

EDI POWER SUPPLY

PRODUCT CATALOG

DC Power Supply System

DC POWER CONTROLLER

WE MAKE PURE!
WE LINK EDI !

DCPS Catalog V4.7.0 | 2026



EDI POWER SUPPLY
DC-Link

WE MAKE PURE! WE LINK EDI !

DC power supply solutions for EDI systems

DC Power Controller System

DC-Link's DC Power Controller is a pulse-width-modulation(PWM) DC power supply that controls AC utility power to deliver DC power to the ion membranes of an EDI system.

A microprocessor and high-speed power semiconductors control the high switching frequency, and a pulse insulation transformer provides safe electrical isolation. A built-in control sequence unit makes the controller lighter and more compact and easier to maintain. A touch-screen Operation Monitor that monitors and controls operating data enables effective operation and management.

1

Stability

- Built-in EMS filter
- Improved DC output waveform
- Enhanced output circuit
- Compact transformer via high-frequency control
- Minimal heat generation

2

Convenience

- Three-phase free-voltage input
- Modular sequence control
- Compact control panel
- Modbus RS-485 communication

3

Field Service

- LCD display and power meter
- Enhanced alarm / history
- Built-in flow interlock
- Minimal panel installation area

Product line-up for your EDI/MDI module capacity

From the compact single-phase DCK-M2 to the 9 kW rack-mount DCK-M8S, choose the DC Power Controller that fits your installation environment and module capacity.



DCK-M8S

Max DC 600V 15A

9 kW · 3-phase 380–480 VAC

19-inch rack mount · 28 kg

High-capacity EDI modules



DCK-M3

Max DC 600V 7A

4.2 kW · 3-phase 380–480 VAC

Wall-mount panel type · 10.1 kg

General small/medium EDI modules



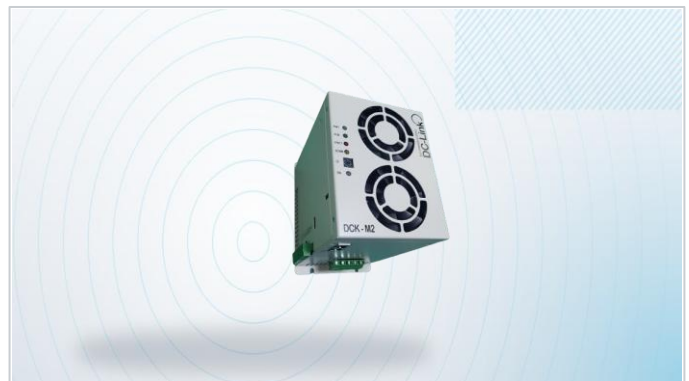
DCK-M7

Max DC 600V 15A

9 kW · 3-phase 380–480 VAC

Wall-mount panel type · 11.5 kg

High-current EDI modules (e.g. fluoride removal)



DCK-M2

Max DC 600V 9A

5.4 kW · single-phase 220–600 VAC

Compact all-in-one · 3.8 kg

Replaces EVOQUA G2 / DCR / DCM

DC POWER CONTROLLER

DCK-M8S

CE

Max DC 600V 15A



- 1 AC/DC Power Terminal
- 2 Cooling Fan
- 3 Interface Port (IDC 26PIN)
- 4 Communication Port (RJ45)
- 5 Display (4×20 LCD)
- 6 Control Button
- 7 Status Lamp (5 LED)
- 8 Air Vent

INPUT	OUTPUT	COOLING	SIZE / WEIGHT
380~480 VAC 3P3W 9 kW	Max 600 V Max 15 A	Forced air 0~50 °C	479×149×544 mm 28 kg

DC power supply for large-capacity EDI modules, providing complete EMS protection and high-quality DC power.

- DC output unit designed to optimize EDI module performance
- Connects directly to the power source – no external isolation transformer required
- Input power: 380~480 VAC, 3P3W, 9 kW, 50/60 Hz
- High-efficiency three-phase switch-mode power supply – higher efficiency and lower power consumption than conventional SCR units
- Built-in EDI system modularization, software, relays and control-panel elements
- Modbus RS-485 communication
- DC output voltage and current adjustable via external HMI or PLC
- Local/Remote switch and ON/OFF input for remote control
- EDI flow-switch control circuit
- Short-circuit and over-current protection
- Made in Korea



Multi-unit installation in a control panel

DC POWER CONTROLLER

DCK-M3

CE

Max DC 600V 7A



- 1 Interface Connector
- 2 Display (4×20 LCD)
- 3 Status Lamp (OK / COMM / ALARM)
- 4 Remote / Local Switch
- 5 Cooler (Fan)
- 6 AC/DC Power Terminal
- 7 Communication Port (RS-485)

INPUT	OUTPUT	COOLING	SIZE / WEIGHT
380~480 VAC 3P3W 4.2 kW	Max 600 V Max 7 A	Forced air 0~50 °C	272×305×178 mm 10.1 kg

DC power supply for general small and medium-sized EDI modules, providing effective EMS protection and high-quality DC power.

