

Innovative and Ultra Green A/V and Control Solutions for Residential & Commercial Applications We are here to help you save the Earth one-shade at a time



Helping you Save the Earth one shade at a time!



Headquartered in Austin Texas Founded in Jan. 2024

CEDIA

MEMBER







Helping you Save the Earth one shade at a time!

Modern Atomics @ CEDIA EXPO

Booth #3520 Next to SurgeX

Reaktor Training Session on Friday 6th

3-4:30 - Room 111



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Modern Atomics International Manufacture Representatives





















Why does our industry need new power supplies for motorized shades?

With energy costs increasing by many fold, and sustainable efforts starting to kick into gear we need the most energy efficient power sources available



Almost every power supply sold today by all the popular shade brands are not engineered or made by them, they have no requirements for DC motors or to handle the high amount of ESD associated with motorized shades.





Which shading brand(s) below engineers and makes power supplies for their shades?





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Since these brands don't engineer the power supplies, they typically use one of four types of off-the-shelf unit(s)





These off-the-shelf power supplies are generic and designed for a variety of applications such as lighting loads, industrial controls, handheld electronic devices, factory automation controls, security, sensors, networking, and telecommunications.



They <u>DO NOT</u> have specific requirements for DC MOTORS, ultra low operational quiescent current or the ability to handle higher levels of electrostatic discharge (ESD)



Off-The-Shelf Power Supplies For example, lets look at two different 24VDC applications LED Lighting and Shades 4 3.5 3 (Y) 2.5 2 1.5 DC Motor also has **HUGE Inrush** 1 possible HUGE Stal **Current for** .5 each shade **Current demand** 0 80 60 100 150 .25 .5 .75 1 2.5 5 10 20 30 40 50 70 90 200 0 Modern Atomics Time (S) 2024 Modern Atomics LLC Aug 2024

Off-The-Shelf Power Supplies

For example, lets look at two different 24VDC applications LED Lighting and Shades



Energy efficient data hubs & PDUs for motorized shades

To help everyone understand this issue, let's conduct an interactive mental exercise

- What would you say is the average times per day a shade is used?
- We have found that typical response to this question is 2-3 times a day, for this example we are defining this to mean for each time going from the upper limit to the lower limit or to a preset or intermediary position and then back.
- Next question, how long would you say it takes the average shade to travel from the upper limit to the lower limit?



Energy efficient data hubs & PDUs for motorized shades

We have found that typical response to this question is 10-30 seconds depending on the motor RPM settings, the amount of fabric on the tube, and the length of the shade.

So, let's do some simple math, take the number or times a day the shades are operated, and multiply them by the average time it takes to complete the motion. What is the result?



Energy efficient data hubs & PDUs for motorized shades

4 movements X 30 Seconds each=2 Minutes

We have found that the typical response to this question is a total of 2 minutes

So, in one day, or said differently, in one 24-hour cycle, what is the motor doing for the rest of the twenty-three hours and fifty-eight minutes of that day?



Helping you Save the Earth one shade at a time!

Modern Atomics

Modern Atomics launches extensive Edge AI-controlled motorized window treatment solutions at CEDIA EXPO We help dealers with solutions for all Shade motor types!

Including advanced Power Distribution Systems for AC, DC, Wirefree and PoE motors



Modern Atomics

Helping you Save the Earth one shade at a time!

As well as our Patent-pending, award-winning Power Distribution Units we also offer a wide range of Shade Tools to help dealers meet any end user requirements including;





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Reaktor DC-22

72Nm Plenum Rated Somfy Digital Network R5485







Helping you Save the Earth one shade at a time!



SAVE MONEY-make **your bids** more competitive

50% or more reduction in your motorized shade power supply costs due to the ultra highdensity design which means far less wall space in electrical rooms, or much less rack space.





Io Year Total Cost of Ownership for Power Infrastructure & QI for an example 44 Shade Project



Helping you Save the Earth one shade at a time!





SAVE TIME & SPACE-deploy faster & take less room Up to 80% reduction in your motorized shade power supply space due to its ultra high-density design which means far less wall space in electrical rooms. EXAMPLE 44 SHADE PROJECT





Helping you Save the Earth one shade at a time!



SAVE TIME & SPACE-deploy faster & take less room

Up to 60% or more reduction in your motorized shade power supply space due to its ultra high-density design which means far less rack space.

EXAMPLE 44 SHADE PROJECT













Helping you Save the Earth one shade at a time!

