LDX-SC12 12 V Super Capacitors Module

The LDX-SC12 Super Capacitors Module is used to replace 12 V batteries for short term backup applications.

Multiple parallel and series connection are possible for voltage and/or current increase.

Simple but elegant look and ease of installation make it ideal for various industrial applications and is designed to be mounted on DIN rail and installed inside a protective enclosure.

FEATURES

- Reliable topology, based on new technology of Electric Double Layer Capacitors
- > 7.6 kJ (2.1 Wh) energy storage
- Replaces 12 V batteries for short term backup applications
- Extended operating temperature (up to 85°C) for high reliability
- Multiple parallel and series connection possibilities for voltage and/or current increase
- Reverse polarity and overcurrent protections
- Pluggable connectors
- Compact size in aluminum enclosure
- Dimensions: 80 x 120 x 100 mm







LDX-SC12

1. GENERAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITIONS	SPECIFICA	TION
Input DC Rated Voltage	Nominal Range Absolute maximum voltage	12 0 - 16 17	VDC VDC VDC
Energy Storage Capacity		7.6	kJ (2.1Wh)
Input Current for Capacitor Charging	Maximum	20	A
Charging Time	See charging chart 1		
Output Current for Capacitor Discharging	See discharging charts 2, 3, 4	20 30	A A for 5 s
Protections	Reverse polarity connection Short circuit through ATO blade, user replaceable Overvoltage protection	30	A / 32 V
Operating Temperature		-40 to +85	°C
Storage Temperature		-40 to +80	°C
Voltage Derating	Over 65°C	- 120	mV
Humidity	Non-condescending	5 - 95	% RH
Cooling	Natural convection		
Charging / Discharging Cycles	Ta = 25°C	500 000	
Life Time Expectancy	$Ta = 25^{\circ}C$, full load	10	years
MTBF	MIL-HDBK-217F at Ta = 25°C, full load	> 500 000	hrs
Isolation	DC Bus to Ground	0.75	kVDC
Safety Standards & Approvals	UL 508 (certified) IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950		
EMC Emissions	EN 55011 / CISPR 11 EN 55022 / CISPR 22	Class B Class B	
EMC Immunity	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5	Level 3 Level 3 Level 3 Level 1	
Protection Degree	EN 60529	IP20	
Vibration Sinusoidal	IEC 60068-2-6	5-17.8 Hz: ±1.6 m 2 g 2 Hours /	m; 17.8-500 Hz: axis (X,Y,Z)
Shock	IEC 60068-2-27	30 g 6 ms, 20 g 11 ms; 3 bumps / direction, 18 bumps total	

2. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITIONS	SPECIFICATION
Dimensions		80 x 120 x 100 mm 3.15 x 4.72 x 3.94 in
Weight		750 g
Connection Terminals	Screw type pluggable (24 - 12 AWG)	2.5 mm ²
Case Material	Aluminum	



3. CHARGING / DISCHARGING CHARTS



4. PIN LAYOUT & DESCRIPTION





INPUT / OUTPUT CONNECTION + = Positive DC - = Negative DC

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5. MECHANICAL DRAWING



Figure 1. Mechanical Drawing

Notes:

Technical parameters are typical, measured in laboratory environment at 25°C and 16 VDC

NUCLEAR AND MEDICAL APPLICATIONS - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.



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