- DC output unit designed to optimize EDI module performance
- Connects directly to the power source – no external isolation transformer required
- Input power: 380~480 VAC, 3P3W, 4.2 kW, 50/60 Hz
- High-efficiency three-phase switch-mode power supply – higher efficiency and lower power consumption than conventional SCR units
- Built-in EDI system modularization, software, relays and control-panel elements
- Modbus RS-485 communication; works with the Interface Box (INTB)
- DC output voltage and current adjustable via external HMI or PLC
- Local/Remote switch and ON/OFF input for remote control
- EDI flow-switch control circuit
- Short-circuit and over-current protection
- Made in Korea



Installation example inside a panel

DC POWER CONTROLLER

DCK-M7

CE

Max DC 600V 15A



- 1 Interface Connector
- 2 Display
- 3 Status Lamp
- 4 Remote / Local Switch
- 5 Cooler (Fan)
- 6 AC/DC Power Terminal
- 7 Communication Port

INPUT	OUTPUT	COOLING	SIZE / WEIGHT
380~480 VAC 3P3W 9 kW	Max 600 V Max 15 A	Forced air -5 to 50 °C	292×332×182 mm 11.5 kg

DC power for high-current EDI modules used to remove fluoride from treated pure water, providing effective EMS protection and high-quality DC power.

- DC output unit designed to optimize EDI module performance
- Connects directly to the power source – no external isolation transformer required
- Input power: 380–480 VAC, 3P3W, 9 kW, 50/60 Hz
- High-efficiency three-phase switch-mode power supply – higher efficiency and lower power consumption than conventional SCR units
- Built-in EDI system modularization, software, relays and control-panel elements
- Modbus RS-485 communication
- DC output voltage and current adjustable via external HMI or PLC
- Local/Remote switch and ON/OFF input for remote control
- EDI flow-switch control circuit
- Short-circuit and over-current protection
- Made in Korea

KEY POINTS

15 A

High-current output

9 kW

Input capacity

RS-485

Modbus communication

DC POWER CONTROLLER

DCK-M2

CE

Max DC 600V 9A



- 1 Status Lamp (PWR/RUN/FAULT/COMM/ON)
- 2 ID Setting (Rotary Dial)
- 3 DC 12/24V (Monitor Power)
- 4 F/W Port
- 5 4-20mA / ON-OFF Control, RUN / FAULT Relay
- 6 Communication Port (RS-485)
- 7 AC/DC Power Terminal

INPUT	OUTPUT	COOLING	SIZE / WEIGHT
220-600 VAC Single-phase 5.4 kW	30-600 V Max 9 A	Forced air 0-75 °C	130×194×194 mm 3.8 kg

DC power controller that supplies DC power to EDI modules. Designed and manufactured to replace the DC power supplies of existing EVOQUA G2, DCR and DCM models.

- DC power supply to replace existing G2, DCR and DCM units
- Microprocessor control – very low ripple voltage and current
- Output of 30-600 VDC proportional to the 220-600 VAC input (maximum output voltage is about 100 % of the input RMS voltage)
- High-efficiency single-phase switch-mode power supply – lower power consumption than conventional SCR units
- Constant-current / constant-voltage operation
- Modbus RS-485 connection; module ID set by rotary dial
- DC output voltage and current adjustable via external HMI or PLC
- 4-20 mA analog input for DC output current control
- 4-20 mA (or 0-5 V) analog output for remote monitoring
- Over-temperature, over-voltage and over-current protection

KEY POINTS

1-Phase

Single-phase 220-600 VAC

0-75 °C

Ambient operating temp.

