PLANS REVIEWED FOR CODE COMPLIANCE

ACCEPTABLE

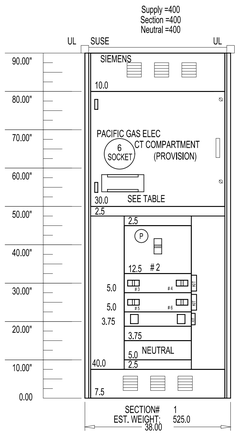
ACCEPTANCE OF THE PLANS EXTENDS ONLY TO THAT WHICH IS SHOWN AND DESCRIBED HEREON, BUT DOES NOT AUTHORIZE OR APPROVE ANY OMISSIONS, DEVIATIONS OR REQUIREMENTS OF STATE LAWS, LOCAL ORDINANCES OR OTHER AGENCIES.

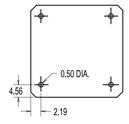
GRASS VALLEY FIRE DEPARTMENT
BUREAU OF FIRE PREVENTION

APPROVAL SUBJECT TO FIELD ACCEPTANCE TESTS AND FINAL

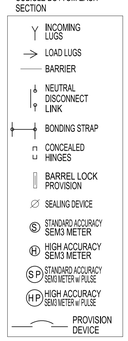
ACCEPTED:
SEE FIRE DEPARTMENT "CONDITIONS - 22FPS-0288" for CONDITIONS OF ACCEPTANCE.
Darrin J. Hutchins June 22, 2022

CONDITIONS OF APPROVAL (COA) SHEET SHALL BE INSERTED AFTER COVER PAGE.





TYPICAL BOLTDOWN HOLE PROVISION FOR CUBICLE BOTTOM EACH SECTION



NOTES

CONSTRUCTION	:SWITCHBOARD IS BUILT AND LABELED PER UL 891 IN EFFECT.
INCOMING	:AMPERES: 600
SERVICE	:SYSTEM VOLTAGE: 120/240 1Ø3W Ground Neutral AC
INTERRUPTING RATING	:THE SHORT CIRCUIT INTERRUPTING CAPABILITY IS 22,000 :RMS SYMMETRICAL AMPERES AT 240 VOLTS BASED ON THE LOWEST SHORT CIRCUIT CURRENT RATING OF THE INDIVIDUAL OR SERIES RATED COMBINATION DEVICES INSTALLED AT TIME OF MANUFACTURE OF BUSSING STRUCTURE. THE BUSSING STRUCTURE IS CONSTRUCTED TO WITHSTAND FAULTS OF 42,000 RMS SYMMETRICAL AMPERES.
ENCLOSURE	:ENCLOSURE IS TYPE NEMA 3R FOR OUTDOOR APPLICATION.
SEISMIC	:ENCLOSURE SHALL BE CONSTRUCTED TO MEET SEISMIC REQUIREMENTS.
EXTERIOR	:ANSI 61 LIGHT GREY PAINT.
TERMINATIONS	:TERMINATIONS ARE ACCESSIBLE FROM THE FRONT.
BUS BARS	:TIN PLATED ALUMINUM BUS BARS SIZED ON BASIS OF 65°C MAXIMUM TEMPERATURE RISE.
BUS BARS	:THE GROUND BUS IN THIS SWITCHBOARD IS Aluminum SIZED PER UL 891 OR GREATER.
UTILITY	:PACIFIC GAS ELEC
SECTION SKIDS	:SPECIAL SHIPPING SKID(S) REQUIRED FOR LARGE SECTIONS.

ABBREVIATIONS

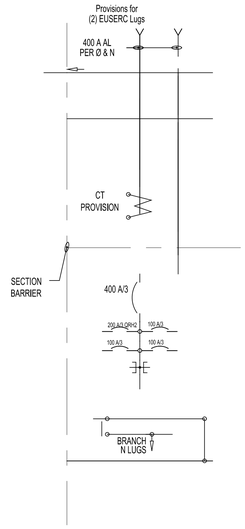
'UL' INDICATES THAT THE MARKED SWITCHBOARD SECTION COMPLIES WITH ALL APPLICABLE UNDERWRITERS LABORATORIES STANDARDS AND IS IDENTIFIED WITH A UL LABEL.

'SUSE' INDICATES THAT THE MARKED SWITCHBOARD SECTION IS SUITABLE ONLY FOR USE AS SERVICE ENTRANCE EQUIPMENT.

