
<b>Weight:</b>	<10 lb.	
<b>Carton Size:</b>	16.5 in(420 mm)L x 16.0 in(407 mm)W x 11.0 in(280 mm)H	
<b>Shipping Weight:</b>	11 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 12** Spec Sheet: HF SuperSmart<sup>®</sup> Charger (12V, 24V AGM)



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>High Frequency SuperSmart<sup>®</sup> (Golf Cart Style) 12V, 24V GEL</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>GEL</b>	
<b>Deltran Part Number:</b>	<b>022-0138-1, -2</b>	<b>022-0131-1, -2</b>
<b>Nominal Output:</b>		
<b>Voltage:</b>	<b>12 Volts</b>	<b>24 Volts</b>
<b>Current:</b>	<b>20 Amps</b>	<b>20 Amps</b>
<b>Input Voltage: (Factory Selectable)</b>	with -1 part number suffix <b>90 to 132 VAC</b> with -2 part number suffix <b>180 to 264 VAC</b>	
<b>Input Frequency:</b>	47-62 Hz	
Maximum Input Current:	5.25 Arms @ 90 VAC 2.63 Arms @ 180 VAC	10.5 Arms @ 90 VAC 5.25 Arms @ 180 VAC
Nominal Efficiency:	85%	85%
Nominal Power Factor:	0.75	0.75
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	300 Watts	600 Watts
Maximum Current: During Bulk Charge	20 Amps	20 Amps
Absorption Voltage:	14.1 VDC = (2.35 vpc)	28.2 VDC = (2.35 vpc)
Equalization Voltage Limit:	NA	NA
Equalization Constant Current:	NA	NA
Float Voltage:	13.2 VDC = (2.20 vpc)	26.4 VDC = (2.20 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	24 to 24.5 VDC (2 to 2.04 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	2500 VAC	
Input / Chassis:	2500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	12.0 in(305 mm)L x 7.5 in(191 mm)W x 3.27 in(84 mm)H	
<b>Weight:</b>	<10 lb.	
<b>Carton Size:</b>	16.5 in(420 mm)L x 16.0 in(407 mm)W x 11.0 in(280 mm)H	
<b>Shipping Weight:</b>	11 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 13** Spec Sheet: HF SuperSmart<sup>®</sup> Charger (12V, 24V GEL)



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>High Frequency SuperSmart<sup>®</sup> (Golf Cart Style) 36V, 48V STD</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>STANDARD</b>	
<b>Deltran Part Number:</b>	<b>022-0066-1, -2</b>	<b>022-0074-1, -2</b>
<b>Nominal Output:</b>		
<b>Voltage:</b>	<b>36 Volts</b>	<b>48 Volts</b>
<b>Current:</b>	<b>15 Amps</b>	<b>10 Amps</b>
<b>Input Voltage: (Factory Selectable)</b>	with -1 part number suffix <b>90 to 132 VAC</b> with -2 part number suffix <b>180 to 264 VAC</b>	
<b>Input Frequency:</b>	47-62 Hz	
Maximum Input Current:	10.5 Arms @ 90 VAC 5.25 Arms @ 180 VAC	10.5 Arms @ 90 VAC 5.25 Arms @ 180 VAC
Nominal Efficiency:	85%	
Nominal Power Factor:	0.75	
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	600 Watts (550 W typical)	600 Watts (550 W typical)
Maximum Current: During Bulk Charge	15 Amps	
Absorption Voltage: (Terminates when charge current drops below 3 amps.)	43.3 VDC = (2.41 vpc)	57.6 VDC = (2.40 vpc)
Equalization Voltage:	NA	
Float Voltage:	39.6 VDC = (2.2 vpc)	52.8 VDC = (2.2 vpc)
Charge Reset: Battery Voltage Threshold	36 to 37 VDC (2 to 2.06 vpc)	48 to 49 VDC (2 to 2.04 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	2500 VAC	
Input / Chassis:	2500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	12.0 in(305 mm)L x 7.5 in(191 mm)W x 3.27 in(84 mm)H	
<b>Weight:</b>	<10 lb.	
<b>Carton Size:</b>	16.5 in(420 mm)L x 16.0 in(407 mm)W x 11.0 in(280 mm)H	
<b>Shipping Weight:</b>	11 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 14** Spec Sheet: HF SuperSmart<sup>®</sup> Charger (36V, 48V Standard)



