Momentary Dip Protector
Instruction Manual

MODEL:KDP Three-Phase Series

KDP-2T006

KDP-2T009

KDP-2T012

KDP-2T020

KDP-2T030

The contents of this manual may be revised at any time without notice.

7-2113-9Q1E

= Contents =

1. Safety Precautions

1-1 Before Use

WARNING

The precautions described here are critical for safety.
Always follow these instructions.

1-2 Guide to Danger Warnings

HAZARDOUS

Level 1 Danger Warning：Usage other than as described here may result in serious injury or death.

DANGEROUS

Level 2 Danger Warning：Usage other than as described here may result in injury or death, or physical damage to equipment and surroundings.

CAUTION

CAUTION：Usage other than as described here may result in injury or physical damage to equipment and surroundings.

NOTE

NOTE：Indicates important information regarding conditions for use.

1-3 Internal Danger Warning

High voltage electricity (100V-200VAC) flows through the interior of this device.
Always cut off power to the device before inspecting the interior.

1-4 Guide to Danger Indicators

Risk of Shock
Take precautions against electric shock.

Do Not Touch
Touching may cause minor injuries. Do not touch.

Safety Ground
Safety ground required. Be sure to ground.

1.Précautions de la sécurité

1-1 Avant Usage

PRÉVENIR

Les précautions décrites ici sont critiques pour sécurité.
Toujours suivez ces directives.

1-2 Guidez aux Avertissements du Danger

HASARDEUX

Nivelez 1 Avertissement du Danger：Usage autre que comme décrit ici peut résulter en blessure sérieuse ou mort.

DANGEREUX

Nivelez 2 Avertissement du Danger：Usage autre que comme décrit ici peut résulter en la blessure ou mort, ou dégât physique à matériel et alentours.

PRUDENCE

PRUDENCE：Usage autre que comme décrit ici peut résulter en la blessure ou dégât physique à matériel et alentours.

NOTE

NOTE：Indique de l'information importante concernant conditions pour usage.

1-3 Avertissement du Danger interne

La haute électricité du voltage (100V-200VAC) coule à travers l'intérieur de cet appareil.
Toujours coupez le pouvoir à l'appareil avant d'inspecter l'intérieur.

1-4 Guidez aux Indicateurs du Danger

Risquez de Choc
Prenez des précautions contre choc électrique.

Ne touchez pas
Toucher peut causer des blessures mineures. Ne touchez pas.

Terre de la sécurité
La terre de la sécurité a exigé. Soyez sûr à fondez.

2. Usage Precautions

Read Before Using

NOTE

(1) Circuit Breaker Set-Up:
Power down before installing a circuit breaker, to ensure the device is not operating.
A circuit breaker that can tolerate high frequency is recommended.

NOTE

(2) Input Sag Test:
Perform an input power sag test to confirm sag protection is working.

NOTE

(3) Matching Test:
Conduct a matching test with customer equipment to verify equipment operates properly. (Especially with miniature relays, etc.)

DANGEROUS

(4) Prevent Electric Shock:
A high-voltage direct current flows in the interior of this machine.
Even with the power turned off, high-voltage current continues to flow in the capacitor peripheral circuits.
Never open the case cover due to extreme danger.

CAUTION

(5) Inrush Current:
To prevent damage to this device, ensure that the inrush current of the connected equipment (especially transformers) does not exceed the tolerable allowance for momentary overload.

CAUTION

(6) Prevent Smoke and Fire:
① Do not use in locations where flammable gas or combustible materials are present.
② Do not use if smoke, abnormal noise or sound, or any other malfunction is detected.
③ Do not use when condensation has formed on machine.

NOTE

(7) Connections:
Make sure connections to input/output terminals and each signal terminal have been performed correctly as described in this operating manual.
Verify input voltage and frequency are within regulations.
The area between the input and output is not insulated.
When connecting the power input/output, connect the hot line to terminals LI and LO, and the neutral line to terminals NI and NO.

(8) Grounding:
Terminals with this indicator are connected to the case.
Make certain to ground them for safety.
Connect the ground wire (yellow/green indicator) with plenty of extra length, so it is longer than the N-phase and L-phase wires (so in the event that the wiring is accidentally pulled when wiring the input/output, the ground wire will not come off).


NOTE

(9) Electrical Cable and screw recommendation torque:
Use an electrical cable of at least the size corresponding to the input/output current value for each model shown in the diagram below.
Use a cable with a temperature rating of at least 90°C.
Please refer to the following for recommended torque of the screw.

Electrical Cable Size

Model	Input/Output				Ground				Control			
	AWG	mm²	Size of screw	Recommended torque (N•m)	AWG	mm²	Size of screw	Recommended torque (N•m)	AWG	mm²	Size of screw	Recommended torque (N•m)
KDP-2T006	12	3.5	M5	2.0	12	3.5	M5	2.0	18	0.75	M4	1.2
KDP-2T009	10	5.5	M5	2.0	10	5.5	M5	2.0	18	0.75	M4	1.2
KDP-2T012	10	5.5	M5	2.0	10	5.5	M5	2.0	18	0.75	M4	1.2
KDP-2T020	4	22	M8	5.5	4	22	M8	5.5	18	0.75	M4	1.2
KDP-2T030	2	30	M8	5.5	2	30	M8	5.5	18	0.75	M4	1.2


NOTE

(10)Breaker Installation:
Do not connect the facility's power directly to the input terminal block.
Make connections through a both shutdown type breaker with at least the current value shown below for each model.

Model	Voltage	Current
KDP-2T006	200V/240V	30A(50AF/30AT)
KDP-2T009	200V/240V	40A(50AF/40AT)
KDP-2T012	200V/240V	50A(50AF/50AT)
KDP-2T020	200V/240V	75A(125AF/75AT)
KDP-2T030	200V/240V	100A(125AF/100AT)


NOTE

(11)Operating Environment:
* Do not block the vent or the aluminum area on the back side.
* Keep at least 100mm distance between wall and device.
* Operate in a room with controlled temperature and humidity.
* Do not operate in dusty locations.
* Position in a location with no vibration.
* Position in a level location.
* Do not operate in locations with corrosive gas or salinity.


NOTE

(12)Ambient Temperature:
The temperature range specification for this device is 40 degrees from 0 degrees.
Operate within this range.


NOTE

(13)Installation of equipment:
After placing the unit in position, firmly fix it on the floor using the leveler and the L legs.


NOTE

(14)Note on Installation:
a. Do not place anything on top of this device.
b. Please store in the chassis without fail for safety, and use it to touch from the outside easily when you do not use the terminal cover of this device.


NOTE

(15)Exemptions:
The manufacturer exempts this device from uses affecting human life and uses having a large impact on the public.


NOTE

(16)Equipment Application:
For use with equipment that is required to be reliable, establish failsafe measures on the customer equipment-side.


NOTE

(17)Voltage Waveform Distortion:
Large input voltage waveform distortion may cause sag detector malfunction, alarm, internal charging circuit cutoff, etc.
High stress placed on parts or components may cause damage or drastically shorten the life of the device.


NOTE

(18)Sudden Frequency or Phase Changes:
Sudden changes in the frequency or phase of the input line may cause sag detector malfunction, alarm, internal charging circuit cutoff, etc.
High stress placed on parts or components may cause damage or drastically shorten the life of the device.


NOTE

(19)Power Source Capacity:
This device may not operate on a line with insufficient power source capacity.


NOTE

(20)Regenerative Energy:
Energy returning from the load side may cause this device to break down.


NOTE

(21)Use Overseas:
Be aware of the quality of the input power if using internationally.
Input voltage waveform distortion or shape change may cause this device to malfunction.


NOTE

(22)At the time of bypass operation:
By maintenance etc., when you bypass input and output of this equipment using an external breaker etc., please stop this equipment. Or please cut input and output from a line.
An inverter circuit may be damaged, when a momentary voltage drop etc. happen and this equipment does backup operation, where bypass operation of this equipment is done by an operating state.

2. Précautions de l'usage

Lisez Avant d'Utiliser

NOTE

(1) Organisation du Disjoncteur:
Propulsez en bas avant d'installer un disjoncteur, assurer l'appareil n'opère pas.
Un disjoncteur qui peut tolérer la haute fréquence est recommandé.