'PROV' INDICATES THAT A PROVISION IS MADE FOR A FUTURE DEVICE. ALL REQUIRED MOUNTING HARDWARE IS PROVIDED.

'UNIT SPACE' INDICATES UNOCCUPIED AREA INTENDED FOR FUTURE USE.

'P' INDICATES PADLOCK PROVISION.



UTILITY CO. :
PACIFIC GAS ELEC

DESCRIPTION	PG NO.
CT COMPARTMENT	P319
UGPS	345
LINE TERMINATION	347
METER PLATES	333
SMM METERING	_
SUPPORT	12-18

INSTALLATION NOTE

Caution: If switchboard is installed on a housekeeping slab greater than 2-1/2" the meter may be over the 6'3" maximum allowable meter height. Consult utility if you need more information.

NO.	REVISIONS	DRAWN BY:	DATE
1	0	-	1-18-2021

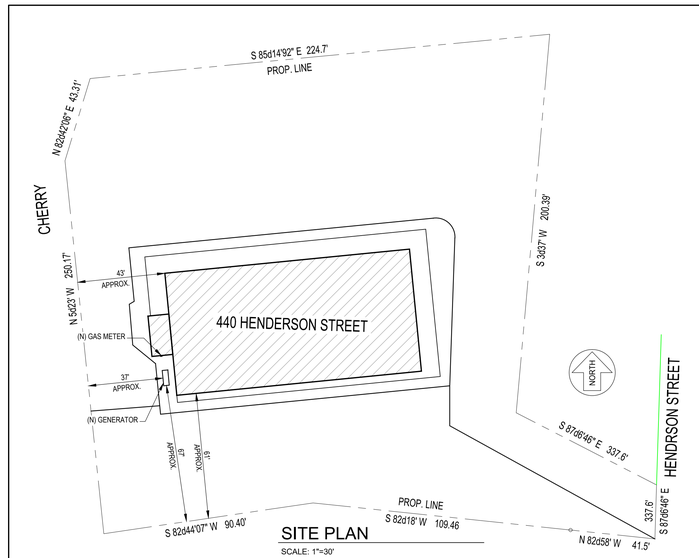
JOB
Interfaith Food Ministry

P.O. -	CUST.		
CONTR	CONSLT		
TIE -	BY grahtx20c	ENG. LOC. -	DESIGNATION MSB
S.O. -	DATE 3-14-2022		
Siemens Industry, Inc. Norcross, Georgia	DWG. NO. grahtx20c_01182100_00_00_M00-20000-1		
	APP.	MFG. LOC. -	SHEET 1 OF 6
	APP.	DWG. FILE	REV. 1

REVIEWED FOR CODE COMPLIANCE

PLANS REVIEWED SUBJECT TO FIELD INSPECTION

Plans shall reflect the scope of the project. Any changes or deviations must be submitted and reviewed by the Building Department prior to inspection.



REQUEST FOR PROPOSAL / ELECTRIC SCOPE OF WORK

1. The Electrical Contractor shall provide all labor and materials necessary for a complete and working electrical system; the system shall include but is not limited to:
   - Installation of a contractor provided 60kW 120/208V 3Ø4W Kohler generator and 200A Service Entrance rated transfer switch.
   - Connection of the new generator to existing panel "A"
   - Connection of selected receptacles to panel "A", including IT rack branch circuit, manager's office and selected office terminals, as indicated on the plans
   - Installation of annunciation panel to an interior location, as noted on the plans.
   - Contractor to provide connections to PG&E gas, as required. Note the gas service may need an upgrade, consult with PG&E for local requirements
2. The electrical system shall include:
   - Full conduit system. EMT conduit, flex or bx cabling shall be used throughout. All exposed conduits shall be run plumb, true and at right angles to the building lines.
   - Conductors to be copper, 12awg minimum, excepting feeder conductors larger than #4 AWG.
   - Specification grade devices.
3. This is a prevailing wage project. Provide all necessary documents to the California Dept. of Industrial Relations, per DIR standards and direction. Al bids submitted become the property of the owner; a public bid opening shall be scheduled by the owner.
4. Contractor shall make application to the Pacific Gas and Electric Company for gas service. Fees for gas meter upgrades to be paid by the building owner.
5. Contractor to provide City of Grass Valley building inspections.
6. Contractor to provide evidence of three (3) successful generator installations of similar size and type with in the last five (5) years
7. All materials shall be new and free of defects.
8. Upon completion, provide a detailed "as-built" plans to the owner.
9. Upon completion, provide product manuals and instruction as to the correct use, function and maintenance of each system and device.
10. All work to be minimally invasive to other tenancies. Collect refuse daily and store materials so as to not interfere with other areas of construction.
11. Coordinate work with other trades; advise plans or field conflicts to the General Contractor or Architect as they become known and before proceeding with construction.
12. Work not to include: Floor cutting and patching, coring, repair to existing interior wall finishes.
13. All work involving commissioning, testing and power cut-over to be coordinated with the building owner to minimize disruptions to the business operations..
14. Contractor is to maintain jobsite sanitary facilities and a garbage container suitable for construction debris. The Contractor shall keep his portion of the jobsite neat and orderly. All refuse is to be placed in the container at the end of each business day.

