

Clean energy devices to sustain
the next generation

DCH20 Series

DC POWER SUPPLY

EDLC application product

Features

- EDLC (Electric Double Layer Capacitor)
- Hold Up Time > 4 Seconds
- Includes Connector for Optional EDLC Unit Connection
- Failure Detection Signal Employed
- On/Off Switch Included for Hold Up Mode
- 5 Output Voltages from 3.3-48VDC
- Universal Input 85-264VAC
- Meets FCC Class B,CISPR Class B
- Board type
- RoHS Compliant

BUILT-IN BACKUP

Maintains Power for 4 seconds
when AC power is interrupted
SUPERCAP EDLC Technology



Applications Power fail Measure ／ Memory Back up ／ Data Protection
HDD Head Protection ／ Switch Malfunction Measure
Additionally, it is possible to use as a standard power supply for data processing, measuring or optical equipment.

(LVD only) (scheduled) (scheduled) (scheduled)

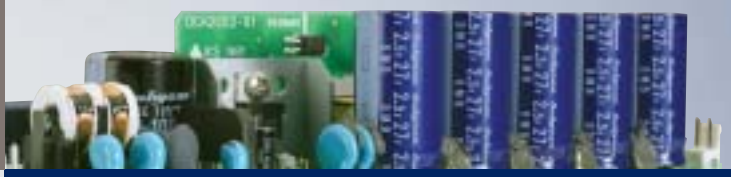
Rubycon

The long Hold-Up time is achieved by using Electric Double Layer Capacitor.

"DCH20 series" is a power supply wherein the Electric Double Layer capacitors are applied and therefore the DC-output can be maintained. The Hold-Up time is > 4 Seconds when the AC input is interrupted It is possible to reduce momentary power failure and loss of data with this design.

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EDLC application product



DCH20

62 (W) ×190 (D) ×40 (H) mm



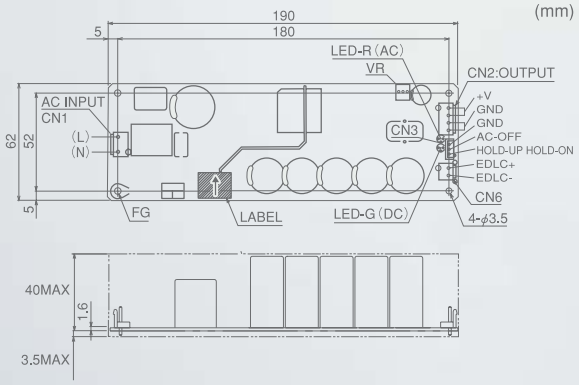
DCH20 Specifications

5 Fixed Output Models are shown with corresponding specifications.
Please consult us for custom configurations.

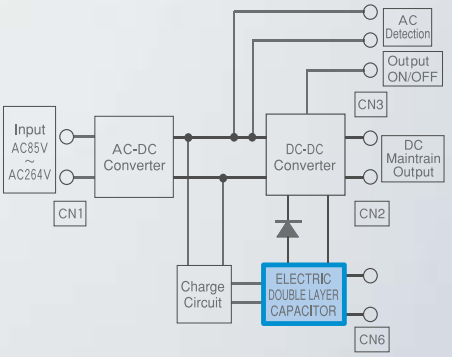
Item	DCH20-3.3	DCH20-5	DCH20-15	DCH20-24	DCH20-48
Rated output voltage	3.3V	5V	15V	24V	48V
Rated output current	6.0A	4.0A	1.3A	0.83A	0.41A
Maximum output power	20W	20W	20W	20W	20W
Adjustable voltage range ※1	3.1～3.5V	4.75～5.25V	14.3～15.8V	22.8～25.2V	45.6～50.4V
Efficiency (120/230VAC,TYP) ※1	—	—	—	—	—
Output ripple noise	150mVpp	150mVpp	150mVpp	150mVpp	250mVpp
Over current protection ※2	7.2A～	4.8A～	1.6A～	1.0A～	0.5A～
Over voltage protection ※3	4.0V～	6.0V～	17.3V～	27.6V～	55.2V～
Input voltage range	85～264VAC				
Input frequency range	47～63Hz				
Input current ※1	0.8A (100VAC) ,0.5A (230VAC)				
Inrush current ※4	15Apk MAX (120VAC) ,30Apk MAX (240VAC)				
Hold-up time ※5	4sec MIN				

※1.At rated power. ※2.Recovers automatically. ※3.Recovers on AC input again
※4.Specified at 25 degree ambient temperature with cold start.
※5.When AC power is interrupted with rated power

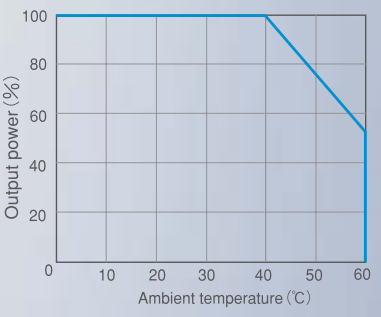
Outline Drawing



Block Diagram



Output Derating



Item	
Maximum line/load regulation	±0.5%
Voltage tolerance ratio	±3% (at line, load,time,temperature)
Operating temperature	0～+60℃ (Refer to Output Derating)
Operating humidity	30～90%RH (Non condensing)
Storage temperature	−30～+70℃
-Storage humidity	10～95%RH (Non condensing)
Cooling	Convection cooling (Refer to Output Derating)
Electric strength voltage	Input-Output 3000VAC 1minute,Input-FG 1500VAC 1minute,Output-FG 500VAC 1minute
Insulation resistance	100MΩ MIN DC500V 25℃ 70%RH Input-Output,Input-FG,Output-FG
Leakage current	0.5mA MAX (240VAC,50Hz)
Vibration	10～55Hz 2G (X-Y-Z direction for one hour)
Shock	20ms 20G (X-Y-Z direction each three times)
Safety standard	UL90950, CSA60950 (cUL), EN60950 (NEMKO)(acquisition schedule)
Harmonic distortion	FCC Class B, EN55022 Class B, VCCI Class B conforming
Conduction noise	EN61000-4-5 Level 3/4KV (CM), 2KV (DM) conforming
Dimensions	62 (W) ×190 (D) ×40 (H) mm
Weight	220g TYP.

※Specifications are subject to change.

Connectors used

Part discription	Part name	Manufacturer	Q.T.Y
CN1(input side) pin header	B2P3-VH	JST	1
CN2(output side)pin header	B4P-VH	JST	1
CN3(output side)pin header	B3B-EH	JST	1
CN6(enlargement)pin header	B2P-VH	JST	1

Matching housings and pins

Part discription	Part name	Manufacturer	Q.T.Y
CN1 housing	VHR-3N	JST	1
CN2 housing	VHR-4N	JST	1
CN3 housing	EHR-3	JST	1
(CN1, CN2, CN6) terminal	BVH-21T-P1.1	JST	8
CN6(enlargement)housing	VHR-2N	JST	1
(CN3) terminal	BEH-001T-P0.6	JST	3

※Not included with the product

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