

*u***START**TM *Like a Battery... But Better!*

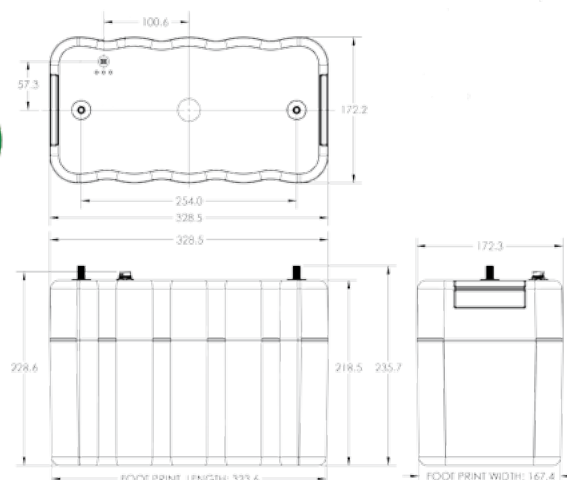


FEATURES

Made in USA
3/8" SAE Terminals
SAE Adapters available
RoHS compliant
Long life
85C Capable

APPLICATIONS

Medium Duty Trucking
Delivery with Stop/Start
Marine
Generator Starting



BENEFITS

Increased Reliability
Increased Efficiency
Rapid Payback
Eliminates battery related operation disruptions
More than doubles battery life
Doubles starter life
Built-in, no service call, "Jump Start"
<10 minute installation

MOUNTING RECOMMENDATION

Do not reverse polarize. Must be used in parallel with 12V Battery. User manual available at www.ioxus.com. Contact your Ioxus representative for ordering and application information regarding sizing. Use NoAlOx or equivalent anti-oxidation compound on terminals in installation.

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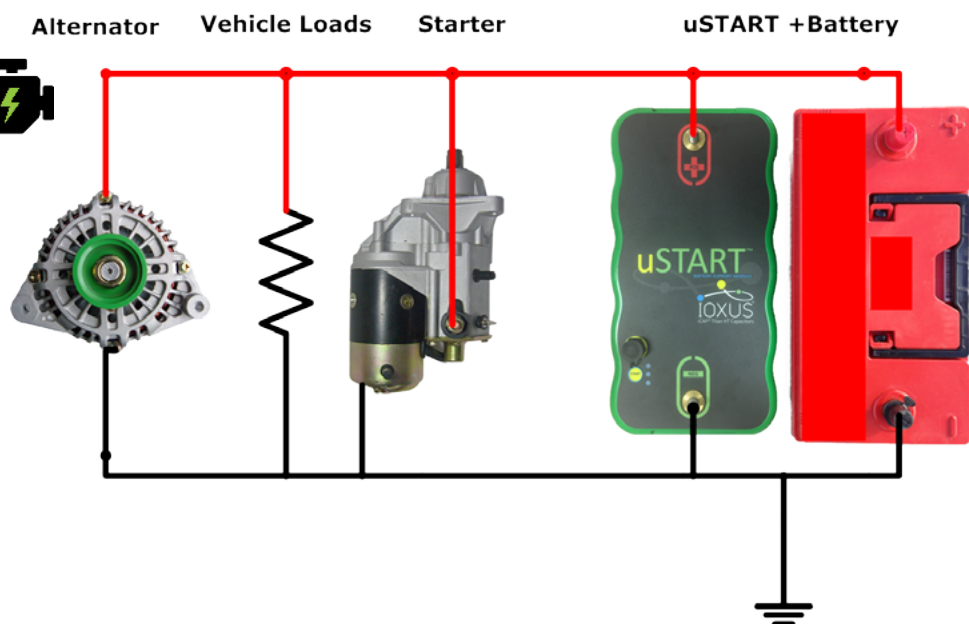
MARKINGS

Products are marked with the following:
rated voltage, product number, serial number, name of manufacturer, positive and negative terminal marking.

PRODUCT SPECIFICATIONS

ELECTRICAL \ PART NUMBER		uST12V1100G31-ISA
Cold Cranking Amps ¹ (3sec@0°F) [Nom]		1100¹
Voltage (Rated/Surge) [V_R /V _S]		7-14.5/80
Reverse Polarity Protection (V)		-30
DC ESR ² 10ms (mΩ) [Nom/Max]		3.5/ 5.5²
Standby consumption (mA) [Min/Max]		15/25
Initial Charging Time (min) [Nom/Max]		9/25
Recommended Applications (Engine Size L)		<10
CYCLING		
Recharge time 1 start (s) [Nom/Max]		30 / 240
Recharge current (A) [Nom/Max]		15 / 21
THERMAL (Reference)		
Operational / Storage Range (°C)		-40 to 65 / -40 to 70 (4 years)
PHYSICAL (Nominal Values)		
L (mm)		330 (13")
W (mm)		173 (6-13/16")
H (mm)		240 (9-7/16")
Mass (kg)		<8.2 (18lbs)
Terminal Fastener Size / Torque Range		SAE 3/8" -16 / 17-22.5 Nm (12.5-16.6 ft*lbs)
STANDARDS COMPLIANCE		
Safety/Environmental		UL810a, IP67, SAE J1455
Shock		SAE J1455,
Vibration		SAE J1455

uSTART™ Installation



1 Ultracapacitor CCA is calculated differently than a battery and a different time interval is used.

$$CCA = \frac{CAP \times (V_{max} - V_{min})}{(Time + CAP \times ESR)}$$

For uSTART™ CAP = 375 F, ESR² = 5 mΩ, Vmax = 21.5 V, Vmin = 7.2 V (per SAE), and Time = 3 seconds.

2 Maximum ESR at minimum operation temperature