NOTE

(2) Épreuve de l'Affaissement de l'entrée:
Exécutez une épreuve de l'affaissement du pouvoir de l'entrée pour confirmer la protection de l'affaissement travaille.

NOTE

(3) Épreuve assortie:
Effectuez une épreuve assortie avec matériel du client pour vérifier le matériel opera correctement. (Surtout avec les relais miniatures, etc.)

DANGEREUX

(4) Prévenez le Choc Électrique:
Un haut-voltage courants du courant directs dans l'intérieur de cette machine.
Même avec le pouvoir désactivé, le courant de l'haut-voltage continue à couler dans le condensateur circuits périphériques.
N'ouvrez jamais l'abri du cas dû à danger extrême.

PRUDENCE

(5) Courant de l'irruption:
Pour prévenir le dégât à cet appareil, assure que le courant de l'irruption du matériel suivi (surtout transformateurs) ne dépasse pas l'allocation tolérable pour surcharge momentanée.

PRUDENCE

(6) Prévenez Fumée et Feu:
① N'utilisez pas dans emplacements où le gaz inflammable ou matières combustibles sont présentes.
② N'utilisez pas si fumée, bruit anormal ou sonne ou tout autre fonctionnement défectueux est détecté.
③ N'utilisez pas lorsque la condensation a formé sur machine.

NOTE

(7) Rapports:
Faites des rapports sûrs pour entrer / les terminaux de la production et chaque terminal du signal ont été exécutés correctement comme décrit dans ce manuel du fonctionnement.
Vérifiez le voltage de l'entrée et fréquence sont dans règlements.
La région entre l'entrée et la production n'est pas séparée.
Quand relier le pouvoir entré / production, reliez la ligne directe aux terminaux LI et VOILÀ, et la ligne neutre aux terminaux NI et NON.

(8) Fonder:
Les terminaux avec cet indicateur sont reliés au cas.
Faites certain à fondez-les pour sécurité.
Associez le fil moulu (indicateur jaune / vert) à beaucoup de longueur supplémentaire, donc c'est plus long que la N-phase et fils de la L-phase (donc au cas où le câblage est tiré par hasard lorsque installer l'entrée / production, le fil moulu ne se détachera pas).

NOTE

(9) Electrical Câble and screw recommendation torque:

Utilisez un câble électrique d'au moins la dimension qui correspond à l'entrée / production valeur courante pour chaque modèle affiché dans le diagramme au-dessous.

Utilisez un câble avec une température qui estime d'au moins 90.C.

Please refer to the following heart recommended torque of the screw.

Dimension du Câble électrique

Model	Entrée / Production				Terre				Contrôle			
	AWG	mm²	Size of screw	Moment de rotation recommandé (N.m)	AWG	mm²	Size of screw	Moment de rotation recommandé (N.m)	AWG	mm²	Size of screw	Moment de rotation recommandé (N.m)
KDP-2T006	12	3.5	M5	2.0	12	3.5	M5	2.0	18	0.75	M4	1.2
KDP-2T009	10	5.5	M5	2.0	10	5.5	M5	2.0	18	0.75	M4	1.2
KDP-2T012	10	5.5	M5	2.0	10	5.5	M5	2.0	18	0.75	M4	1.2
KDP-2T020	4	22	M8	5.5	4	22	M8	5.5	18	0.75	M4	1.2
KDP-2T030	2	30	M8	5.5	2	30	M8	5.5	18	0.75	M4	1.2

NOTE

(10)Installation du casseur:

Ne reliez pas directement le pouvoir de la facilité à l'entrée bloc terminal.

Faites des rapports à travers une les deux fermeture tapez le casseur avec au moins la valeur courante montrée au-dessous de pour chaque modèle.

Modèle	Voltage	Courant
KDP-2T006	200V/240V	30A(50AF/30AT)
KDP-2T009	200V/240V	40A(50AF/40AT)
KDP-2T012	200V/240V	50A(50AF/50AT)
KDP-2T020	200V/240V	75A(125AF/75AT)
KDP-2T030	200V/240V	100A(125AF/100AT)

NOTE

(11)Opérant Environnement:

* Ne bloquez pas la prise d'air ou la région aluminiume sur le côté du dos.
* Gardez au moins 100mm distance entre mur et appareil.
* Opérez dans une pièce avec température contrôlée et humidité.
* N'opérez pas dans les emplacements poussiéreux.
* Placez dans un emplacement sans vibration.
* Placez dans un emplacement égal.
* N'opérez pas dans les emplacements avec le gaz corrosif ou la salinité.

NOTE

(12)Température ambiante:

La spécification de la gamme de la température pour cet appareil est ０℃～４０℃.

Opérez dans cette gamme.

NOTE

(13)Installation de la Montagne du casier:

Utilisez le manche de cet appareil lorsque arranger la place. Pour stockage dans la montagne de casier, placez sur une étagère et raillez qui peut supporter le poids de l'appareil.

NOTE

(14)Notez sur Installation:

a. Ne placez rien sur cet appareil.

b. Veuillez entreposer dans le châssis sans échec pour sécurité et utilisez-le pour toucher facilement de l'extérieur lorsque vous n'utilisez pas l'abri terminal de cet appareil.

NOTE

(15)Exemptions:

Le fabricant exempte cet appareil d'usages vie humaine touchante et usages qui ont un grand impact sur le public.

NOTE

(16)Application du matériel:

Pour usage avec matériel qui est exigé pour être fiable, établissez des mesures infaillibles sur le matériel-côté du client.

NOTE

(17)Voltage Distorsion Waveform:

La grande distorsion du waveform du voltage de l'entrée peut causer affaissez-vous fonctionnement défectueux du détecteur, alarmez, raccourci du circuit du chargement interne, etc.

Le haut stress placé sur les parties ou les composants peut causer le dégât ou radicalement raccourcir la vie de l'appareil.

NOTE

(18)Fréquence soudaine ou Changements de la Phase:

Les changements soudains dans la fréquence ou phase de la ligne de l'entrée peuvent causer affaissez-vous fonctionnement défectueux du détecteur, alarmez, raccourci du circuit du chargement interne, etc.

Le haut stress placé sur les parties ou les composants peut causer le dégât ou radicalement raccourcir la vie de l'appareil.

NOTE

(19)Propulsez la Capacité de la Source:

Cet appareil ne peut pas opérer sur une ligne avec capacité de la source du pouvoir insuffisante.

NOTE

(20)Énergie régénératrice:

L'énergie qui revient du côté de la charge peut causer cet appareil de se casser.

NOTE

(21)Utilisez Outre-mer:

Soyez informé de la qualité du pouvoir de l'entrée si utiliser internationalement.

Entrez la distorsion du waveform du voltage ou changement de la forme peuvent causer cet appareil de mal fonctionner.

NOTE

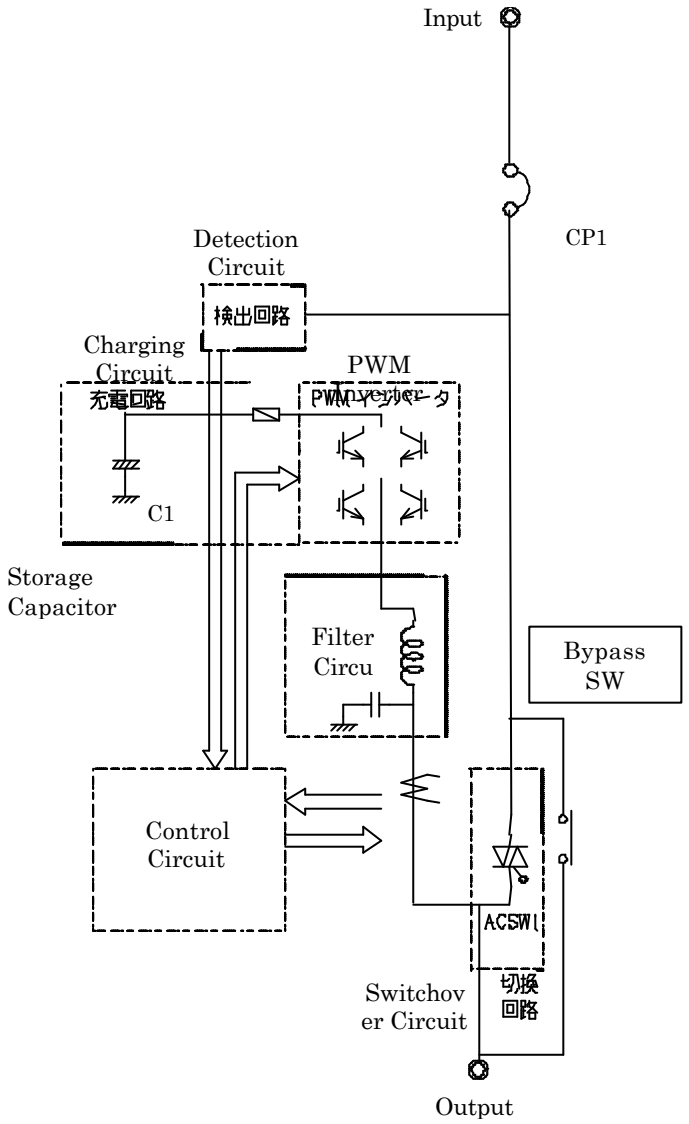
(22)Au temps d'opération de la déviation:

Par etc de l'entretien., lorsque vous mettez hors circuit entré et production de ce matériel qui utilise un etc du casseur externe., veuillez arrêter ce matériel. Ou s'il vous plaît la coupe est entrée et production d'une ligne.

