

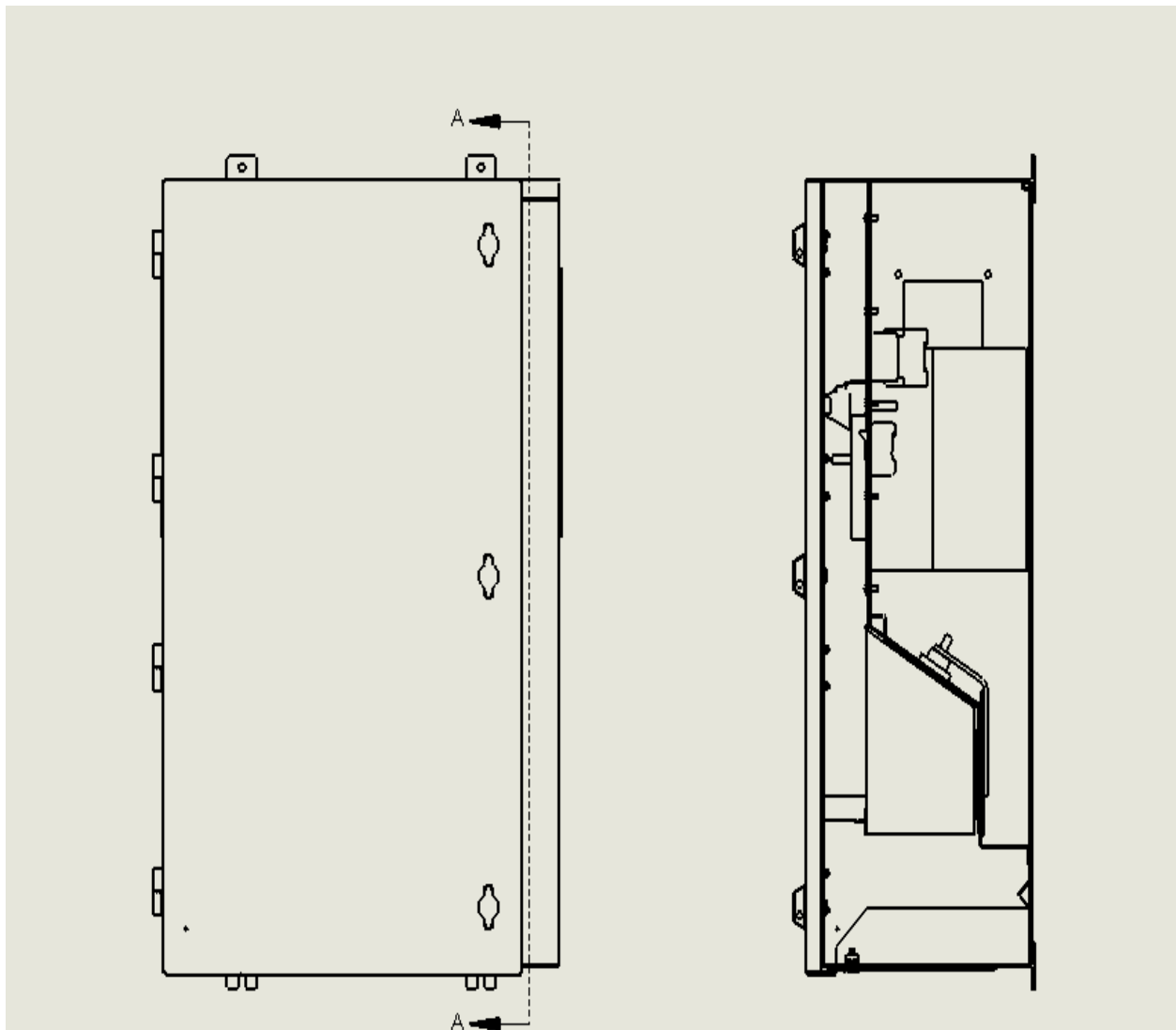
Retail Generator Docking Station

Model # RGDS-XXXX-XXX-XXX

Installation, Operation, and Maintenance Manual

IMPORTANT:

Save this instruction sheet for future use of the product



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Warning

Electrical potentials hazardous to human life can exist within this equipment when energized. Disconnect all input power before opening case or touching internal parts. Use proper lock-out/tag-out procedures.