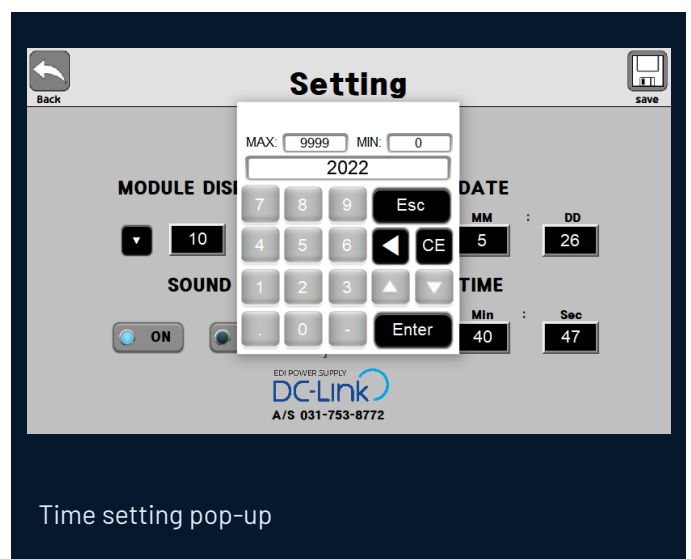
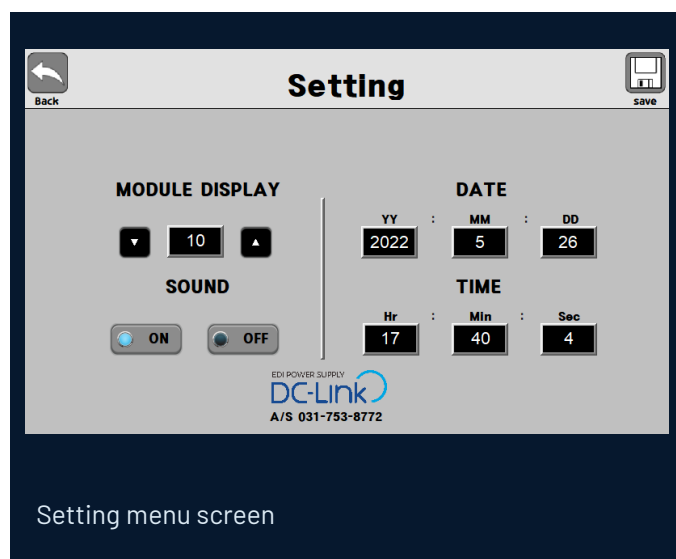
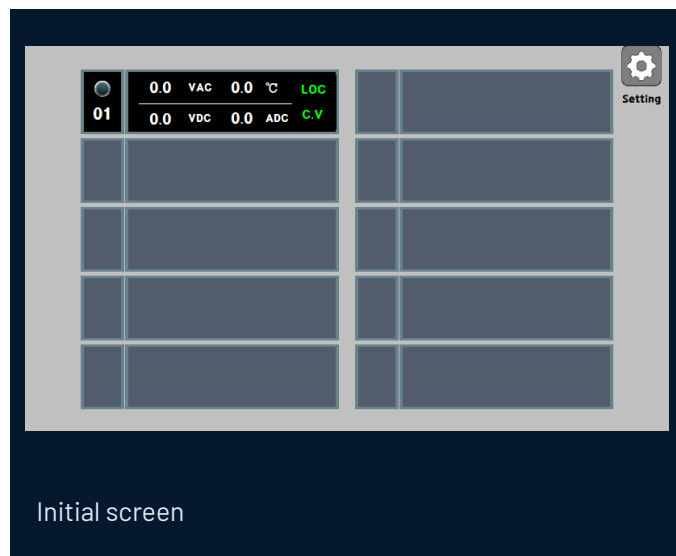
3.8 kg

Lightweight · compact

Operation Monitor – Operation & Settings

A touch monitor on the front of the panel is used to set parameters and operate the EDI system, and displays operating information and alarms.

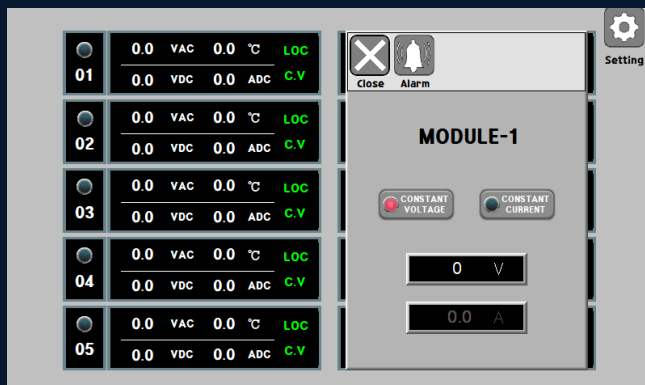
- 4-inch or 7-inch LCD touch monitor
- Input voltage display
- DC output voltage/current setting
- DC output voltage/current display
- Constant-voltage / constant-current mode display
- Temperature and status display with module lamps
- Alarm history and reset
- Date, time and buzzer settings



Operation Monitor – Modules & Events

A touch monitor on the front of the panel is used to set parameters and operate the EDI system, and displays operating information and alarms.

