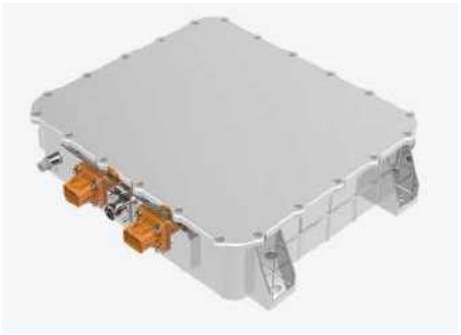
ANNREN TECHNOLOGIES CO., LTD.

https://www.annren.com
e-Mail：sales@annren.com
TEL：+886-6-313-0155 FAX：+886-6-313-0225
No.196-19, Zhonghua Rd., Yongkang Dist., Tainan City 71069, Taiwan

20KW – 60KW DC/DC Converter Bidirectional liquid

Products Portfolio

Items	Model No.	Rated Power(KW)	Va Voltage Range(VDC)	Va Current Range(A)	Vb Voltage Range(VDC)	Vb Current Range(A)
1	ATRDB-20-M35-XX	20	0-100	0-300	0-100	0-300
2	ATRDB-40-M35-XX	40	0-500	0-240	0-500	0-240
3	ATRDB-60-M35-XX	60	0-1000	0-160	0-1000	0-160



Features

1. Dimensions(mm) (LxWxH): 310.6 x 390 x 83
2. Weight(KG): 13.5 ± 0.5
3. Cooling System: Liquid
4. IP Rating: IP67
5. CAN compatibility: CAN2.0 B
6. Enclosure: Aluminum alloy
7. Isolated: Non Supported
8. Software: Digital software design
9. Online Upgrade & Fault Diagnosis: Supported

Specification

Description		Remark
Efficiency	≥97%	Rated input voltage, load＞30%
Output Voltage Accuracy	±1%	
Communication Method	CAN 2.0 BUS	
Isolation	Non supported	

Operating Environment

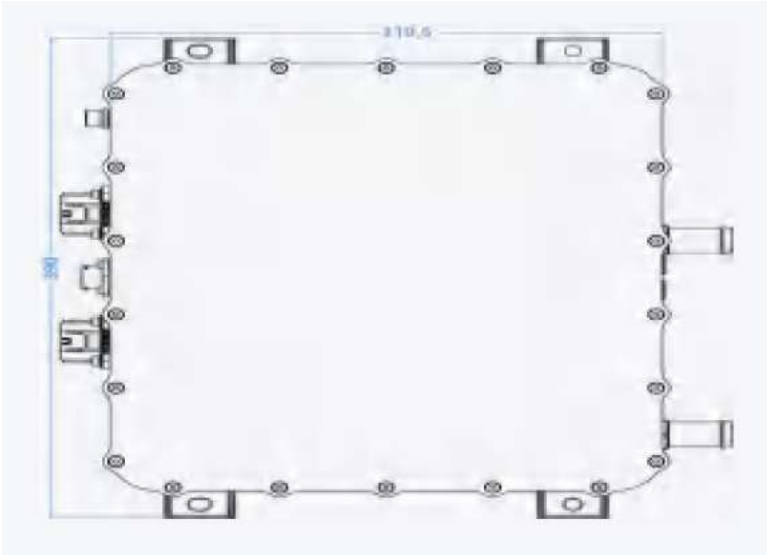
The operating environment conditions of this assembly are as follows:

Items	Descriptions		Remark
1.	Operating Temperature(℃)	-40~85	The power will be derated when the temperature exceeds 65℃
2.	Storage Temperature(℃)	-40~95	
3.	relative humidity(%RH)	5～95	No condensation, no frost
4.	Vibration level	ISO 16750-3,2012（E）	After X,Y,Z three directions of sweep frequency vibration testing, no damage for parts , no loose for fastening piece
5.	Noise level(dB)	< 60	
6.	Salt spray level	GB/T 2423.17	
7.	Altitude(M)Max	3000	GB/T16935.1-2008

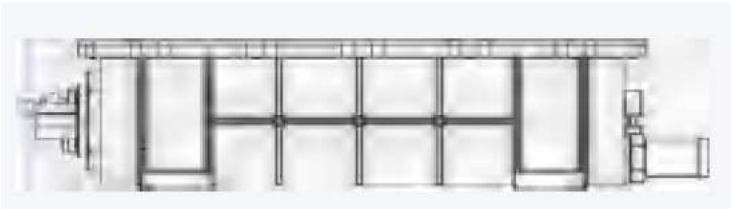
Version: V0.0 Date: 2026/06/15
File No.: SDCB-Q033--0

https://www.annren.com
e-Mail：sales@annren.com
TEL：+886-6-313-0155 FAX：+886-6-313-0225
No.196-19, Zhonghua Rd., Yongkang Dist., Tainan City 71069, Taiwan

8.	Fall	Wiring harness according to QC/T417.1-2001 Housing according to GB/T 2423.8-1995	Appearance, structure and performance are normal
9.	Protection Characteristics	Input OVP/UVP, output OVP/UVP, input anti-reverse connection, output short circuit protection, OCP, OTP	
10.	Electromagnetic immunity	GB/T17619-1998 chap4	
11.	Electromagnetic disturbance	GB18655-2002chap 12 chap14	



Dimensions(mm) (LxWxH): 310.6 x 390 x 83



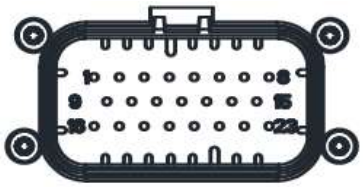
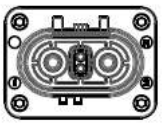
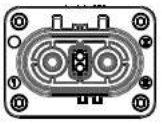
Version: V0.0 Date: 2026/06/15
File No.: SDCB-Q033--0

https://www.annren.com
e-Mail：sales@annren.com
TEL：+886-6-313-0155 FAX：+886-6-313-0225
No.196-19, Zhonghua Rd., Yongkang Dist., Tainan City 71069, Taiwan

Connector Model: Adjustable as per requirement Connector Model

Position	Function	Brand	Socket Model	Plug Model
1	Signal control	TBD		
2	HV DC input			
3	HV BUS Output			
4				

Interface Definition

Signal Control(1)		HV DC Input(2)		HV BUS Output (3)	
					
1	CANH	1	INPUT +	1	OUTPUT +
2	CANL	2	INPUT –	2	OUTPUT –
3	Enable(out)	3	HVIL +	3	HVIL +
4	GND	4	HVIL -	4	HVIL -
5	TBD				
6	TBD				
7	WAKEUP IN				
8	BAT+				
9	BAT-				

Cable Current Rating Table for reference only. The actual current-carrying capacity shall be based on the cable manufacturer's specifications

CURRENT (A)	CABLE SIZE (MM2)	CURRENT (A)	CABLE SIZE (MM2)	CURRENT (A)	CABLE SIZE (MM2)
7	0.75	60	10	250	70
22	2.5	80	16	300	95
25	3	125	25	350	120
30	4	150	35		
40	6	200	50		

Version: V0.0 Date: 2026/06/15
File No.: SDCB-Q033--0