The Information contained herein may not cover all variations in equipment or provide for all contingencies. Failure to follow instructions may result in death or serious injury.

Labels

NEUTRAL
NEUTRE

GROUND
FIL DE TERRE

LINE 1
LIGNE 1

LINE 2
LIGNE 2

CAUTION
Connect in the following sequence to avoid electric shock:
1. GROUND
2. NEUTRAL
3. PHASE A
4. PHASE B
5. PHASE C
Reverse sequence must be used for disconnecting.
This inlet must be used in conjunction with a transfer switch when used to power a structure.

ATTENTION
Connecter dans la séquence suivante pour éviter les chocs électriques:
1. FIL DE TERRE
2. NEUTRE
3. PHASE A
4. PHASE B
5. PHASE C
Ordre inverse doit être utilisé pour la disconnection.

For power inlet only.
Not for use as an outlet.
480Y/277V 600A 3Ø 60Hz
TRYSAR, INC.
MODEL: RGDS-XXXX-XXX-XXX
SERIAL: XXXXXXXXXX-XX/XXXX
5 - 95% Humidity
Ambient Temperature 40 Deg C
Do not use a neutral to ground bonded generator.

Pour entrée d'alimentation seulement.
Ce n'est pas pour une utilisation en tant que sortie.
480Y/277V 600A 3Ø 60Hz
TRYSAR, INC.
MODELE: RGDS-XXXX-XXX-XXX
SÉRIE: XXXXXXXXXX-XX/XXXX
5 - 95% Humidité
Température ambiante 40 Deg C

Utilisez pas de neutre à la terre du générateur relié.

SHORT CIRCUIT WITHSTAND AND CLOSING RATINGS
This transfer switch is suitable for use in a circuit capable of delivering the short circuit current for the maximum voltage marked below.

When Protected by a circuit breaker, it shall not include a short-time trip response.

SHORT-CIRCUIT CURRENT (RMS symmetrical Amperes X 1000)	VOLTAGE (Volts AC Maximum)
65	480

SHORT-TIME CURRENT RATINGS
This transfer switch does not include short-time current ratings.

TENUE AUX COURT CIRCUIT ET LA FERMETURE NOTATIONS
Ce commutateur de transfert est approprié pour une utilisation dans un circuit capable de délivrer le courant de court circuit à la tension maximum ci-dessous.

Quand il est protégé par un disjoncteur elle ne comprend pas une réponse déclenchement courts termes.

COURANT DE COURT CIRCUIT (RMS ampères symétriques X 1000)	TENSION (Volts AC Maximum)
65	480

NOTES COURANT DE COURTE DUREE
Ce commutateur de transfert ne comprend pas les notations Courant de courte durée.

WARNING
Verify the condition of power source prior to manually transferring. When both sources are energized, manual operation may result in out-of-phase transfer.

AVERTISSEMENT
Vérifiez l'état source d'alimentation avant le transfert manuel. Quand les deux sources sont sous tension, opération manuelle peut entraîner un transfert hors phase.

Mechanical lugs for single conductors only.
Use copper wire only.

Wire size:	Rated Torque:
4-350 kcmil	375 IN. LBS

75 Deg C Terminals

Ces ergots mécaniques pour conducteurs simples seulement.
Utilisez du fil de cuivre seulement.

La grosseur du fil:	Couple nominal:
4-350 kcmil	375 IN. LBS

75 Deg C Bornes

Suitable for use with a generator which is not neutral bonded to ground or to the generator frame.

Approprié pour une utilisation avec un générateur qui n'est pas neutre lié à la masse ou à la carcasse de l'alternateur.

PHASE ROTATION MONITOR
Yellow light indicates correct phase rotation.
Reverse any two phases if no yellow light.

MONITEUR DE ROTATION DE PHASE
La lumière jaune indique la rotation de phase correcte.
Inverser deux phases en l'absence de voyant jaune.

DANGER
HIGH VOLTAGE
KEEP OUT
Reinstallation is Required

HAUTE TENSION
RESTER EN DEHORS
La réinstallation est requise

DANGER

Shut down generator prior to connecting or disconnecting cables.

Arrêtez le générateur avant de la connexion ou la déconnexion des câbles.

DANGER

ELECTRIC SHOCK HAZARD

Use only for connection of a portable generator to the source terminals of a transfer switch, such that the inlets are only energized from the generator.