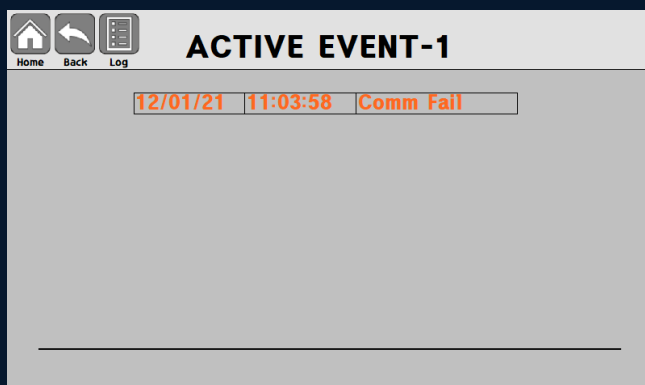
- 4-inch or 7-inch LCD touch monitor
- Individual module status and settings
- DC output voltage/current display
- Constant-voltage / constant-current mode display
- Active event display
- Event history view
- Event history reset
- Alarm history and reset



Individual module pop-up



Event history screen



Active event screen



Event reset pop-up

Operation Monitor & Interface Board



Operation Monitor

A panel-front monitor displays operating information and is used to set parameters for EDI or MDI system operation. One set supports 8 DC power controllers.

- Maker : LS
- Size : 4" TFT touch monitor
- Power : DC 24 V
- Communication : Modbus RS-485



Interface Board & Cable

Interlock signals from a PLC or HMI and alarm signals from the flow sensor are handled by a connector-type interface board, eliminating unnecessary wiring and greatly reducing installation labor and space.

- Model : INTB
- DC output voltage (4-20 mA)
- DC output current (4-20 mA)
- Remote IC analog control (4-20 mA)
- Run / fault / flow switch fault signals
- Local-remote status signal, remote ON/OFF command
- DSUB 25-pin cable connection



※ Alarm signal contact rating: dry contact, 24 VDC

SPECIFICATIONS

	DCK-M8S	DCK-M1	DCK-M3	DCK-M2
Input Specification				
Line Voltage	380~480 VAC	380~480 VAC	380~480 VAC	220~600 VAC
Phase	3P3W L1,L2,L3,GND	3P3W L1,L2,L3,GND	3P3W L1,L2,L3,GND	1P2W L1,L2
Frequency	50~60 Hz $\pm 5\%$	50~60 Hz $\pm 5\%$	50~60 Hz $\pm 5\%$	50~60 Hz $\pm 5\%$
Efficiency	Max 94 %	Max 94 %	Max 92 %	Max 95 %
Output Power	9 kW	9 kW	4.2 kW	5.4 kW
Output Specification				
Current DC	Max 15 A	Max 15 A	Max 7 A	Max 9 A
Voltage DC	Max 600 V	Max 600 V	Max 600 V	Max 600 V
Voltage stability	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
Response speed	2 ms	2 ms	2 ms	2 ms
Display	LCD	LED Lamp	LCD	LED Lamp
Interlocks Specification				
Current / Voltage DC	4-20 mA Analog	4-20 mA	4-20 mA	4-20 mA / 0-5 V
Remote-Local Status	Dry Contact	Dry Contact	Dry Contact	—
Run, Alarm Status	Dry Contact	Dry Contact	Dry Contact	Dry Contact
Flow fault	Dry Contact	Dry Contact	Dry Contact	—
Remote On-Off command	Dry Contact	Close On	Close On	Close On
Communications Specification				
Protocol / Connection	Modbus RS-485	Modbus RS-485 / RJ45	Modbus RS-485 / RJ45	Modbus RS-485 / RJ45
Physical Specification				
Weight (kg)	28	11.5	10.1	3.8
W × H × D (mm)	479×149×544	292×332×182	272×305×178	130×194×194
Power / I/O Terminal	10-12 / 13-18 AWG	8-12 / 13-18 AWG	10-12 / 13-18 AWG	10-12 / 16-18 AWG
Environmental Specification				
Operating Temperature	0~50 °C	-5~50 °C	0~50 °C	0~75 °C
Storage Temperature	-15~70 °C	-15~70 °C	-15~70 °C	-15~70 °C
Humidity	5~95 % n.c.	0~95 % n.c.	0~95 % n.c.	0~95 % n.c.
Altitude / Cooling	1,800 m / Forced air	1,800 m / Forced air	1,800 m / Forced air	1,800 m / Forced air
Protections				
Over-Voltage · Under-Voltage · Shorted output · Over temperature · Chassis ground · I/O terminal				