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>High Frequency SuperSmart<sup>®</sup> (Golf Cart Style) 36V, 48V AGM</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>Sealed/VRLA/GRT/AGM</b> (Valve Regulated Lead Acid / Gas Recombinant Technology /Absorbed Glass Matte)	
<b>Deltran Part Number:</b>	<b>022-0115-1, -2</b>	<b>022-0113-1, -2</b>
<b>Nominal Output:</b>		
<b>Voltage:</b>	<b>36 Volts</b>	<b>48 Volts</b>
<b>Current:</b>	<b>15 Amps</b>	<b>10 Amps</b>
<b>Input Voltage: (Factory Selectable)</b>	with -1 part number suffix <b>90 to 132 VAC</b> with -2 part number suffix <b>180 to 264 VAC</b>	
<b>Input Frequency:</b>	47-62 Hz	
Maximum Input Current:	10.5 Arms @ 90 VAC 5.25 Arms @ 180 VAC	10.5 Arms @ 90 VAC 5.25 Arms @ 180 VAC
Nominal Efficiency:	85%	85%
Nominal Power Factor:	0.75	0.75
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	600 Watts	600 Watts
Maximum Current: During Bulk Charge	15 Amps	10 Amps
Absorption Voltage:	44.7 VDC = (2.48 vpc)	59.6 VDC = (2.48 vpc)
Equalization Voltage Limit:	46.8 VDC = (2.60 vpc)	62.4 VDC = (2.60 vpc)
Equalization Constant Current:	2 Amps	2 Amps
Float Voltage:	40.8 VDC = (2.27 vpc)	54.4 VDC = (2.27 vpc)
Charge Reset: Battery Voltage Threshold	36 to 37 VDC (2 to 2.06 vpc)	48 to 49 VDC (2 to 2.04 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	2500 VAC	
Input / Chassis:	2500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	12.0 in(305 mm)L x 7.5 in(191 mm)W x 3.27 in(84 mm)H	
<b>Weight:</b>	<10 lb.	
<b>Carton Size:</b>	16.5 in(420 mm)L x 16.0 in(407 mm)W x 11.0 in(280 mm)H	
<b>Shipping Weight:</b>	11 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 15** Spec Sheet: HF SuperSmart<sup>®</sup> Charger (36V, 48V AGM)





## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Heavy Duty Portable Charger, Single 12V20A, DVS-20, STD</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>STANDARD</b>	
<b>Deltran Part Number:</b>	<b>021-0099</b>	
<b>Nominal Output:</b>		
	<b>DELCO Mode</b>	<b>Other Mode</b>
<b>Voltage:</b>	<b>12 Volts</b>	<b>12 Volts</b>
<b>Current:</b>	<b>20 Amps</b>	<b>20 Amps</b>
<b>Input Voltage:</b>	85 to 130 VAC	
<b>Input Frequency:</b>	57 to 63 Hz	
Total Maximum Input Current:	9.8 Arms	
Nominal Efficiency:	60%	
Nominal Power Factor:	0.6	
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	300 Watts	
Maximum Current: During Bulk Charge	20 Amps	
Absorption Voltage:	NA	14.56 VDC = (2.43 vpc)
Note: When operating in the Delco mode, the output current is a true constant current. There is no absorption period because the constant current does not terminate until the battery voltage reaches the equalization level. When operating in the Other mode, the constant current is terminated at a lower, absorption voltage level.		
Equalization Voltage:	16.25 (2.71 vpc)	16.58 (2.76 vpc)
Float Voltage:	13.5 VDC = (2.25 vpc)	13.5 VDC = (2.25 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	12 to 12.5 VDC (2 to 2.08 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	1500 VAC	
Input / Chassis:	1500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	9.0 in(229 mm)L x 6.75 in(172 mm)W x 6.75 in(172 mm)H	
<b>Weight:</b>	19 lb.	
<b>Carton Size:</b>	16.0 in(407 mm)L x 12 in(305)W x 10 in(254 mm)H	
<b>Shipping Weight:</b>	20 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 16** Spec Sheet: Heavy Duty DVS-20, Single 12V20A Standard