Un circuit de l'inverter peut être endommagé, quand un etc de la goutte du voltage momentané. passez-vous et ce matériel fait l'opération auxiliaire où met hors circuit opération de ce matériel est faite par un état du fonctionnement.

3. Overview

The KDP-Series voltage sag protector provides a stable power supply to equipment affected by power supply voltage sag.
Under normal conditions, a direct line connects the applied supply power to the equipment. However, when the input sags, a switchover is made to an internal inverter. Parallel inverter operation with capacitor energy enables complete voltage protection for 1 second.
Circuitry is shown in fig. 2-1.



(1) Normal Operating Mode
(during normal power input)
The source power is sent directly to the output via AC switch ACSW1. At the same time, storage capacitor C1 is charged to standby for when sag occurs.

(1) **Backup Operating Mode**
(when sag occurs)
Input voltage is monitored: when it falls from rated voltage to sag detection voltage or below, AC switch ACSW1 is triggered to start the inverter.
During protection, if the supply voltage recovers, this device automatically resumes direct transfer of the power supply.
If the storage capacitor runs out of energy during sag, energy supply is forcibly moved to the main line.

(2) **In Bypass Operating Mode**
(during malfunction)
When overload, abnormal internal temperature, etc occurs, the bypass switch turns on and operation continues.
Backup operation cannot be performed in this mode.

Figure 2-1

4. Features

(1) Maintenance-Free:
To maximize reliability, in place of a battery requiring regular maintenance, a capacitor is used for energy storage.

(2) Durable Design:
Rather than using a fan with a limited life span, this machine employs a natural air-cooling process.

(3) Self-Diagnosis:
To maintain reliability, an internal microcomputer performs self-diagnosis.

(4) Frequency 50/60Hz Self-Switching Method

(5) Sag protection voltage matches the input voltage.

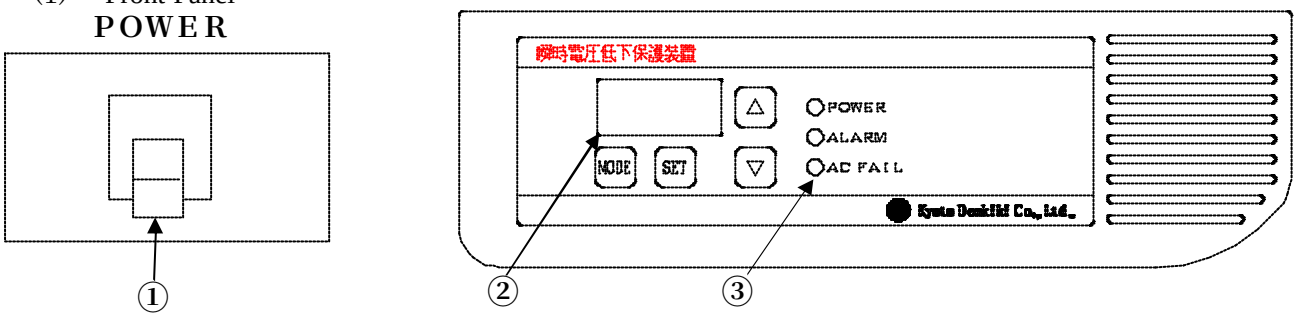
(6) Bypass operation prevents current overload stress to the switchover unit from inrush current during power source input.

(7) Low-customer operating overhead design.

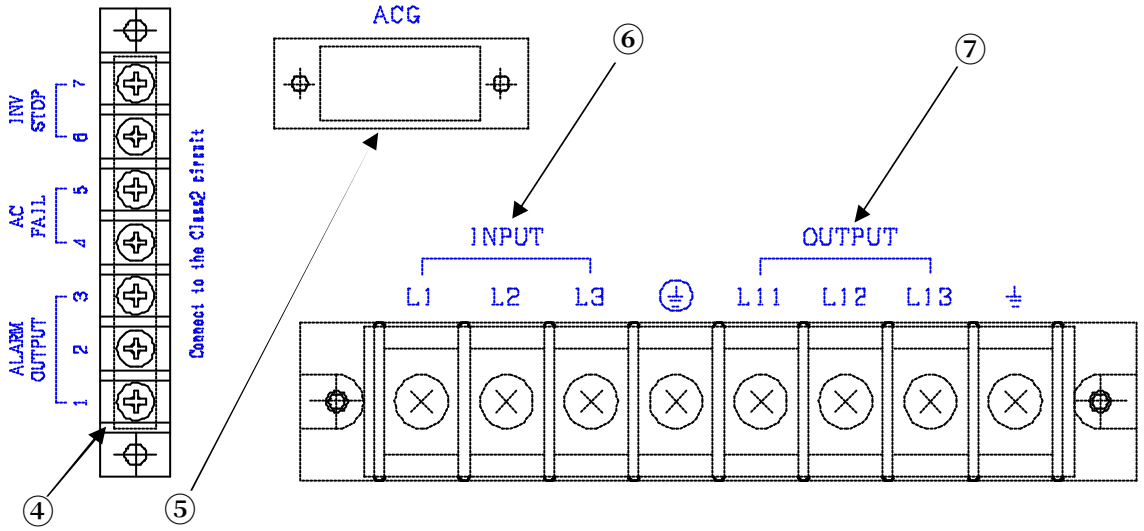
(8) Quiet low-noise design.

5. Operating Panel Explanation

(1) Front Panel



(2)背面パネル



	名　　称	機　　能
①	Breaker (MCCB1)	Current Overload Protection Breaker
②	Operating Indicator Panel	Displays input voltage/load current/sag frequency, etc.
③	Operating Indicator Lights	When flashing, the following lights display the corresponding operating status: **POWER**(Green Light),**ALARM**(Red Light), **AC FAIL**(Yellow Light)
④	Control Signal Terminal　*1	1-3. Alarm Contact : **ALARM OUT** Output during alarm or malfunction status. 4-5. AC Fail Output : **AC FAIL** Output when abnormality (sag, outage) occurs in applied voltage. 6-7. Inverter Stop Input : **INV STOP** Opening the exterior no-voltage contact forces sag protection (inverter) to stop and forces changeover to the bypass circuit.
⑤	ACG Terminal	Y : Built-in line filter neutral point, internally connected to the ground terminal. Z : Built-in surge absorption varistor ground.
⑥	Input Terminal	Connection for power input line and protective earth.
⑦	Output Terminal	Connection for power output line and protective bonding.

*1 : Refer to page 10.

*1: Control signal terminal operation is as follows:

Please connect the signal from Class2 circuit.