INTERFAITH FOOD MINISTRY
40kW GENERATOR INSTALLATION

PROJECT INFORMATION

SITE ADDRESS:
440 HENERSON STREET
GRASS VALLEY, CA 95945

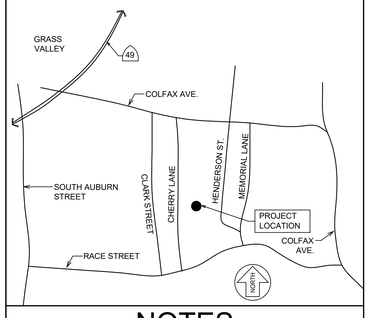
APN: 008-520-059
ZONING: NC-FLEX GVCTY
ACRES: 1.16

SHEET INDEX

OWNER

INTERFAITH FOOD MINISTRY
440 HENDERSON STREET
GRASS VALLEY, CA 95945
530-273-8132

VICINITY MAP
NOT TO SCALE



NOTES

COMPLY WITH:
2019 California Residential Code (CRC)
2019 California Mechanical Code (CMC)
2019 California Energy Code (T-24)
2019 California Electric Code (CEC)
2019 California Plumbing Code (CPC)
2019 Swimming pool, Hot Tub and Spa Code
2019 California Fire Code
2019 California Green Building Standards Code (CGC)
Other Local & State Laws

General Notes

NOTES:

LICENSED ELECTRICAL CONTRACTOR
GRASS VALLEY ELECTRIC
CLASSIFICATION C-10
LICENSE NO 392506
STATE OF CALIFORNIA

No.	Revision/Issue	Date

Grass Valley Electric
G. Brady Pryor
Phone: (530) 273-7543
Cell: (530) 913-3384
Fax: (530) 273-3450
bradypryor@sbcglobal.net
Lic. #392506
10973 Rough & Ready Hwy
Grass Valley, California 95945

Project Name and Address:
INTERFAITH FOOD MINISTRY
440 HENDERSON STREET
GRASS VALLEY, CA

Project No.	Sheet
	COVER SHEET SITE PLAN SWITCHBOARD DIAGRAM
Date 3-16-2022	
Scale N/A	E-CS

CITY OF GRASS VALLEY - CONDITIONS OF APPROVAL

ALL CONDITIONS OF APPROVAL MUST BE SATISFIED PRIOR TO FINAL INSPECTION

Office of the Fire Marshal
City of Grass Valley Fire Department
(530) 274-4380

Date: ***June 22, 2022***

To: ***Brady Pryor***
10973 Rough & Ready Hwy.
Grass Valley, CA 95945

From: ***Darrin Hutchins, Deputy Fire Marshal***

File #: ***22FPS-0288***

Re: ***22BLD-0288, APN: 008-520-059: Installation of a 40k W LNG Generator Emergency Standby Power System located at 440 Henderson St. in Grass Valley, Ca. 95945***

Plans for emergency and standby power systems are reviewed by the *Fire Prevention Bureau for the City of Grass Valley Fire Department* to ensure that a reasonable degree of fire and life safety will exist once the project has been completed.

Plans for specialized systems, including back-up/standby power systems, communication systems, fire alarm, fire suppression, and smoke removal, are reviewed to determine compliance with applicable codes and standards.

The *Fire Prevention Bureau for the City of Grass Valley Fire Department* also reviews plans to verify compliance with the *California Fire Code* as they relate to the storage, use, and handling of explosive, flammable, combustible, toxic, corrosive and other hazardous gaseous, solid, and liquid materials.