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Heavy Duty Portable Charger, Single 12V20A, DVS-20, AGM</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>Sealed/VRLA/GRT/AGM</b> (Valve Regulated Lead Acid / Gas Recombinant Technology /Absorbed Glass Matte)	
<b>Deltran Part Number:</b>	<b>021-0136</b>	
<b>Nominal Output:</b>		
	<b>DELCO Mode</b>	<b>Hawker (GRT/AGM)</b>
<b>Voltage:</b>	<b>12 Volts</b>	<b>12 Volts</b>
<b>Current:</b>	<b>20 Amps</b>	<b>20 Amps</b>
<b>Input Voltage:</b>	85 to 130 VAC	
<b>Input Frequency:</b>	57 to 63 Hz	
Total Maximum Input Current:	9.8 Arms	
Nominal Efficiency:	60%	
Nominal Power Factor:	0.6	
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	300 Watts	
Maximum Current: During Bulk Charge	20 Amps	
Absorption Voltage:	NA	14.7 VDC = (2.45 vpc)
Note: When operating in the Delco mode, the output current is a true constant current. There is no absorption period because the constant current does not terminate until the battery voltage reaches the equalization level. When operating in the GRT/AGM mode, the constant current is terminated at a lower, absorption voltage level.		
Equalization Voltage:	16.25 (2.71 vpc)	15.6 VDC (2.60 vpc)
Float Voltage:	13.5 VDC = (2.25 vpc)	13.6 VDC = (2.27 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	12 to 12.5 VDC (2 to 2.08 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	1500 VAC	
Input / Chassis:	1500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	9.0 in(229 mm)L x 6.75 in(172 mm)W x 6.75 in(172 mm)H	
<b>Weight:</b>	19 lb.	
<b>Carton Size:</b>	16.0 in(407 mm)L x 12 in(305)W x 10 in(254 mm)H	
<b>Shipping Weight:</b>	20 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 17** Spec Sheet: Heavy Duty DVS-20, Single 12V20A AGM



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Heavy Duty Portable Charger, Dual 12V10A, DVD-20, STD</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>STANDARD</b>	
<b>Deltran Part Number:</b>	<b>021-0098</b>	
<b>Nominal Output:</b>		
	<b>DELCO Mode</b>	<b>Other Mode</b>
<b>Voltage:</b>	<b>12 Volts</b>	<b>12 Volts</b>
<b>Current:</b>	<b>10 Amps</b>	<b>10 Amps</b>
<b>Input Voltage:</b>	85 to 130 VAC	
<b>Input Frequency:</b>	57 to 63 Hz	
Total Maximum Input Current:	9.8 Arms	
Nominal Efficiency:	60%	
Nominal Power Factor:	0.6	
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	150 Watts per Channel 300 Watts Total	
Maximum Current: During Bulk Charge	10 Amps per Channel 20 Amps Total	
Absorption Voltage:	NA	14.56 VDC = (2.43 vpc)
Note: When operating in the Delco mode, the output current is a true constant current. There is no absorption period because the constant current does not terminate until the battery voltage reaches the equalization level. When operating in the Other mode, the constant current is terminated at a lower, absorption voltage level.		
Equalization Voltage:	16.25 (2.71 vpc)	16.58 (2.76 vpc)
Float Voltage:	13.5 VDC = (2.25 vpc)	13.5 VDC = (2.25 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	12 to 12.5 VDC (2 to 2.08 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	1500 VAC	
Input / Chassis:	1500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	10.25 in(261 mm)L x 7.25 in(185 mm)W x 6.75 in(172 mm)H	
<b>Weight:</b>	21 lb.	
<b>Carton Size:</b>	16.0 in(407 mm)L x 12 in(305)W x 10 in(254 mm)H	
<b>Shipping Weight:</b>	22 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 18** Spec Sheet: Heavy Duty DVD-20, Dual 12V10A Standard