Warning Contact : ALARM OUT

Signal Terminal No.	Signal Output Status	
	Normal	Before Charging Complete・During Malfunction
1-3 (N.O.)	Closed	Open
2-3 (N.C.)	Open	Closed

No-Voltage Contact Output (Insulated)／ＤＣ２４Ｖ、０．５Ａ

AC Fail Output : AC FAIL

Signal Terminal No.	Signal Output Status	
	Normal	During Sag・Power Abnormality
4(+) - 5(-)	L	H (High Impedance)

Open Collector Output (Insulated) / 24V, 5mA

Inverter Stop Input : INV STOP

Signal Terminal No.	Signal Input Status	
	Normal	Forced Stop
6(+) - 7(-)	Short Circuit	Release

No-Voltage Contact Input (Insulated) / max DC12V / max DC12V, 10mA

NOTE

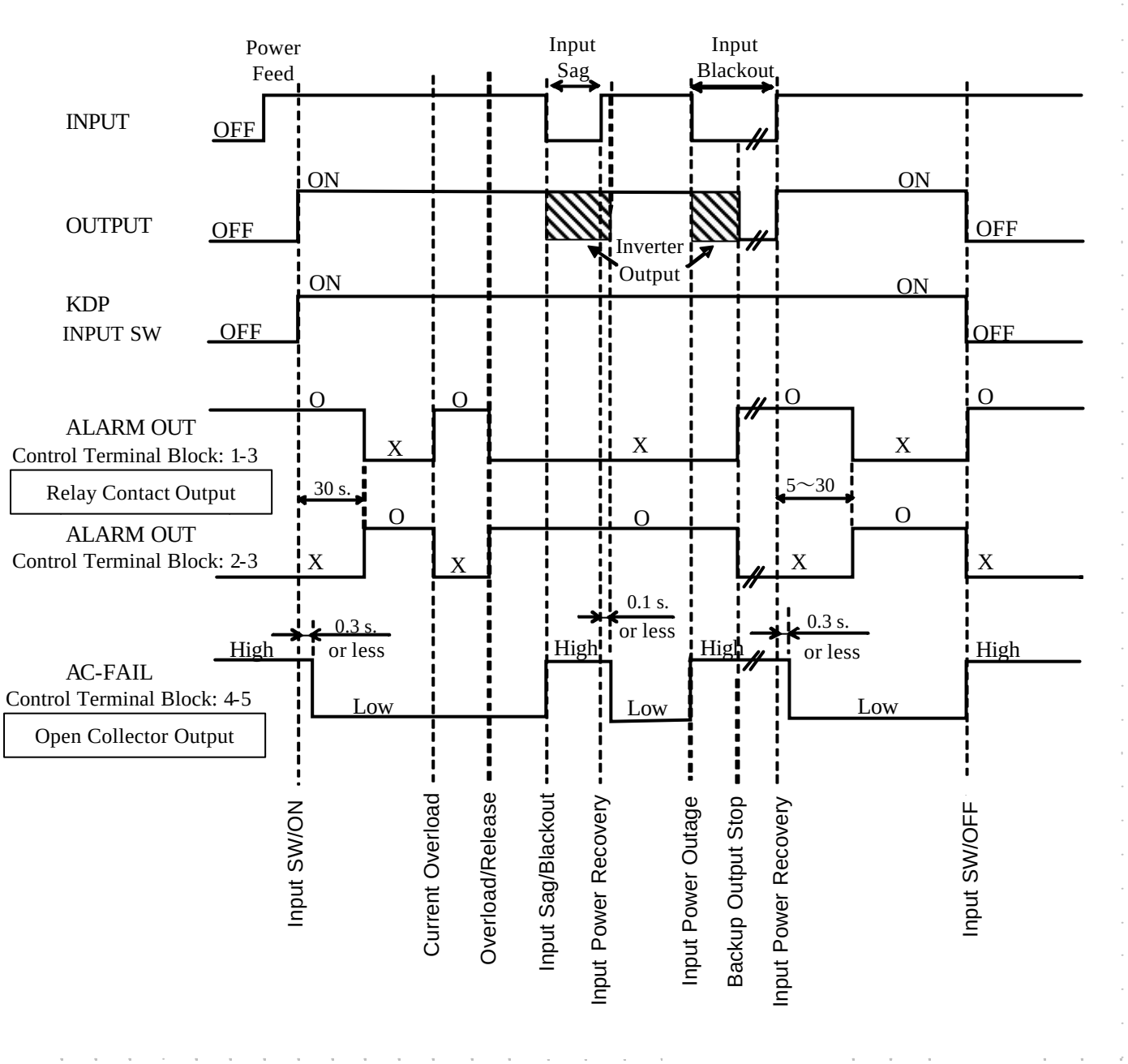
Make connections to the terminal block with solderless terminals.

NOTE

Install an additional breaker on the side connected to the device output.

6. Sequence Time Chart

O = Open, X = Closed



7. Connections

⑴ When making connections to the backside terminal block, be absolutely certain to turn off the input breaker and to turn off the power supply.

⑵ Refer to the sample acceptable power cable sizes to select the power cable.

⑶ Make connections to each terminal as shown below:

Input Terminal (INPUT)

L1 ————————————————

L2 ———————————————— Input

L3 ————————————————

⏚ ———————————————— protective earth.

ACG Terminal

ACG ⌐ ¬ ← Connector *1

*1 : The ACG connector is the surge absorption varistor ground.
Release the ACG connector when performing dielectric strength testing.

出力端子（OUTPUT）

L11 ———————————————— Output

L12 ————————————————

L13 ————————————————

⏚ ———————————————— protective bonding.

Control Terminal

1 --------- A Signal

2 --------- B Signal Alarm Output : ALARM OUT

3 --------- Common

4 ⌐ ¬ + AC Fail Output : AC FAIL

5 - AC Fail Output : AC FAIL

6 ⌐ ¬ Inverter Stop Input : INV STOP *2

7 Inverter Stop Input : INV STOP *2

*2 : 1) To use INV STOP, remove the short bar and connect the signal wire.
2) Connect class 2 control device to a control connector.

Power Cable Protection Bushing Diameters

Model	I/O Opening Diameter	Qty.	Signal Opening Diameter	Qty.
KDP-2T006 KDP-2T009 KDP-2T012	φ42mm	2	φ22mm	1
KDP-2T020 KDP-2T030	φ48mm	2	φ22mm	1

Caution) Power cable protection bushings are not included with this device.
When connecting the power cable, protect the power wire sheathing with an appropriate bushing, grommet, PF connector, or adjustable bushing.

8. Operating Procedures

8-1 Startup Procedure

(1) Confirm that connections to the input and control signal terminals have been made correctly as shown in this manual.

(2) Confirm that input voltage and frequency are within regulations.

(3) Set the input breaker to "on" and input the power supply.

(4) Set the front screen panel switch or the breaker to "on" to simultaneously start up internal control power and begin supply of power to output.

(5) The capacitor charges for approximately 30 seconds while the device performs self-diagnosis. The POWER light flashes during this time.

(6) If no malfunction is found, device transfers to normal operating mode. At this time, the POWER light stops flashing and is lit constantly.

8-2 Stop Procedure 1

(1) Turn the front panel switch or the breaker to "off" to stop supply of power to the output.

(2) Turn the input breaker to "off" and cut off the power supply.

8-3 Stop Procedure 2

(1) Release control terminals 6-7 to stop the inverter and cause device to switch over to bypass operation.

(2) Set the input breaker to "off" and cut off the power supply to stop supply of power to the output.

Caution: When only step (2) is performed, the device enters backup operation mode and power supply to output will continue for a period of time.

8-4 Malfunction Reset

Reset the front panel or breaker to recover after eliminating the cause of the malfunction.
In case of abnormal temperature, the malfunction will continue until the temperature returns to within tolerable limits.

8-5 Rated Voltage Setting Procedure

Refer to "9.1 Operating Display Panel During Normal Operation Rated Voltage Setting."

9. Display

9-1 Operating Display Panel

During Normal Operation

Item	Use	Description
Input Voltage	Displays input voltage when power supply is input. Use the ▽ △ buttons to change display in order from input voltage to sag count.	Displays input voltage value.
Output Voltage		Display alternates "out" and the output voltage value.
Output Current		Alternately displays "Cur" and current value.
Output Power		Display alternates between "Pur" and the power value.
Frequency		Display alternates "Fr" and the frequency value.
Sag Count		Display alternates "dPc" and the number of times sag protection has been performed. Hold down the **SET** button to reset the count.
Rated Voltage Setting	With the input voltage displayed, press **MODE** and **SET** simultaneously.	The rated voltage setting is displayed while the buttons are pressed. Press the ▽ △ buttons with the rated voltage displayed in order to change the set value.

Caution: The displayed values are for reference only.
(Verify actual values using the appropriate measurement device.)