RISQUE DE CHOC ÉLECTRIQUE

Utilisez seulement pour la connexion d'un générateur portable de bornes de source d'un commutateur de transfert, de sorte que l'orifice d'admission sont seulement alimentés à partir du générateur.

DANGER

RISK OF ELECTRIC SHOCK.

Do not start the generator until all connectors are connected or made inaccessible. Any terminal may be energized when any cable is connected. De-energize cables at the generator prior to connecting or removing any connector.

RISQUE DE CHOC ÉLECTRIQUE

N'avez pas démarrer le générateur jusqu'à ce que tous les connecteurs sont reliés ou inaccessible. Un quelconque terminaux peut être mise sous tension lorsque l'un des câbles sont connectés. Désenergiser les câbles au niveau du générateur avant de connecter ou d'enlever un des connecteurs.

This inlet is rated for use on a circuit capable of delivering less than 50,000 rms symmetrical amperes, 600 volts maximum, when protected by a circuit breaker without an adjustable short time response only or by fuses.

Cette entrée électrique est conçu pour une utilisation sur un circuit capable de délivrer moins de 50,000 ampères symétriques efficaces, 600 V au maximum, quand il est protégé par un disjoncteur qui est sans temps de réponse court réglable uniquement ou par des fusibles.

Use only approved accessories and replacement parts from TRYSTAR to maintain the integrity of this enclosure.

866-TRYSTAR (879-7827)
www.trystar.com
NEMA 3R ENCLOSURE

Utilisez uniquement des accessoires et pièces de rechange approuvées de TRYSTAR de maintenir l'intégrité et la notation de cette encls.

866-TRYSTAR (879-7827)
www.trystar.com
NEMA 3R ENCLOSURE

2 wire auto start
24V 1A

auto start 2 fils
24V 1A

CAUTION

Manual Transfer Switch
This device will not automatically transfer to an alternative source.

ATTENTION

Commutateur de transfert manuel
Cet appareil ne transfère pas automatiquement à une source alternative.

KIRK KEY*
Interlocked with main breaker.
See instructions for use.

KIRK KEY*
Est enclenchée avec le disjoncteur principal.
Lisez les instructions pour l'usage.

For outdoor use only.
Pour utiliser à l'extérieur seulement

Hardwire access door must be in place before using CAM-LOKS.

La porte d'accès matériel doit être en place avant en utiliser les CAM-LOKS

A | B | C
**PHASE ROTATION
MONITOR FUSES**

**FUSIBLES POUR
LE DU MONITEUR
DE ROTATION DE
PHASE**

Rake system must be closed and locked before energizing the breaker.

Le système rake doit être fermé et verrouillé avant mise sous tension le disjoncteur.

Mechanical lugs for single conductors only.
Use copper wire only.

Wire size	Rated Torque
4-600 kcmil	500 IN. LBS

75 Deg C Terminals

Ces ergots mécaniques pour conducteurs simples seulement.
Utilisez du fil de cuivre seulement.

La grosseur du fil	Couple nominal
4-600 kcmil	500 IN. LBS

75 Deg C Bornes

SHORT CIRCUIT WITHSTAND AND CLOSURE RATINGS
This transfer switch is suitable for use in a circuit capable of delivering the short circuit current at 65kVA.

TENUE AUX COURT CIRCUIT ET LA FERMETURE NOTATIONS
Ce commutateur de transfert est appropriée pour une utilisation dans d'un circuit capable de délivrer la courant de court circuit à 65kVA.

A. Installation of the temporary wiring shall be performed according to the applicable electrical installation codes.

B. Cables must be labeled hard usage.

C. A connection with an unsupported vertical length of 2 meters or more shall be provided with strain relief.

A. L'installation du câblage temporaire doit être effectuée conformément aux codes applicables aux installations électriques.

B. Les câbles doivent être étiquetés l'usage dur.

C. Une connexion avec une longueur non supportée verticale de 2 mètres ou plus doit être muni de discharge de traction.

! DANGER !
HIGH VOLTAGE
KEEP OUT

AUTHORIZED PERSONNEL ONLY

The routing, making, and breaking of inlet conductors, and the energization and de-energization of supply shall be performed by qualified personnel only.

Any terminal may be energized when any cable is connected. De-energize cables at the generator prior to opening the enclosure.