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Heavy Duty Portable Charger, Dual 12V10A, DVD-20, AGM</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>Sealed/VRLA/GRT/AGM</b> (Valve Regulated Lead Acid / Gas Recombinant Technology /Absorbed Glass Matte)	
<b>Deltran Part Number:</b>	<b>021-0137</b>	
<b>Nominal Output:</b>		
	<b>DELCO Mode</b>	<b>Hawker (GRT/AGM) Mode</b>
<b>Voltage:</b>	<b>12 Volts</b>	<b>12 Volts</b>
<b>Current:</b>	<b>10 Amps</b>	<b>10 Amps</b>
<b>Input Voltage:</b>	85 to 130 VAC	
<b>Input Frequency:</b>	57 to 63 Hz	
Total Maximum Input Current:	9.8 Arms	
Nominal Efficiency:	60%	
Nominal Power Factor:	0.6	
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	150 Watts per Channel 300 Watts Total	
Maximum Current: During Bulk Charge	10 Amps per Channel 20 Amps Total	
Absorption Voltage:	NA	14.7 VDC (2.45 vpc)
Note: When operating in the Delco mode, the output current is a true constant current. There is no absorption period because the constant current does not terminate until the battery voltage reaches the equalization level. When operating in the GRT/AGM mode, the constant current is terminated at a lower, absorption voltage level.		
Equalization Voltage:	16.25 (2.71 vpc)	15.6 VDC (2.60 vpc)
Float Voltage:	13.5 VDC = (2.25 vpc)	13.6 VDC = (2.27 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	12 to 12.5 VDC (2 to 2.08 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	1500 VAC	
Input / Chassis:	1500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	10.25 in(261 mm)L x 7.25 in(185 mm)W x 6.75 in(172 mm)H	
<b>Weight:</b>	21 lb.	
<b>Carton Size:</b>	16.0 in(407 mm)L x 12 in(305)W x 10 in(254 mm)H	
<b>Shipping Weight:</b>	22 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 19** Spec Sheet: Heavy Duty DVD-20, Dual 12V10A AGM



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Heavy Duty Portable Charger, Dual 12V20A, DVD-40, STD</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>STANDARD</b>	
<b>Deltran Part Number:</b>	<b>021-0102</b>	
<b>Nominal Output:</b>		
	<b>DELCO Mode</b>	<b>Other Mode</b>
<b>Voltage:</b>	<b>12 Volts</b>	<b>12 Volts</b>
<b>Current:</b>	<b>20 Amps</b>	<b>20 Amps</b>
<b>Input Voltage:</b>	85 to 130 VAC	
<b>Input Frequency:</b>	57 to 63 Hz	
Total Maximum Input Current:	19.6 Arms	
Nominal Efficiency:	60%	
Nominal Power Factor:	0.6	
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	300 Watts per Channel 600 Watts Total	
Maximum Current: During Bulk Charge	20 Amps per Channel 40 Amps Total	
Absorption Voltage:	NA	14.56 VDC = (2.43 vpc)
<p>Note: When operating in the Delco mode, the output current is a true constant current. There is no absorption period because the constant current does not terminate until the battery voltage reaches the equalization level. When operating in the Other mode, the constant current is terminated at a lower, absorption voltage level.</p>		
Equalization Voltage:	16.25 (2.71 vpc)	16.58 (2.76 vpc)
Float Voltage:	13.5 VDC = (2.25 vpc)	13.5 VDC = (2.25 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	12 to 12.5 VDC (2 to 2.08 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	1500 VAC	
Input / Chassis:	1500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	11.75 in(299 mm)L x 9.0 in(229 mm)W x 6.75 in(172 mm)H	
<b>Weight:</b>	28 lb.	
<b>Carton Size:</b>	16.0 in(407 mm)L x 12 in(305)W x 10 in(254 mm)H	
<b>Shipping Weight:</b>	29 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 20** Spec Sheet: Heavy Duty DVD-40, Dual 12V20A Standard