During Breakdown/Malfunction (Apply to KDP-2T006/009/012)

Item	Error Code	Description of Breakdown/Malfunction	Treatment
Blown AC Fuse	Ex0	Blown input fuse	Inspect/Repair
Overvoltage Input	Ex1	Over voltage is applied to input power supply	Inspect/Repair
Inrush Current Block Time Out	Ex2	Charge is insufficient for startup	Inspect/Repair
Insufficient DC Charge	Ex3	Inverter is insufficiently charged	Inspect/Repair
Current Overload (Charge)	Ex4	Current overloaded during inverter charging	Inspect/Repair
Current Overload (Discharge)	Ex5	Current overloaded during inverter discharge	Inspect/Repair
DC Overvoltage	Ex6	Overvoltage charge voltage	Inspect/Repair
Insufficient DC Voltage	Ex7	Charge voltage is insufficient	Inspect/Repair
Blown DC Fuse	Ex8	Blown inverter fuse	Inspect/Repair
Aux. Charge Malfunction	Ex9	Decreased auxiliary charge capacity	Inspect/Repair
Inverter Malfunction	ExA	Malfunction found during 12hr. cycle self diagnosis	Inspect/Repair
AC Switch Malfunction Input voltage wave Malfunction	Exb	1. AC switch malfunction 2.Input waveform is abnormal.	Inspect/Repair
Abnormal Waveform	ExC	Abnormal sag detection count	Inspect/Repair
Bypass Switch Malfunction	Exd	Magnet or relay contact weld	Inspect/Repair
Internal Malfunction	ExE	Internal CPU malfunction	Inspect/Repair
Internal Malfunction	ExF	Internal memory malfunction	Inspect/Repair
Communication Malfunction	E99	Miscommunication between display panel and internal CPU	Inspect/Repair

x = 0 when stopped x = 1 during initial charging x = 2 during inverter charging
x = 3 during regular operation x = 4 during sag protection

Alarm Indicators (Apply to KDP-2T006/009/012)

Item	Error Code	Description	Treatment
Temperature Warning 1	AL0	High AC switch temperature	Lower temperature to reset
Temperature Warning 2	AL1	High inverter temperature	Lower temperature to reset
Current Overload Warning	AL2	Load current overload	Release from overload condition to reset
Capacitor	AL3	High storage capacitor leakage current	Return for repairs
Abnormal Input Waveform	AL4	High input wave distortion is causing sag protection to repeat	Decrease input voltage wave distortion
Control circuit warning	AL5	Abnormality of control circuit	Return for repairs

During Breakdown/Malfunction (Apply to KDP-2T020/030)

Item	Error Code	Description of Breakdown/Malfunction	Treatment
Blown AC Fuse	E00	Blown input fuse	Inspect/Repair
Overvoltage Input	E01	Over voltage is applied to input power supply	Inspect/Repair
Inrush Current Block Time Out	E02	Charge is insufficient for startup	Inspect/Repair
Insufficient DC Charge	E03	Inverter is insufficiently charged	Inspect/Repair
Current Overload (Charge)	E04	Current overloaded during inverter charging	Inspect/Repair
Current Overload (Discharge)	E05	Current overloaded during inverter discharge	Inspect/Repair
DC Overvoltage	E06	Overvoltage charge voltage	Inspect/Repair
Insufficient DC Voltage	E07	Charge voltage is insufficient	Inspect/Repair
Abnormality of DC voltage balance	E08	The voltage of the capacitor is unbalanced	Inspect/Repair
Aux. Charge Malfunction	E09	Decreased auxiliary charge capacity	Inspect/Repair
N.C.	E10	———	———
AC Switch Malfunction Input voltage wave Malfunction	E11	1.AC switch malfunction 2.Input waveform is abnormal.	Inspect/Repair
Abnormal Waveform	E12	Abnormal sag detection count (250 times or more)	Inspect/Repair
Bypass Switch Malfunction	E13	Magnet or relay contact weld	Inspect/Repair
N.C.	E14	———	———
Internal Malfunction	E15	Internal ratings voltage setting abnormality	Inspect/Repair
N.C.	E16	———	———
Communication abnormality (1)	E17	The communication is defective of switch part CPU and INV part CPU.	Inspect/Repair
The thyristor is abnormal	E18	Short breakdown in internal thyristor	Inspect/Repair
leakage current is abnormal	E19	Breakdown of capacitor • the life of a capacitor	Inspect/Repair
N.C.	E20	———	———
The temperature is abnormal	E21	The internal switch part and the inverter part overheat.	Inspect/Repair
The control source is abnormal.	E22	Internal control power supply decrease	Inspect/Repair
Inverter DC fuse is abnormal.	E23	The fuse of the inverter or the capacitor has opened.	Inspect/Repair
Breakdown of inverter AC fuse	E24	Inverter AC fuse was opened.	Inspect/Repair
N.C.	E25	———	———
Communication abnormality (2)	E99	The communication is interrupted of display panel and internal CPU.	Inspect/Repair

Alarm Indicators (Apply to KDP-2T020/030)

Item	Error Code	Description	Treatment
Unused	AL0	----	----
AC switch Temperature Warning	AL1	The temperature of the AC switch is high.	Lower temperature to reset
Current Overload Warning	AL2	Load current overload	Release from overload condition to reset
Unused	AL3	----	----
Abnormal Input Waveform	AL4	High input wave distortion is causing sag protection to repeat	Decrease input voltage wave distortion
Control circuit warning	AL5	Abnormality of control circuit	Return for repairs

9-2 Operating Display Lights

Item	Light Color	Description
POWER	Green	Operating Indicator Light Charging: Flashing During Normal Operation: Lit
ALARM	Red	Alarm Indicator Light During Alarm: Flashing During Error: Lit
AC FAIL	Yellow	Input Voltage Sag Indicator Light Initial Sag Detection: Flashing During Sag: Lit

10. Maintenance Precautions

⚠ Warning

Capacitor Discharge Procedure

To be performed only by a qualified service engineer

・The internal capacitor and related circuitry contain dangerous high-voltage areas.

＊Connect the discharge tester to the discharge point. Do not touch the surrounding terminals while making connections.

・Then, turn the discharge tester switch on and discharge to within safe operating voltage.

11. Equipment Specifications & Standards

KDP-2T006 Three-phase 200V, 6kVA

Item / Model	KDP-2T006				
AC Input					
Standard Voltage Setting *1	200	208	220	230	240
Standard Input Voltage *2	Three-phase 200VAC	Three-phase 208VAC	Three-phase 220VAC	Three-phase 230VAC	Three-phase 240VAC
Standard Input Frequency	50 / 60 Hz				
Input Voltage Range	180VAC---264VAC				
Standard Input Current (rms)	18.3A	17.6A	16.7A	16.0A	15.4A
Normal AC Output (During Direct Output)					
Standard Output Voltage	AC Input Voltage – 4VAC (typ.) Astable Output				
Standard Output Current (rms)	17.3A	16.6A	15.7A	15.0A	14.4A
Standard Output Power	6kVA / 4.8kW				
Current Overload Protector	Circuit Breaker (50AF / 30AT)				
Tolerable Instant. Overload	5 Times Standard Output Current (1 Cycle) or Less				
AC Output During Sag (During Sag Protection)					
Standard Output Voltage	Standard Voltage Setting Value (Input Voltage Matching)				
Output Voltage Stability	± 5% (typ.)				
Standard Output Current (rms)	17.3A	16.6A	15.7A	15.0A	14.4A
Standard Output Power	6kVA / 4.8kW				
Output Frequency	50 / 60 Hz (Input Frequency Matching)				
Output Waveform	Sine Wave				
Output Wave Distortion Rate	5% (typ.)				
Load Power Rate	0.8 – 1.0 Log				
Tolerable Peak Current	2.5 Times Standard Output Current (Wave Height Value)				
Sag Switchover Time	1/4 cycle (typ.) / At the time of a momentary voltage drop and momentary voltage shutdown of all the Phases. 1/2 cycle (typ.) / At the time of a momentary voltage drop and momentary voltage shutdown of the Single Phases.				
Sag Detection Voltage	For Standard Voltage Setting, Less than -11% ±1% of Rated Input Voltage				
Recovery Voltage	For Sag Detector Voltage, + 2%				
Sag Protection Time *5	At least 1 sec. (during standard power output)/max 6 sec. (under light load)				
Repeat Protection Time	1 sec. voltage sag or blackout protection per 15 sec. interval, up to 10 times in sequence				
Current Overload Protection	Current Overload Drop: 1. It returns automatically when the continuance time is five cycles. 2.The continuance time is five cycles or more, the by-pass switch is turned on, and the alarm is output at the same time.				
Operating Environment					
Ambient Temperature	0 – 40 deg				
Ambient Humidity	30 – 90% R.H. condensation-free				
Altitude	1000 m or less				
Installation Environment	Location with minimal dust (including conductive), smoke, corrosive gas, flammable gas, steam, saline, and soot				
Vibration • Impact	Location that does not experience vibrations or impacts.				
Dielectric Strength					
Tolerable Voltage *3	Between Power Source and Device Body: ac2000V / 1 min.				
Insulation Resistance *3	Between Power Source and Device Body: at least 10Mohm (DC500V)				
Dimensions • Construction					
Size *4	W 420 mm x H 700 mm x D 550 mm				
Weight	Approx. 70 kg				
Input/Output Units					
Power Source I/O	Rear Terminal Block/M5 Terminal Screws				
Control Signal I/O	Rear Terminal Block/M4 Terminal Screws				
Others					
Regulations	NRTL : UL60950-1 certification, SEMI F47-0706 CE Marking : Low Voltage Directive 2006/95/EC, EMC Directive 2004/108/EC Conformity				
Cooling Method	Natural Air Cooling				