HAUTE TENSION
RESTER EN DEHORS

LE PERSONNEL AUTOISÉ SEULEMENT

Le câblage, la réalisation et la rupture des conducteurs d'entrée, d'alimentation et de dé-énergisation de l'armoire, doivent être effectués par du personnel qualifié. Un quelconque des bornes peut être mise sous tension lorsque l'un des câbles sont connectés.

Évitez sous tension des câbles au niveau du générateur avant l'ouverture de l'armoire.

Not to exceed 80% of switch rating.
Ne doit pas dépasser 80% du taux de commutateur.

WARNING
RISK OF ELECTRIC SHOCK

Plug connection should be in the following order:
1) Equipment grounding conductors connector.
2) Grounded circuit conductors connector.
3) Ungrounded circuit conductors connectors.
The disconnection should be done in the reverse order.

AVERTISSEMENT
RISQUE DE CHOC ÉLECTRIQUE

La connexion positive doit être dans l'ordre suivant:
1) Le connecteur pour équipement de conducteurs de terre.
2) Le connecteur de mise à la terre des conducteurs de circuit.
3) Les connecteurs des conducteurs de circuit non mis.
La disconnection devrait se faire dans l'ordre inverse.

Mechanical lugs for single conductors only.
Use copper wire only.

Wire size	Rated Torque
4-350 kcmil	375 IN. LBS

75 Deg C Terminals

Ces ergots mécaniques pour conducteurs simples seulement.
Utilisez du fil de cuivre seulement.

La grosseur du fil	Couple nominal
4-350 kcmil	375 IN. LBS

75 Deg C Bornes

Introduction

This manual covers 100, 200, 300, 400, 600amp, up to 600 Volt class three phase and single phase Retail Generator

Docking Station cabinets. These instructions set out the limiting factors for satisfactory performance of the cabinets. The information contained herein outlines and describes the proper inspection, installation and maintenance of the cabinets.

Inspection upon Receiving

Cabinets should be carefully inspected upon receipt to ensure that no damage has occurred during shipment. Any damage should be reported at once and a claim should be placed against the transportation company. If any problems are found or parts are missing please contact Trystar at 1-866.TRYSTAR.

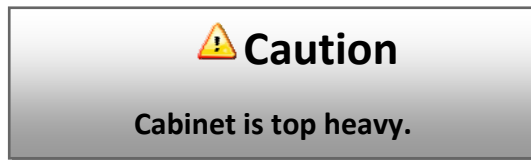
Installation and operating safety

The cabinets are provided with access panels to facilitate installation and should never be operated without these access covers securely mounted in place. All personnel must be qualified personnel and follow the NEC or CEC standards.

Cabinet Mounting & Spacing

Make sure cabinet is mounted at all anchor points. Must have at least 36 inch clearance in front of panel.

This cabinet must be fed from a listed generator and only installed by qualified personnel.



Grounding

The cabinet should in turn be grounded securely and effectively as a safety precaution. Grounding must be in accordance with NEC and local electrical codes. For 100 amp panel, size 8 is recommended. For 200 amp panel, size 6 is recommended. For 300 amp panel, size 4 is recommended. For 400 amp panel, size 3 is recommended. For 600 amp panel, size 1 is recommended.

Wire Selection

Connection cables must be rated for at least 90 degrees C insulation and 75 degree C ampacity. Connection cables must meet NEC or CEC and local electrical codes.

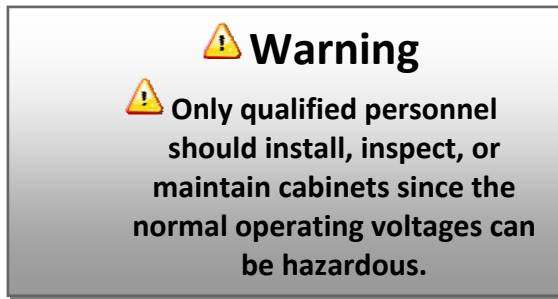
Current	Inlet cable size	Lugs - Incoming	Load connection size	Ground Cable	
				Factory	Field
100A	4-AWG - 350kcmil	4-AWG - 350kcmil	4-AWG - 350kcmil	8 - 4/0AWG	8AWG - 350kcmil
200A	3/0 AWG - 350kcmil	3/0 AWG - 350kcmil	3/0 AWG - 350kcmil	6- 4/0AWG	6AWG - 350kcmil
300A	1/0AWG (2) - 350kcmil (2) or 1	1/0AWG (2) - 350kcmil (2) or 1	1/0AWG (2) - 350kcmil (2) or 1	4- 4/0AWG	4AWG - 350kcmil
400A	3/0AWG (2) - 350kcmil (2)	3/0AWG (2) - 350kcmil (2)	3/0AWG (2) - 350kcmil (2)	3- 4/0AWG	3AWG - 350kcmil
600A	350kcmil (2)	350kcmil (2)	350kcmil (2)	1- 4/0AWG	1AWG - 350kcmil

Technical Specifications

This panel is rated at 40 degree C.