※ DCK-M8S / M3 / M2 specifications are based on the latest instruction manuals. Specifications are subject to change without notice for product improvement.

Instruction Manuals & Technical Documents

Instruction manuals(English/Korean) covering installation, wiring, operation, alarm troubleshooting and inspection are available for the DCK-M2, DCK-M3 and DCK-M8S.

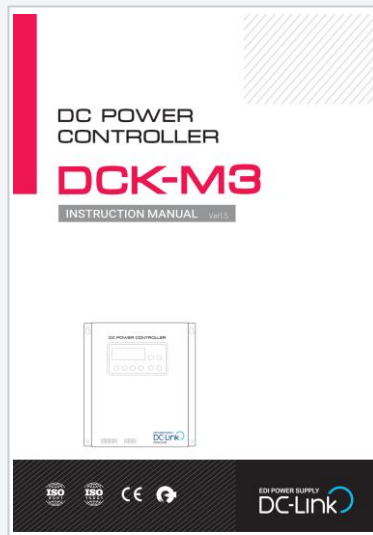


DCK-M2

Instruction Manual Ver1.4

ENG / KOR · DOCX / PDF

- Installation · wiring · Modbus RS-485 communication
- VM/IM output selectable: 4-20 mA or 0-5 VDC
- LED, alarm and inspection guide

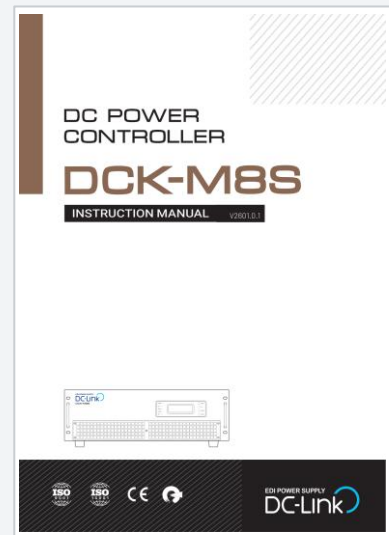


DCK-M3

Instruction Manual Ver1.5

ENG / KOR · DOCX / PDF

- Interface box(INTB) wiring
- Menu tree · operating procedure · screen examples
- Alarm troubleshooting and inspection guide



DCK-M8S

Instruction Manual Ver2.1

ENG / KOR · DOCX / PDF

- 19-inch rack installation · rear connector wiring
- 4×20 LCD menu tree · screen descriptions
- Alarm troubleshooting and inspection guide