KDP-2T009 Three-phase 200V, 9kVA

Item / Model	KDP-2T009				
AC Input					
Standard Voltage Setting *1	200	208	220	230	240
Standard Input Voltage *2	Three-phase 200VAC	Three-phase 208VAC	Three-phase 220VAC	Three-phase 230VAC	Three-phase 240VAC
Standard Input Frequency	50 / 60 Hz				
Input Voltage Range	180VAC---264VAC				
Standard Input Current (rms)	26.9A	25.9A	24.6A	23.5A	22.6A
Normal AC Output (During Direct Output)					
Standard Output Voltage	AC Input Voltage – 4VAC (typ.) Astable Output				
Standard Output Current (rms)	25.9A	24.9A	23.6A	22.5A	21.6A
Standard Output Power	9kVA / 7.2kW				
Current Overload Protector	Circuit Breaker (50AF / 40AT)				
Tolerable Instant. Overload	5 Times Standard Output Current (1 Cycle) or Less				
AC Output During Sag (During Sag Protection)					
Standard Output Voltage	Standard Voltage Setting Value (Input Voltage Matching)				
Output Voltage Stability	± 5% (typ.)				
Standard Output Current (rms)	25.9A	24.9A	23.6A	22.5A	21.6A
Standard Output Power	9kVA / 7.2kW				
Output Frequency	50 / 60 Hz (Input Frequency Matching)				
Output Waveform	Sine Wave				
Output Wave Distortion Rate	5% (typ.)				
Load Power Rate	0.8 – 1.0 Log				
Tolerable Peak Current	2.5 Times Standard Output Current (Wave Height Value)				
Sag Switchover Time	1/4 cycle (typ.) / At the time of a momentary voltage drop and momentary voltage shutdown of all the Phases. 1/2 cycle (typ.) / At the time of a momentary voltage drop and momentary voltage shutdown of the Single Phases.				
Sag Detection Voltage	For Standard Voltage Setting, Less than -11% ±1% of Rated Input Voltage				
Recovery Voltage	For Sag Detector Voltage, + 2%				
Sag Protection Time *5	At least 1 sec. (during standard power output)/max 6 sec. (under light load)				
Repeat Protection Time	1 sec. voltage sag or blackout protection per 15 sec. interval, up to 10 times in sequence				
Current Overload Protection	Current Overload Drop: 1. It returns automatically when the continuance time is five cycles. 2.The continuance time is five cycles or more, the by-pass switch is turned on, and the alarm is output at the same time.				
Operating Environment					
Ambient Temperature	0 – 40 deg				
Ambient Humidity	30 – 90% R.H. condensation-free				
Altitude	1000 m or less				
Installation Environment	Location with minimal dust (including conductive), smoke, corrosive gas, flammable gas, steam, saline, and soot				
Vibration • Impact	Location that does not experience vibrations or impacts.				
Dielectric Strength					
Tolerable Voltage *3	Between Power Source and Device Body: ac2000V / 1 min.				
Insulation Resistance *3	Between Power Source and Device Body: at least 10Mohm (DC500V)				
Dimensions • Construction					
Size *4	W 420 mm x H 700 mm x D 550 mm				
Weight	Approx. 73 kg				
Input/Output Units					
Power Source I/O	Rear Terminal Block/M5 Terminal Screws				
Control Signal I/O	Rear Terminal Block/M4 Terminal Screws				
Others					
Regulations	NRTL : UL60950-1 certification, SEMI F47-0706 CE Marking : Low Voltage Directive 2006/95/EC, EMC Directive 2004/108/EC Conformity				
Cooling Method	Natural Air Cooling				

KDP-2T012 Three-phase 200V, 12kVA

Item / Model	KDP-2T012				
AC Input					
Standard Voltage Setting *1	200	208	220	230	240
Standard Input Voltage *2	Three-phase 200VAC	Three-phase 208VAC	Three-phase 220VAC	Three-phase 230VAC	Three-phase 240VAC
Standard Input Frequency	50 / 60 Hz				
Input Voltage Range	180VAC---264VAC				
Standard Input Current (rms)	35.6A	34.3A	32.4A	31.0A	29.8A
Normal AC Output (During Direct Output)					
Standard Output Voltage	AC Input Voltage – 4VAC (typ.) Astable Output				
Standard Output Current (rms)	34.6A	33.3A	31.4A	30.0A	28.8A
Standard Output Power	12kVA / 9.6kW				
Current Overload Protector	Circuit Breaker (50AF / 50AT)				
Tolerable Instant. Overload	5 Times Standard Output Current (1 Cycle) or Less				
AC Output During Sag (During Sag Protection)					
Standard Output Voltage	Standard Voltage Setting Value (Input Voltage Matching)				
Output Voltage Stability	± 5% (typ.)				
Standard Output Current (rms)	34.6A	33.3A	31.4A	30.0A	28.8A
Standard Output Power	12kVA / 9.6kW				
Output Frequency	50 / 60 Hz (Input Frequency Matching)				
Output Waveform	Sine Wave				
Output Wave Distortion Rate	5% (typ.)				
Load Power Rate	0.8 – 1.0 Log				
Tolerable Peak Current	2.5 Times Standard Output Current (Wave Height Value)				
Sag Switchover Time	1/4 cycle (typ.) / At the time of a momentary voltage drop and momentary voltage shutdown of all the Phases. 1/2 cycle (typ.) / At the time of a momentary voltage drop and momentary voltage shutdown of the Single Phases.				
Sag Detection Voltage	For Standard Voltage Setting, Less than -11% ±1% of Rated Input Voltage				
Recovery Voltage	For Sag Detector Voltage, + 2%				
Sag Protection Time *5	At least 1 sec. (during standard power output)/max 6 sec. (under light load)				
Repeat Protection Time	1 sec. voltage sag or blackout protection per 15 sec. interval, up to 10 times in sequence				
Current Overload Protection	Current Overload Drop: 1. It returns automatically when the continuance time is five cycles. 2.The continuance time is five cycles or more, the by-pass switch is turned on, and the alarm is output at the same time.				
Operating Environment					
Ambient Temperature	0 – 40 deg				
Ambient Humidity	30 – 90% R.H. condensation-free				
Altitude	1000 m or less				
Installation Environment	Location with minimal dust (including conductive), smoke, corrosive gas, flammable gas, steam, saline, and soot				
Vibration • Impact	Location that does not experience vibrations or impacts.				
Dielectric Strength					
Tolerable Voltage *3	Between Power Source and Device Body: ac2000V / 1 min.				
Insulation Resistance *3	Between Power Source and Device Body: at least 10Mohm (DC500V)				
Dimensions • Construction					
Size *4	W 420 mm x H 700 mm x D 550 mm				
Weight	Approx. 75 kg				
Input/Output Units					
Power Source I/O	Rear Terminal Block/M5 Terminal Screws				
Control Signal I/O	Rear Terminal Block/M4 Terminal Screws				
Others					
Regulations	NRTL : UL60950-1 certification, SEMI F47-0706 CE Marking : Low Voltage Directive 2006/95/EC, EMC Directive 2004/108/EC Conformity				
Cooling Method	Natural Air Cooling				