The docking station is rated up to 600Volts.

The panel is rated at 95% humidity.



For complete electrical specifications refer to the table below.

SHORT-CIRCUIT WITHSTAND AND CLOSING RATINGS	
THIS TRANSFER SWITCH IS SUITABLE FOR USE IN A CIRCUIT CAPABLE OF DELIVERING THE SHORT-CIRCUIT CURRENT FOR THE MAXIMUM VOLTAGE MARKED BELOW.	
WHEN PROTECTED BY A CIRCUIT BREAKER, IT SHALL NOT INCLUDE A SHORT-TIME TRIP RESPONSE.	
SHORT-CIRCUIT CURRENT (RMS SYMMETRICAL AMPERES X 1000)	VOLTAGE (VOLTS AC MAXIMUM)
65	480
SHORT-TIME CURRENT RATINGS	
THIS TRANSFER SWITCH DOES NOT INCLUDE SHORT-TIME CURRENT RATINGS	

Inspection during Installation

The cabinet should be carefully inspected for any damage due to handling after receipt. The nameplate rating on the unit should be checked against the job specifications to ensure installation of the correct cabinet. The cabinet should be connected only as described on its nameplate to match the available line voltage. All bolted electrical connection should be checked and tightened since fasteners may have loosened during shipment.

The cabinet is not for indoor use.

Installation Procedures

1. Ensure that the generator does not have the neutral bonded to the ground or the generator frame.
2. Ensure the area is well ventilated and free from explosive or corrosive gas or vapors. Ensure that the panel is installed in a weather protected area only. Ensure that the generator is installed away from doors, windows and ventilation systems to mitigate carbon monoxide hazards.
3. Check the cabinet nameplate and verify that it is the correct line and load voltage for the application.
4. Mount the cabinet securely using the provided holes to mount to a wall, or use the holes in the stainless steel legs to mount to a pad.
5. Shut off primary voltage using approved lock-out/tag-out procedures
6. Remove the cover over the wiring compartment.
7. Route wires into enclosure by creating holes as needed.
8. Connect the cabinet according to the wiring diagram on the nameplate or color coded connections, ground, neutral, phase a, phase b, phase c. Torque the mechanical lugs to 500 in/lbs. 350 KCMIL is suggested.
9. Ground the cabinet in accordance with NEC or CEC and local electrical codes.
10. Before energizing the unit, check the utility voltage to ensure it is properly disconnected from the load. Ensure correct phase rotation.
11. Connect the phase monitor in correct phase sequence to a location on the

load side that will be energized at all times. (see figure 2)

12. Shut off the primary voltage using approved lock-out/tag-out procedures.
13. Connect the load to the load terminals and the breaker.

Note: After installation of cables and connectors, a minimum of 1" clearance should be maintained between the enclosure and any energized parts, unless insulated by another means.

14. Replace the cover over the wiring compartment.
15. If for any reason you suspect the unit has been exposed to moisture during transit or storage, it should be dried out before being energized.
16. Energize the unit.

Torque Values for Screws and Bolts

When attaching the wires to the terminals use the recommended bolts for the wiring lugs. It is recommended to use two wrenches "where applicable" when tightening or loosening bolted connections to prevent damage. Torque 2S350 lug to 350 IN. LBS. The chart below shows recommended torque values for standard size bolts.

Torque Values for Screws and Bolts	
Screw/bolt Size (SAE Grade 5)	Torque Value (+/-5%)
1/4	8 ft-lbs
5/16	17 ft-lbs
3/8	30 ft-lbs
7/16	50 ft-lbs
1/2	75 ft-lbs

Operation

To use generator,


1. Ensure Main Power source/ Utility is turned off and locked out.

2. Connect Generator via Cam Lock connections or mechanical lugs located behind front door of the Docking Station, Connect in labeled sequence, ground, neutral, phase a, phase b, phase c, making sure that the connections are fully inserted and turned clockwise to full stop position.