The plans, specifications, calculations, and related submittals for the above referenced project have been reviewed for compliance with the minimum requirements of the *of the 2019 editions of the California Fire Code, California Building Code, the following editions of NFPA: 30-18 (Flammable and Combustible Liquids Code), 37-15 (Standard for the Installation and use of Stationary Combustible Engine and Gas Turbines), 54-15 (National Fuel Gas Code),110-16 (Standard for Emergency and Standby Power Systems), 704-17 (Standard System for Hazards of Materials for Emergency Response) and the City of Grass Valley.*

The plans for the above referenced project have been reviewed and *ACCEPTED* subject to following conditions:

Fire extinguisher(s) with a minimum rating of *2-A:20-B:C* ***shall be provided*** such that no point is further than 75-foot travel distance to an extinguisher. Extinguishers shall be mounted in cabinets; such that the top of the extinguisher is no more than *four (4') feet* above and the bottom no less than *four (4") inches* from the ground level.

Provide applicable signage in accordance with *2019 CFC/CBC* and *NFPA 704-17*.

The above conditions are the minimum requirements of the Fire Prevention Bureau for the City of Grass Valley Fire Department. ***Approval of the drawings and specifications are subject to the applicant agreeing to complete the above requirements and successful passing of all required testing.***

All work performed without benefit of the required inspections may be subject to additional inspections or removal, as needed, to ensure that the work has been completed in compliance with the requirements of the fire prevention bureau, the approved design, and the manufacturer's listing or installation requirements.

This approval does not replace any license or permit required by other agencies.

Have stamped / accepted plans on site for all inspections.

All Inspections and/or Acceptance Tests are performed on Tuesday and Thursday only. To schedule please contact Robert Arnett at roberta@cityofgrassvalley.com at least 3 BUSINESS DAYS in advance.

Please contact me at darrinh@cityofgrassvalley.com should you have any questions.

Darrin J. Hutchins

Darrin Hutchins,
Deputy Fire Marshal

CITY OF GRASS VALLEY
BUILDER'S COPY

CITY OF GRASS VALLEY

COA

ELECTRIC PLAN - GENERATOR ADDITION

SCALE: 1/4" = 1'-0"

GAS PIPING NOTES
1. GAS PIPING SIZED ACCORDING TO FIGURE 1-19, KOHLER 40 RCLB INSTALLATION MANUAL. PIPE SIZING FOR NATURAL GAS LESS THAN 2 PSI WITH PRESSURE DROP = 0.5 IN WC.
2. DISTANCE FROM METER TO GENERATOR = 11 FEET. FITTING EQUIVALENT LENGTH = 16 FEET. USE 40 FEET COLUMN IN FIGURE 1-19.
3. GAS PIPING SHALL SCHEDULE 40 BLACK STEEL.
4. PROVIDE SHUTOFF VALVES OR STOPS AT CONNECTION. AT GAS CONNECTION, PROVIDE GAS COCK, DIRT LEG, UNION AND FLEX CONNECTION.
5. MAIN GAS SHUT OFF TO THE BUILDING SHALL BE IDENTIFIED WITH PERMANENT ALL WEATHER SIGNAGE STATING "MAIN GAS SHUT OFF". INSTALL LINE SIZED SHUT-OFF DOWNSTREAM OF METER.

GAS PIPING KEYED NOTES
1. 1-1/2" GAS DROP TO GROUND LEVEL
2. 1" GAS CONNECTION TO GENERATOR (910 CFH)

GAS SYMBOLS AND LEGEND

SM	SURFACE MOUNT
M	GAS METER
G	GAS SHUT-OFF BIBB
1" G (SM) (95)	GAS PIPING, SIZE LISTED W/ kBTU/hr IN PARENTHESES

LEGEND

$ occ	Switch, occupancy sensor
exit	LED Exit fixture w/ battery backup
	Fluorescent Lighting fixture, 1x4 surface 2-FO32T8 lamps
	Fluorescent Lighting fixture, 2x4 troffer 3-FO32T8 lamps
Zone 1	Occupancy Sensor, ceiling mounted w/ zone indicated
	Receptacle, general use Nema 5-20
	Receptacle, GFI protected Nema 5-20
Tp	Telepower Pole, Wiremold 25TP4
Fan	Bath Fan, Broan 684 80 cfm