KDP-2T020 Three-phase 200V, 20kVA

Item / Model	KDP-2T020				
AC Input					
Standard Voltage Setting *1	200	208	220	230	240
Standard Input Voltage *2	Three-phase 200VAC	Three-phase 208VAC	Three-phase 220VAC	Three-phase 230VAC	Three-phase 240VAC
Standard Input Frequency	50 / 60 Hz				
Input Voltage Range	180VAC---264VAC				
Standard Input Current (rms)	59.7A	57.5A	54.5A	52.2A	50.1A
Normal AC Output (During Direct Output)					
Standard Output Voltage	AC Input Voltage +/– 4VAC (typ.) Astable Output				
Standard Output Current (rms)	57.7A	55.5A	52.5A	50.2A	48.1A
Standard Output Power	20kVA / 16kW				
Current Overload Protector	Circuit Breaker (125AF / 75AT)				
Tolerable Instant. Overload	5 Times Standard Output Current (1 Cycle) or Less				
AC Output During Sag (During Sag Protection)					
Standard Output Voltage	Standard Voltage Setting Value (Input Voltage Matching)				
Output Voltage Stability	± 5% (typ.)				
Standard Output Current (rms)	57.7A	55.5A	52.5A	50.2A	48.1A
Standard Output Power	20kVA / 16kW				
Output Frequency	50 / 60 Hz (Input Frequency Matching)				
Output Waveform	Sine Wave				
Output Wave Distortion Rate	5% (typ.)				
Load Power Rate	0.8 – 1.0 Log				
Tolerable Peak Current	2.5 Times Standard Output Current (Wave Height Value)				
Sag Switchover Time	1/4 cycle (typ.) / At the time of a momentary voltage drop and momentary voltage shutdown of all the Phases. 1/2 cycle (typ.) / At the time of a momentary voltage drop and momentary voltage shutdown of the Single Phases.				
Sag Detection Voltage	For Standard Voltage Setting, Less than -11% ±1% of Rated Input Voltage				
Recovery Voltage	For Sag Detector Voltage, + 2%				
Sag Protection Time *5	At least 1 sec. (during standard power output)/max 6 sec. (under light load)				
Repeat Protection Time	1 sec. voltage sag or blackout protection per 15 sec. interval, up to 10 times in sequence				
Current Overload Protection	Current Overload Drop: 1. It returns automatically when the continuance time is five cycles. 2.The continuance time is five cycles or more, the by-pass switch is turned on, and the alarm is output at the same time.				
Operating Environment					
Ambient Temperature	0 – 40 deg				
Ambient Humidity	30 – 90% R.H. condensation-free				
Altitude	1000 m or less				
Installation Environment	Location with minimal dust (including conductive), smoke, corrosive gas, flammable gas, steam, saline, and soot				
Vibration • Impact	Location that does not experience vibrations or impacts.				
Dielectric Strength					
Tolerable Voltage *3	Between Power Source and Device Body: ac2000V / 1 min.				
Insulation Resistance *3	Between Power Source and Device Body: at least 10Mohm (DC500V)				
Dimensions • Construction					
Size *4	W 570 mm x H 1350 mm x D 760 mm				
Weight	Approx. 240 kg				
Input/Output Units					
Power Source I/O	Rear Terminal Block/M8 Terminal Screws				
Control Signal I/O	Rear Terminal Block/M4 Terminal Screws				
Others					
Regulations	NRTL : UL60950-1 certification, SEMI F47-0706 CE Marking : Low Voltage Directive 2006/95/EC, EMC Directive 2004/108/EC Conformity				
Cooling Method	Natural Air Cooling				

KDP-2T030 Three-phase 200V, 30kVA

Item / Model	KDP-2T030				
AC Input					
Standard Voltage Setting *1	200	208	220	230	240
Standard Input Voltage *2	Three-phase 200VAC	Three-phase 208VAC	Three-phase 220VAC	Three-phase 230VAC	Three-phase 240VAC
Standard Input Frequency	50 / 60 Hz				
Input Voltage Range	180VAC---264VAC				
Standard Input Current (rms)	88.6A	85.3A	80.5A	77.3A	74.2A
Normal AC Output (During Direct Output)					
Standard Output Voltage	AC Input Voltage +/– 4VAC (typ.) Astable Output				
Standard Output Current (rms)	86.6A	83.3A	78.5A	75.3A	72.2A
Standard Output Power	30kVA / 24kW				
Current Overload Protector	Circuit Breaker (125AF / 100AT)				
Tolerable Instant. Overload	5 Times Standard Output Current (1 Cycle) or Less				
AC Output During Sag (During Sag Protection)					
Standard Output Voltage	Standard Voltage Setting Value (Input Voltage Matching)				
Output Voltage Stability	± 5% (typ.)				
Standard Output Current (rms)	86.6A	83.3A	78.5A	75.3A	72.2A
Standard Output Power	30kVA / 24kW				
Output Frequency	50 / 60 Hz (Input Frequency Matching)				
Output Waveform	Sine Wave				
Output Wave Distortion Rate	5% (typ.)				
Load Power Rate	0.8 – 1.0 Log				
Tolerable Peak Current	2.5 Times Standard Output Current (Wave Height Value)				
Sag Switchover Time	1/4 cycle (typ.) / At the time of a momentary voltage drop and momentary voltage shutdown of all the Phases. 1/2 cycle (typ.) / At the time of a momentary voltage drop and momentary voltage shutdown of the Single Phases.				
Sag Detection Voltage	For Standard Voltage Setting, Less than -11% ±1% of Rated Input Voltage				
Recovery Voltage	For Sag Detector Voltage, + 2%				
Sag Protection Time *5	At least 1 sec. (during standard power output)/max 6 sec. (under light load)				
Repeat Protection Time	1 sec. voltage sag or blackout protection per 15 sec. interval, up to 10 times in sequence				
Current Overload Protection	Current Overload Drop: 1. It returns automatically when the continuance time is five cycles. 2.The continuance time is five cycles or more, the by-pass switch is turned on, and the alarm is output at the same time.				
Operating Environment					
Ambient Temperature	0 – 40 deg				
Ambient Humidity	30 – 90% R.H. condensation-free				
Altitude	1000 m or less				
Installation Environment	Location with minimal dust (including conductive), smoke, corrosive gas, flammable gas, steam, saline, and soot				
Vibration • Impact	Location that does not experience vibrations or impacts.				
Dielectric Strength					
Tolerable Voltage *3	Between Power Source and Device Body: ac2000V / 1 min.				
Insulation Resistance *3	Between Power Source and Device Body: at least 10Mohm (DC500V)				
Dimensions • Construction					
Size *4	W 570 mm x H 1350 mm x D 760 mm				
Weight	Approx. 250 kg				
Input/Output Units					
Power Source I/O	Rear Terminal Block/M8 Terminal Screws				
Control Signal I/O	Rear Terminal Block/M4 Terminal Screws				
Others					
Regulations	NRTL : UL60950-1 certification, SEMI F47-0706 CE Marking : Low Voltage Directive 2006/95/EC, EMC Directive 2004/108/EC Conformity				
Cooling Method	Natural Air Cooling				

*1 : The standard voltage setting is selectable. (Standard setting at time of shipment is 100V or 200V.)