3. Ensure that the door is closed and latched before energizing.

4. Turn on generator.

Warning

 If Local Code requires a secondary breaker to protect incoming generator power, make sure it is in the on position at this time and never in the on position when the Main Utility power is on.

This refers to the fact that you need to refer to local codes to ensure correct installation.

To return to utility power,

1. Turn off generator breaker if provided or required.
2. Turn off Generator
3. Disconnect Cam Lock at docking station
4. Close and secure docking station doors.
5. Unlock main utility power and energize breaker.

For all relatively normal and clean installations, this cabinet will operate satisfactorily under normal conditions and loads.

Please note that generator must have neutral and ground bonded at generator for safe operation unless otherwise labeled on enclosure or required by local code.

Optional Items

KirkKey Inter lock System:

If Cabinet comes with optional KirkKey Interlock make sure that only one key is provided and that only the Main utility or the docking station, never both can be energized at any given time. This means that you have to turn off the main power supply and lock it out before you can unlock the secondary connection and power the building with the secondary power.

Maintenance

Docking station shall only be maintained, serviced and inspected by qualified personnel.

All power to the docking station must be disconnected and tested to confirm that the box is safe to work on.

Check Integrity of the enclosure by visually inspecting it for any defects.

Check all stickers

1. Make sure that all stickers are on the enclosure.
2. Make sure all stickers are clean and legible.
3. If stickers are losing adhesion, replace.

Check door latches and cams

1. Make sure that the door latches turn freely.

2. Make sure that when latched the door is firmly closed so that the gasket creates a good seal.

Check door hinges

1. Make sure door hinges swing freely and do not bind.
2. Make sure the fasteners for door hinges are tight.

Check bottom access panel (rake system).

1. Make sure panel opens and closes without binding.
2. Make sure that the latches are tight.

Check all electrical connections.

1. Ensure that all connections are still tight.
2. Ensure that there is no corrosion at the connections.

If optional KirkKey system is installed, ensure that it operates correctly and lube the locking mechanism with a graphite based lubricant.

Spare Parts

If any of the parts need to be replaced contact Trystar at 1-866-TRYSTAR.



866.TRYSTAR – 507.333.3990 – fax: 507.333.3991 – trystar.com
2917 Industrial Drive, Faribault, MN 55021

TRYSTAR RETAIL GENERATOR DOCKING STATION SPECIFICATION

Make selections from the listed options. Bold text in the shaded boxes may be used as an example.

RGDS -	Amperage	Voltage	Mount Style	Permanent Bus Connection		Generator Connection	Alternate Generator Connection	(Other Options - List all after dash)
	04	3	W	L	L	L	M	K
	01 - 100A	1 - 120/240 (2H + N + G)	W - Wall hanging	L - Breaker Lugs	L - Mechanical Lugs	M - Male Cam-Locks		A - 2 Wire Auto Start
	02 - 200A	2 - 120/240 3Φ (3H + N + G)	P - Pad (free standing)					G - 100% Ground Bus
	03 - 300A	3 - 208/120V (3H + N + G)	F - Flush (front flange)					I - Stainless Steel construction
	04 - 400A	4 - 480V (3H + G)						J - Bottom conduit access (increased panel depth - contact factory for details)
	06 - 600A	5 - 480/277 (3H + N + G)						K# - Kirk-Key breaker interlock (# - number of key cylinders)
								P - Custom powder coat color (Specify - ANSI grey standard)
								S - Special (explain)

Voltage 1 - Black, Red, White & Green
Colors for 2 - Black, Orange, Blue, White, Green
Cam-Locks 3 - Black, Red, Blue, White and Green
4 - Brown, Orange, Yellow and Green
5 - Brown, Orange, Yellow, White and Green

Sample Construction:
400A, 208/120V, Wall Mount
Breaker Lug permanent busbar connection
Mechanical lug generator connection
Male Cam-Lock generator connection
Kirk Key
RGDS-043W-LLM-K

Notes:

Phase rotation monitor is standard
Finger safe fuse holder is standard

Refer to page 7 for Technical
Specifications regarding Short
Circuit rating and Type 3R ratings