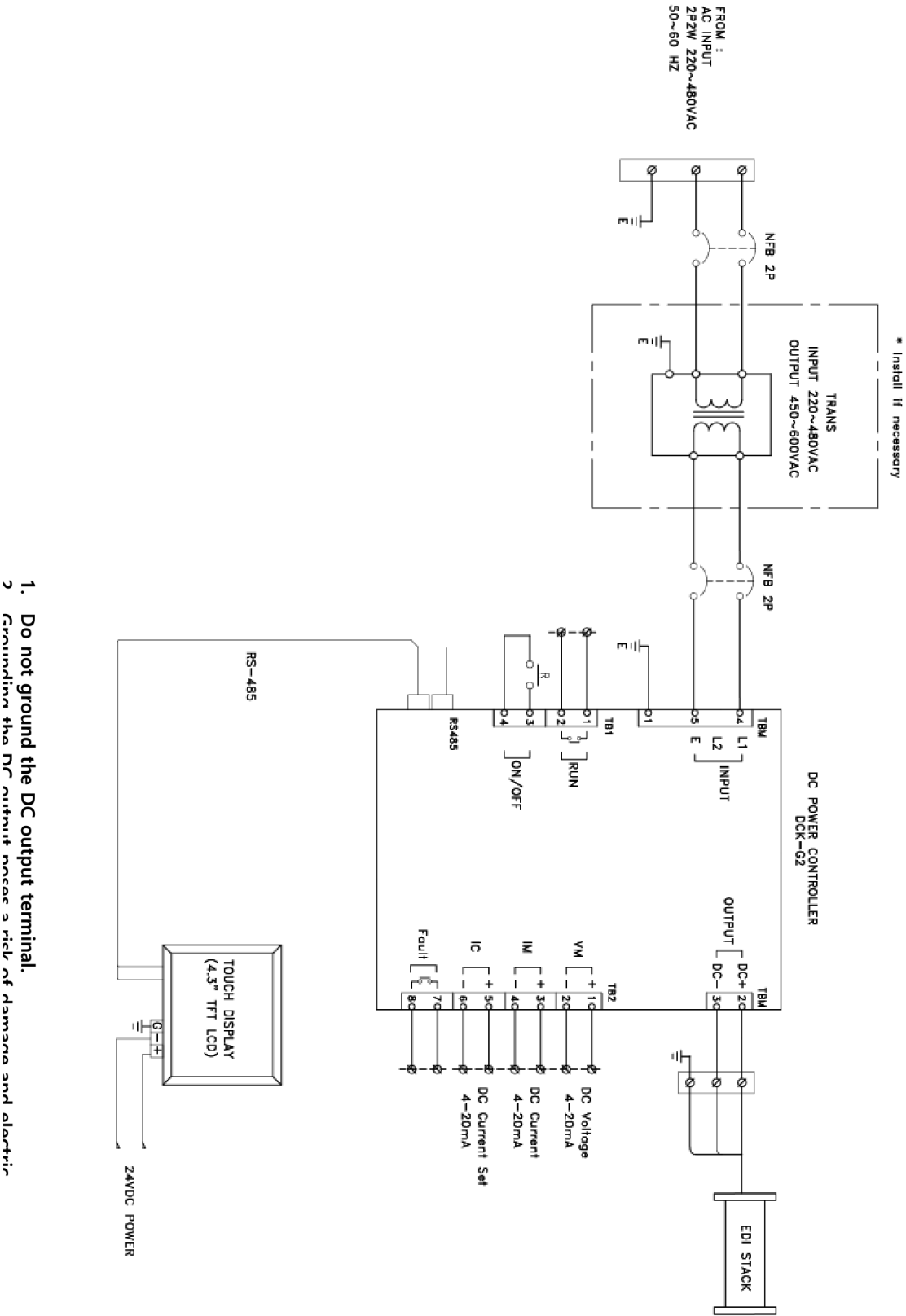
Support & Contact

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Tel : 031-735-8772 Fax : 031-735-8773

E-mail : dclink@dclink.kr | www.dclink.kr

DCK-M2 DIAGRAM



CE Certificate (Marking Plate)

Copy of marking plate:

SMART DC POWER SUPPLY			
Data.		Power	9.8 kVA
Input		Output	
Voltage	380 [Vac]	Voltage	600 [Vdc]
Max.Current	15 [Aac]	Max.Current	13 [Adc]
Phase/Freq.	3Φ / 60[Hz]	S/N	
 DC LINK Co.,Ltd		TEL 031-735-8772	

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

NAME	DC Power Controller	
MODEL	DCK-M3	
SERIAL No.		
INPUT	3~, 380V~, 50/60Hz	
OUTPUT	Max 600V=, 7A	
Manufacturer	DC-Link Corp.	
Address: Hansung Building 402, 26 Nonhyeon-ro 10-gil, Gangnam-gu, Seoul, Republic of Korea		
  		

Certificate of Patent

특허증
CERTIFICATE OF PATENT

특 허 제 10-2348674 호
Patent Number

출원번호 제 10-2020-0112057 호
Application Number

출원일 2020년 09월 03일
Filing Date

등록일 2022년 01월 04일
Registration Date

발명의 명칭 Title of the Invention
EDI 시스템을 위한 통합 콘트롤러 장치

특허권자 Patentee
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발명자 Inventor
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경기도 광주시 오포읍 문형산길 131, 202동 3층 T304호(e편한세상 테라스 오포2단지)

위의 발명은 「특허법」에 따라 특허원부에 등록되었음을 증명합니다.
This is to certify that, in accordance with the Patent Act, a patent for the invention has been registered at the Korean Intellectual Property Office.

2022년 01월 04일

특허청장
COMMISSIONER,
KOREAN INTELLECTUAL PROPERTY OFFICE

김 용 래

특허청
Korean Intellectual
Property Office

QR코드로 현재기준
등록사항을 확인하세요

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