Reduces the annual energy consumption of the average wired motorized shade project by up to FOUR-HUNDRED-TWELVE **KILOWATTHOURS!** 412,000Wh

Or

One-thousand-four-hundredeighty-three point two megajoules 1,483.2MJ SOURCES

> PEP SOMF-00129-V01.01-EN PEP SOMF-00130-V01.01-FR

Sales Training Features Overview

SAVE THE ENVIRONMENT-use *less* power

LOWATTHOURS GENERAL ST ELECTRI



LEED v4.1 (1 credit per shade) for products having an EPD (Environmental PASS Product Declaration) with a focus on sustainability Modern Atomics

http://www.pep-ecopassport.org/

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Helping you Save the Earth one shade at a time!

Power consumption is reduced in two ways;

- First, without any AC power input(s) the need for inefficient, and costly AC power supplies or panels, conduit, & licensed electricians to install them are no longer required.
- 2. & Second, by removing up to 99.75% of the operational Quiescent current (IQ) from every from every shade using our Patent-Pending ECO MODE



Sales Training

Features Overview



Helping you Save the Earth one shade at a time!

Sales Training

Features Overview

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Atomics S T DEVICE PO

Reaktor uses a Low Voltage DC connection with a CAT5 cable and RJ45 termination. We have 3 ways for power;

> Use the included passive PoE injector/ or Somfy[®] 24V in-line BUS power supply, or...

2. Use a Modern Atomics Solar Panel kit (SPK) / & also compatible with Tesla Solar Roof & panel segments ... If using your own panels, harvesting DC@1000mA capability with a minimum 20% duty cycle

 For very large systems with more than 66 shades use our Tokamak[™] Fusion Core Hub which can support up to 176 Shades







All brand names, product names and trademarks are the property of their respective owners. Certain trademarks, registered trademarks, and trade names may be used to refer to either the entities claiming the marks and names or their products for identification. *In process of testing and validation



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(6) DEVICE PORTS

A non-powered BUS OUT port is provided to expand the system this port is also used for RS-232 (Same pin out as UAI+) and End of Line indicator









Re	egulatory ompliance		D Sa	Ies Train Regulatory Comp	Diance)
AGEN	CY: SKU:	DC-22	QSPS-10PNL-NPM	#1871026	SPU-10/24	
CE	IEC Compliant	YES	YES	YES	YES	
RoHS	RoHS Compliant	YES	YES	YES	YES	
	UL (US & Canada)	YES*	YES	YES	NO	
	BIS	YES	NO	NO	NO	
FC Par	t 15 Subpart B Class B	YES	NO		NO	
	ECE SUSTAINABLE GOALS UN38.3	YES	NO	NO	NO	
US Dept. of Energy Level VI		YES	NO	NO	NO	
Reaktor ful	ISO 14025: 2010 CO Type III environmental ORT declarations Ily meets UL 9540A, but we do not te	YES* PSR-TS121-SC17B-EN- 20240420 est as our ESM chemistry does not have	NO eaktor also complies with ve these kind of issues wy 2024	NO n UL758, UL1581 and U	NO JL3512 standards Mode * IN PROCESS	enn Atomica



Sales Training

Extend the life of your shades

When using our Patented ECO mode, your projects can more than double the average motor life.

Modern Atomics has commissioned 2 independent laboratories to conduct advanced lifecycle testing to validate & confirm our Austin Texas findings; Nemko and Intertek

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Double the life math minutes/Nm (1392/2(111.36/60.0)

(40,646.4 l_Q+21,900 load= 62,546.4Wh per year)

 $(609,696 I_{0} + 328,500 Wh = 938,196 Wh 15 Years)$

SOURCES:

PEP SOMF-00129-V01.01-EN PEP SOMF-00130-V01.01-FR

(o I_Q + 328,500Wh = 985,500Wh 45 Years (42.8 years)



Environmental and Reliability Testing

Determine if your product can withstand exposure to its intended environment through a wide range of environmental and reliability tests performed by experts at the accredited Nemko laboratory for



Total Quality. Assured.



Modern Atomics





- Call to Action! COME TO CEDIA BOOTH 3520
- Check out our online store for free* and fast overnight shipments, easy returns & Free Design Services in North America, India, UAE and Japan
- Read the latest ACT NOW at <u>https://www.un.org/en/actnow</u>
- Read our latest white paper on IQ for Shade motors and power supplies and review our PEP ECO PASSPORT for Reaktor and review all Somfy PEP's. http://www.pep-ecopassport.org/
- Contact your local Modern Atomics Sales Rep, sign up to be a dealer and request a demo
- Switch out your popular name brand data hubs and power supplies and start saving money on your project and help your end-user reduce their carbon footprint.



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* Minimum purchase may apply, continental US only © 2024 Modern Atomics LLC Aug 202