General Notes

NOTES:

LICENSED ELECTRICAL CONTRACTOR
GRASS VALLEY ELECTRIC
CLASSIFICATION
C-10
LICENSE NO 392506
STATE OF CALIFORNIA

No.	Revision/Issue	Date

Grass Valley Electric
G. Brady Pryor
Phone: (530) 273-7543
Cell: (530) 913-3384
Fax: (530) 273-3450
bradypryor@sbcglobal.net
Lic. #392506
10973 Rough & Ready Hwy.
Grass Valley, California 95945

Project Name and Address:

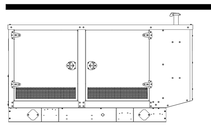
INTERFAITH FOOD MINISTRY
440 HENDERSON STREET
GRASS VALLEY, CA

Project No.	Sheet
	ELECTRIC PLAN GAS PIPING PLAN GENERATOR ADDITION
Date 3-16-2022	
Scale 1/4"=1'-0"	E1.0

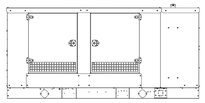
KOHLER.

Industrial Generator Set Accessories

Weather and Sound Enclosures



KG40- KG60



KG80- 125

Available Approvals and Listings

- ❑ UL 2200 Listing
- ❑ CSA Certified
- ❑ IBC Seismic Certification
- ❑ Hurricane Rated Enclosure - Available on sound aluminum (Impact rated for Large Missile Level E and Wind load rated per Florida Building Code tested to TAS201-94, TAS202-94 and TAS203-94 standards)

NOTE: Some models may have limited third-party approvals; see your local distributor for details.

Applicable to the following:
KG40- 125

Weather Enclosure Standard Features

- Internal-mounted critical silencer and flexible exhaust connector.
- Skid-mounted, steel construction with hinged doors.
- Fade-, scratch-, and corrosion-resistant Kohler® Power Armor™ automotive-grade textured finish.
- Enclosure has four access doors which allow for easy maintenance.
- Lockable, flush-mounted door latches.
- Vertical air outlet discharge to redirect air and reduce noise.
- Steel weather enclosure is analyzed to 150 mph (241 kph) wind load rating.

Sound Enclosure Standard Features

- Includes all of the weather enclosure features with the addition of acoustic insulation material.
- Skid-mounted, steel or aluminum construction with hinged doors. Aluminum enclosures are recommended for high humidity and/or high salt/coastal regions.
- Acoustic insulation that meets UL 94 HF1 flammability classification and repels moisture absorption.
- Sound attenuated enclosure that uses up to 51 mm (2 in.) of acoustic insulation, acoustic-lined air inlet hoods, and acoustic-lined air discharge hood.
- Aluminum sound enclosure is certified to 186 mph (299 kph) wind load rating.
- Steel sound enclosure is analyzed to 150 mph (241 kph) wind load rating.

Weather and Sound Enclosure Specifications

Model	Max. Dimensions, mm (in.) Length	Width	Height	Weight, kg (lb.) * Steel Weather Enclosure	Steel Sound Enclosure	Aluminum Sound Enclosure	Sound Pressure Level at 60 Hz with Full Load, Weather/Sound, dB(A) †
KG40				1046 (2307)	1051 (2318)	959 (2115)	79/64
KG45	2585 (101.8)	1078 (42.4)	1531 (60.3)				79/65
KG50				1101 (2427)	1106 (2438)	1014 (2235)	79/67
KG60							79/68
KG80	3525 (138.8)	1154 (45.4)	1713 (67.4)	1417 (3123)	1427 (3146)	1337 (2948)	84/69
KG100				1605 (3539)	1616 (3562)	1515 (3340)	81/69
KG125				1605 (3539)	1616 (3562)	1515 (3340)	81/71

Note: Data in table is for reference only, refer to the respective ADV drawings for details.

* Max. weight includes the generator set (wet) with largest alternator option, enclosure, and silencer.

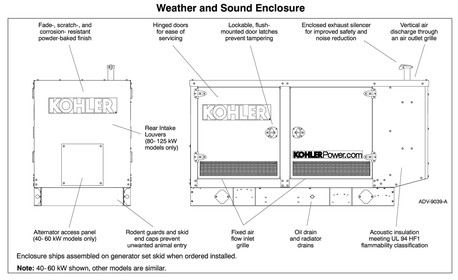
† Log average sound pressure level of 8 measured positions around the perimeter of the unit at a distance of 7 m (23 ft). Refer to TIB-114 for details.

