

iMOD® 24V 300F Engine Start Module

FEATURES

Made in USA
IP 67
RoHS compliant
Long life

APPLICATIONS

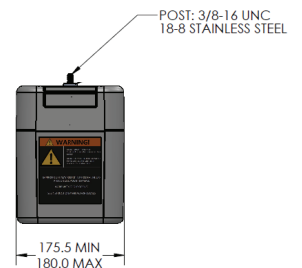
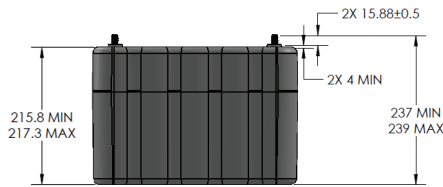
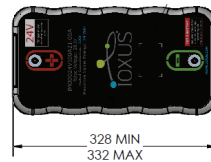
Engine Starting up to 15L
Idle Reduction
Cold Weather Starting
High Start Per Day Cranking

MARKETS

Automotive subsystem
Engine starting
Regen energy capture
Backup power



Top label may change



MARKINGS

Products are marked with the following: Rated capacitance, rated voltage, product number, name of manufacturer, positive and negative terminal marking, maximum energy content.

MOUNTING RECOMMENDATION

Do not reverse polarize. Install following recommendations in *Notes on Using Ultracapacitors*, available at www.ioxus.com. Contact your Ioxus representative for ordering and application information regarding sizing

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PRODUCT SPECIFICATIONS

Part Number: IMOD024V300A21-00A

Electrical	Capacitance	Capacitance, Module Rating	F	300	
		Capacitance, Nominal, IEC Method	F	300	
		Capacitance Tolerance, Lower Limit	%	4%	
			Capacitance, Minimum, IEC Method	F	288
	Voltage	Rated Voltage	V	27	
		Surge Voltage	V	28.5	
		Minimum Voltage	V	0.00	
	ESR	DC-ESR, Nominal, 10mS Method	mΩ	2.0	
		DC-ESR, Maximum, 10 mS Method	mΩ	3.2	
		DC-ESR, Nominal, IEC Method	mΩ	2.5	
DC-ESR, Maximum, IEC Method		mΩ	3.5		
AC-ESR, Nominal, 1 kHz		mΩ	2.2		
		AC-ESR, Maximum, 1kHz	mΩ	3.0	
Cycling	Calculations Per 'Ioxus Notes on Datasheet Specifications'	Current, Peak, 1s	A	2530	
		Continuous Current (20C Temp Rise)	A	N/A	
		Current, Short Circuit	A	13500	
Thermal	Limits	Operating Temperature	°C	-40 to + 65	
		Stored Temperature	°C	-40 to + 70	
	Thermal Res.	Thermal Resistance (CASE TO AMBIENT):	°C/W	N/A	
Energy/Power	Calculations Per 'Ioxus Notes on Datasheet Specifications'	Minimum Energy Storage	Wh	29.1	
		Minimum Energy Density	Wh/kg	2.1	
		Minimum Energy Density	Wh/L	2.2	
		Nominal Energy Storage	Wh	30.3	
		Nominal Energy Density	Wh/kg	2.2	
		Nominal Energy Density	Wh/L	2.3	
		Impedance Matched Power Density	kW/kg	6	
		Impedance Matched Power Density	kW/L	6	
		Usable Power Density	kW/kg	3.2	
Physical	Dimensional, Nominal	Width	mm	180	
		Height (Incl. Terminals)	mm	239	
		Length	mm	332	
		Length, Terminal Extension	mm	19.9	
		Mass (Nominal)	kg	13.5	
		Volume (w/out terminals)	L	13.1	
				Screw Threads	-
	Other	Max Torque	Nm	17 - 22.5 Nm	
	Life Time	DC-Life	Test Voltage	V	Rated V
Test Temperature			°C	25	
Life Time			Yr	10	
Maximum Capacitance % Loss			%	20%	
Maximum ESR % Rise			%	100%	
Minimum Capacitance at End of Test			F	240	
			Maximum ESR at End of Test	mΩ	7.0
Endurance Life		Test Voltage	V	Rated V	
		Test Temperature	°C	65	
		Life Time	hrs	2000	
		Maximum Capacitance % Loss	%	20%	
		Maximum ESR % Rise	%	100%	
		Minimum Capacitance at End of Test	F	240	
			Maximum ESR at End of Test	mΩ	7.0
Storage Life		Test Voltage	V	0	
		Test Temperature	°C	25	
		Life Time	Yrs	2	
		Maximum Capacitance % Loss	%	10%	
		Maximum ESR % Rise	%	50%	
		Minimum Capacitance at End of Test	F	270	
			Maximum ESR at End of Test	mΩ	5.2
Cycle Life		Test Voltage	V	Rated To Half V	
		Test Temperature	°C	25	
		Life Time	Cycles	> 1,000,000	
	Maximum Capacitance % Loss	%	20%		
	Maximum ESR % Rise	%	100%		
	Minimum Capacitance at End of Test	F	240		
			Maximum ESR at End of Test	mΩ	7.0
			Cycle Profile:	-	CC Charge to Rated
			Typical Cycle Test Current (40 mA/F)	A	120
	Standards Compliance	Safety / Environmental	Ingress Protection Rating: IP67		
RoHS: 1-1001					
Chinese RoHS: 1-1001					
Shock		Shock per ISO 16750-3, 4.2.2			
		Shock per IEC 60068-2-27, Table A1 at 25g			
Vibration	Vibration per ISO 16750-3 Table 12				

Contact the Ioxus sales department for price and availability by writing to sales@ioxus.com or by calling 1-877-751-4222

ADDITIONAL TECHNICAL INFORMATION

Product specification test and calculation methods are available in *Ioxus Notes on Datasheet Specifications*

