

DATASHEET

400V Regenerative Power Backup System

PRODUCT CODE	CTS 00XXXC0 0400V0 TB00
DATASHEET VERSION	V2020-0 of 19/10/2020

CapTop 400V Regenerative Power Backup System has high Power Density, over 1,000,000 duty cycles, low maintenance needs and compact design. The system comprises a supercapacitive 54V storage based on CTM00165C00054V0NN00 power module and a DC/DC converter that provides bidirectional energy transfer from/to the 400V DC bus and the storage, that can range from 165F to 1650F. Suitable for applications like elevators and cranes, heavy duty machinery and Energy storage system. Provides additional power when the load goes up, recovers energy when the load goes down and acts as emergency backup if the grid is off.

SPECIFICATIONS	
Item	Characteristics
Nominal Capacitance (25°)	165F to 1650F
Capacitance Tolerance	0% / +20%
Rated Voltage (low voltage side)	54V
Surge Voltage (low voltage side)	57V
Rated Voltage (high voltage side)	375V-415V
Maximum Continuous Current ($\Delta T=15^{\circ}C$)	60A
Maximum Continuous Current ($\Delta T=40^{\circ}C$)	68A
Maximum Peak Current, 1 sec.	85A
Maximum power	3 kW
Operating Temperature Range	- 40° to +65°C
Storage Temperature Range	- 40° to +70°C
Power Terminals	TBD / custom

Recommended Torque - Terminal	TBD
Vibration Specification IEC 255-21-1	TBD
Shock Specification IEC 255-21-2	TBD
Remote Control, Diagnostic and Monitoring	via CanOpen connector
Temperature Monitoring	NTC Thermistor
Stored Energy	from 67.5 Wh to 675 Wh
Temperature Performance (-40°C to 65°C)	$\Delta C \leq 5\%$ of initial measured value ESR $\leq 50\%$ of specified value
High Temp. Life (1,500 hours @ 65°C, Rated Voltage)	$\Delta C \leq 20\%$ of initial measured value ESR $\leq 200\%$ of specified value
Room Temp. Life (10 years @ 25°C, Rated Voltage)	$\Delta C \leq 20\%$ of initial measured value ESR $\leq 200\%$ of specified value
Cycle Life (1,000,000 cycles between VR and 1/2 VR)	$\Delta C \leq 20\%$ of initial measured value ESR $\leq 200\%$ of specified value
Shelf Life (25°C, uncharged)	4 years
Factory High-Pot Test	TBD
Typical Thermal Resistance	TBD
Typical Thermal Capacitance	TBD

*All values are provisional and may vary

DIFFERENCE PARAMETER LIST	
Environmental Protection	IP54 (TBD)
Weight	from 25 kg to 350 kg
Usable Power Density (Pd)	TBD
Impedance Match Power Density (Pmax)	TBD
Gravimetric Energy Density (Emax)	TBD
Environment Humidity	$\leq 90\%RH$
Installation	only by qualified personnel

PIN DEFINITION of 5V insulated CAN connector

Pin Number	Wire Color	Definition	Outputs
1	Black	GND	
2	Orange	CAN H	
3	Green	CAN L	
4	Red	+5V	

OPTIONAL ACCESSORIES

TBD

CONSTRUCTION & DIMENSIONS



h (Max.)	L/mm	
	L1	L2
1000-2000	600-1200	400

Product dimensions are for reference only unless otherwise identified.

Product dimensions and specifications may change without notice.

Product complies to the following certification requirements:



Version	Date	Revision History
V2020-0	16/10/2020	Original Version

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