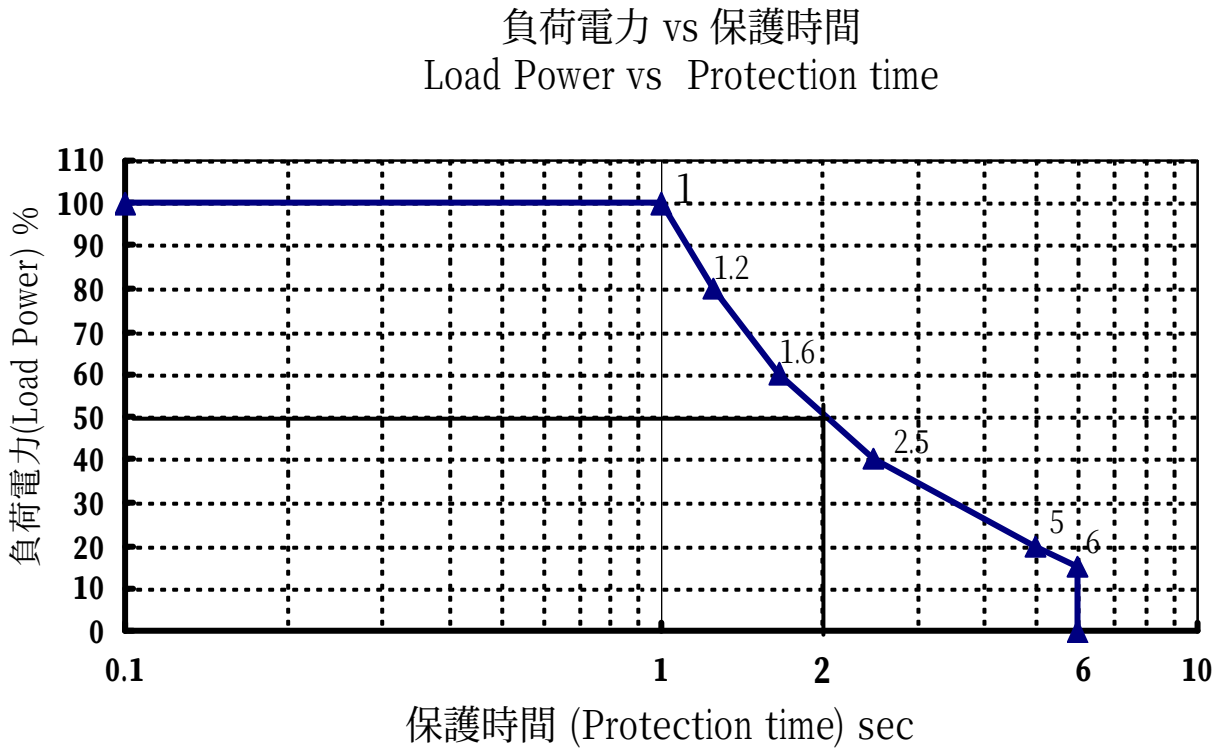
*2 : May be unable to meet the standard if localized distortion occurs in the applied AC voltage.

*3 : Remove the ACG connector when testing.

*4 : Size measurement does not include the dimensions of the casters, foot assembly screw heads or any other projections out from equipment.

*5 : The relationship of protection time to load rate is shown in the graph below. (Reference values)

*6 : After placing the unit in position, firmly fix it on the floor using the leveler and the L legs.



Note: These values are for reference only. Refer to the individual specifications for each machine for detailed information.

12. Warranty & Service


NOTE

(1) The warranty period is one year from the date of customer receipt of product.

(2) Performance guarantee coverage extends only to performance descriptions set forth in catalogs, product specifications, operator's manual, and other manufacturer's materials.

(3) Warranty coverage is limited to use in normal conditions following the operating parameters, warnings, cautions, prohibitions and instructions set forth in the operator's manual. The manufacturer is not responsible for damage caused by malfunction due to usage in disregard of this manual, even if occurring within the warranty period.

(4) The manufacturer is not responsible for damage, secondary losses, loss of profit, restoration costs, etc, occurring due to malfunction of this device, even if the malfunction is covered by the warranty.

(5) The manufacturer is not responsible in the following cases, even if occurring within the warranty period:

(i) Damage occurring due to the device falling, experiencing shock, or other damage due to inappropriate treatment of the device.

(ii) Damage occurring due to fire, water damage, or other natural phenomena.

(iii) When conversions, repairs, or processing not approved by the manufacturer have been performed.

(6) In general, equipment will be returned to manufacturer for repairs and other service. If the customer requests on-site repair, the customer will be charged according to the manufacturer's repair criteria.

(7) If the dispatch of an engineer is required related to a malfunction, even if malfunction is covered by warranty, the customer will be charged for the expense.

(8) The warranty period for repaired products is limited to repairs relating to the performance or function of the repaired products for 6 months after repair.

(9) Repairs on models more than 5 years after production has been discontinued will be addressed separately if repair parts are difficult to acquire.

(10) Maintenance and repair service is not provided outside of Japan.

Contact Information: Contact us at one of the following locations, or contact us by phone or email.

TEL:0774-25-7711 FAX：0774-25-7712
E-mail：products@kdn.co.jp
Visit our homepage for the complete lineup of KDP products: http://www.kdn.co.jp/

Location	Telephone	Postal Code	Address
■ HQ・Head Factory	0774-25-7711	〒 611-0041	16-19-1, Makishimacho, Uji, Kyoto
■ Nishi-Nippon Office	0774-25-7700	〒 611-0041	16-19-1, Makishimacho, Uji, Kyoto
■ Higashi-Nippon Office	046-297-4141	〒 243-0018	NBF Atsugi Building 4F, 2-8-13, Nakamachi, Atsugi, Kanagawa
■ Tokai Office	052-203-0780	〒 460-0003	5F Round Terrace Fushimi, 1-17-26 Nishiki Naka-ku Nagoya Aichi
■ Kumamoto Office	096-375-7706	〒 862-0971	Kai Building,5-15-6, Oe Kumamoto city Kumamoto

Locations as of December 2010

12. Garantie & Service


NOTE

(1) La période de la garantie est une année de la date de reçu du client de produit.

(2) La couverture de la garantie de la performance étend seulement à descriptions de la performance présentées dans catalogues, spécifications du produit, le manuel d'opérateur et les matières d'autre fabricant.

(3) La couverture de la garantie est limitée pour utiliser dans les conditions normales qui suivent les paramètres du fonctionnement, avertissements, prudences, prohibitions et directives présentez dans le manuel de l'opérateur.
Le fabricant n'est pas responsable pour dégât causé par fonctionnement défectueux dû à usage dans le mépris de ce manuel, même si se produire dans la période de la garantie.

(4) Le fabricant n'est pas responsable pour dégât, pertes secondaires, perte de profit, que la restauration coûte, etc, se produire dû à fonctionnement défectueux de cet appareil, même si le fonctionnement défectueux est couvert par la garantie.

(5) Le fabricant n'est pas responsable dans les cas suivants, même si se produire dans la période de la garantie:
1 Dégât qui se produit dû à l'appareil tomber, éprouver le choc, ou autre dégât dû à traitement peu approprié de l'appareil.
2 Dégât qui se produit dû à feu, dégât de l'eau ou autres phénomènes naturels.
3 Lorsque les conversions, réparations ou traitement n'ont pas approuvé par le fabricant a été exécuté.

(6) Dans le général, le matériel sera rendu à fabricant pour réparations et autre service. Si le client demande la réparation sur place, le client sera chargé d'après le critère de la réparation du fabricant.

(7) Si la dépêche d'un ingénieur est exigée apparenté à un fonctionnement défectueux, même si le fonctionnement défectueux est couvert par garantie, le client sera chargé pour la dépense.

(8) La période de la garantie pour les produits réparés est limitée aux réparations concernant la performance ou fonction des produits réparés pour 6 mois après réparation.

(9) Réparations sur les modèles plus que 5 années après que la production ait été cessée sera adressé séparément si les parties de la réparation sont difficiles d'acquérir.

(10) Entretien et le service de la réparation n'est pas fourni en dehors de Japon.

Contactez de l'Information: Contactez-nous au un des emplacements suivants ou contactez-nous par telephone ou email.

TEL:0774-25-7711 FAX：0774-25-7712
E-mail：products@kdn.co.jp

Visitez notre homepage pour le lineup complet de produits KDP: http://www.kdn.co.jp/

Location	Telephone	Postal Code	Address
■ HQ ･Head Factory	0774-25-7711	〒 611-0041	16-19-1, Makishimacho, Uji, Kyoto
■ Nishi-Nippon Office	0774-25-7700	〒 611-0041	16-19-1, Makishimacho, Uji, Kyoto
■ Higashi-Nippon Office	046-297-4141	〒 243-0018	NBF Atsugi Building 4F, 2-8-13, Nakamachi, Atsugi, Kanagawa
■ Tokai Office	052-203-0780	〒 460-0003	5F Round Terrace Fushimi, 1-17-26 Nishiki Naka-ku Nagoya Aichi
■ Kumamoto Office	096-375-7706	〒 862-0971	Kai Building,5-15-6, Oe Kumamoto city Kumamoto

Emplacements comme de Décembre 2010