## DELTRAN BATTERY CHARGER SPECIFICATION SUMMARY SHEETS

<b>Heavy Duty Portable Charger, Dual 12V20A, DVD-40, AGM</b>		
Charger Specification Summary		
<b>SOFTWARE:</b>	<b>Sealed/VRLA/GRT/AGM</b> (Valve Regulated Lead Acid / Gas Recombinant Technology /Absorbed Glass Matte)	
<b>Deltran Part Number:</b>	<b>021-0138</b>	
<b>Nominal Output:</b>		
	<b>DELCO Mode</b>	<b>Hawker (GRT/AGM) Mode</b>
<b>Voltage:</b>	<b>12 Volts</b>	<b>12 Volts</b>
<b>Current:</b>	<b>20 Amps</b>	<b>20 Amps</b>
<b>Input Voltage:</b>	85 to 130 VAC	
<b>Input Frequency:</b>	57 to 63 Hz	
Total Maximum Input Current:	19.6 Arms	
Nominal Efficiency:	60%	
Nominal Power Factor:	0.6	
<b>Charger Output:</b>		
Maximum Power: (+/- 3%) @ 25 °C	300 Watts per Channel 600 Watts Total	
Maximum Current: During Bulk Charge	20 Amps per Channel 40 Amps Total	
Absorption Voltage:	NA	14.7 VDC = (2.45 vpc)
Note: When operating in the Delco mode, the output current is a true constant current. There is no absorption period because the constant current does not terminate until the battery voltage reaches the equalization level. When operating in the GRT/AGM mode, the constant current is terminated at a lower, absorption voltage level.		
Equalization Voltage:	16.25 (2.71 vpc)	15.6 VDC (2.60 vpc)
Float Voltage:	13.5 VDC = (2.25 vpc)	13.6 VDC = (2.27 vpc)
Charge Reset: Battery Voltage Threshold	12 to 12.5 VDC (2 to 2.08 vpc)	12 to 12.5 VDC (2 to 2.08 vpc)
<b>Output Regulation:</b>		
Line (Typical):	1%	
<b>Electrical Isolation:</b>		
Input / Output:	1500 VAC	
Input / Chassis:	1500 VAC	
Output / Chassis:	500 VAC	
<b>Operating Temp:</b>	-20°C to 50°C	
<b>Dimensions:</b>	11.75 in(299 mm)L x 9.0 in(229 mm)W x 6.75 in(172 mm)H	
<b>Weight:</b>	28 lb.	
<b>Carton Size:</b>	16.0 in(407 mm)L x 12 in(305)W x 10 in(254 mm)H	
<b>Shipping Weight:</b>	29 lbs.	
<b>Enclosure:</b>	Powder Coated Aluminum Chassis	
<b>Special Features:</b>		
Short Circuit Protection:	YES	
Reverse Polarity Protection:	YES	
Spark Proof:	NO	
Temperature Compensation:	NO	
Agency Listings: UL, ETL, CSA, etc.	Designed to meet UL-1236 and CSA 22.2 Contact the office in DeLand, FL for information on agency listings. Phone: 386-736-7900	

**Table 21** Spec Sheet: Heavy Duty DVD-40, Dual 12V20A AGM