G6-159 7/21h

KOHLER.

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KOHLERPower.com

Weather and Sound Enclosure



Enclosure ships assembled on generator set skid when ordered installed.

Note: 40- 60 kW shown, other models are similar.

Enclosure Features

- Available in steel (14 gauge) formed panel, solid construction. Preassembled package offering corrosion resistant, dent resilient structure mounting directly to skid.
- Power Armor™ automotive-grade finish resulting in advanced corrosion and abrasion protection as well as enhanced edge coverage and color retention.
- Internal critical exhaust silencer offering maximum component life and operator safety.
  NOTE: Installing an additional length of exhaust tail pipe may increase backpressure levels. Please refer to the generator set spec sheet for the maximum backpressure value.
- Interchangeable modular panel construction. Allows complete serviceability or replacement without compromising enclosure design.
- Cooling/combustion air intake with a horizontal air inlet. Sized for maximum cooling airflow.
- Service access. Multi-personnel doors for easy access to generator set control and servicing of the oil fill and battery.
- Cooling air discharge. Weather protective design featuring a vertical air discharge outlet grille. Redirects cooling air up and above enclosures to reduce noise ambient.
- Enclosed critical silencer and three- way catalyst standard on KG100 and KG125 (optional on KG80).

Additional Sound Enclosure Features

- Available in steel (14 gauge) or aluminum 3.2 mm (0.125 in.) formed panel, solid construction.
- Sound-attenuating design. Mechanically restrained acoustic insulation UL 94 HF1 listed for flame resistance.
- Cooling air discharge. The sound enclosures include acoustic insulation with urethane film.

DISTRIBUTED BY:

G6-159 7/21h

KOHLER.

Model: KG40

190- 600 V Gas

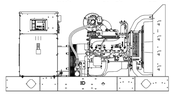
ISO 9001 KOHLER REGISTERED

EPA-Certified for 60 Hz Stationary Emergency Applications

EPA certification not applicable at 50 Hz

Ratings Range

		60 Hz	50 Hz
Standby:	kW	37- 42	32- 34
	kVA	37- 50	32- 41



Generator Set Ratings

Alternator	Voltage	Ph	Hz	Natural Gas 130° C Rise Standby Rating kW/kVA	Amps	LP Gas 130° C Rise Standby Rating kW/kVA	Amps
	120/208	3	60	40/50	139	40/50	139
	127/220	3	60	40/50	132	40/50	132
	120/240	3	60	40/50	121	40/50	121
	120/240	1	60	37/37	155	37/37	155
	139/240	3	60	40/50	121	40/50	121
	220/380	3	60	40/50	76	40/50	76
	277/480	3	60	40/50	61	40/50	61
	347/600	3	60	40/50	49	40/50	49
4P5X	110/190	3	50	33/41	125	33/41	125
	115/200	3	50	33/41	119	33/41	119
	120/208	3	50	33/41	114	33/41	114
	110/220	3	50	33/41	108	33/41	108
	110/220	1	50	32/32	146	32/32	146
	220/380	3	50	33/41	63	33/41	63
	230/400	3	50	33/41	60	33/41	60
	240/415	3	50	33/41	58	33/41	58
	120/208	3	60	40/50	139	40/50	139
	127/220	3	60	40/50	132	40/50	132
	120/240	3	60	40/50	121	40/50	121
	120/240	1	60	40/40	167	40/40	167
	139/240	3	60	40/50	121	40/50	121
	220/380	3	60	40/50	76	40/50	76
	277/480	3	60	40/50	61	40/50	61
4P7BX	347/600	3	60	40/50	49	40/50	49
	110/190	3	50	33/41	125	33/41	125
	115/200	3	50	33/41	119	33/41	119
	120/208	3	50	33/41	114	33/41	114
	110/220	3	50	33/41	108	33/41	108
	110/220	1	50	33/33	150	33/33	150
	220/380	3	50	33/41	63	33/41	63
	230/400	3	50	33/41	60	33/41	60
	240/415	3	50	33/41	58	33/41	58
4Q5X	120/240	1	60	40/40	167	40/40	167
	110/220	1	50	32/32	146	32/32	146
4Q7BX	120/240	1	60	42/42	175	42/42	175
	110/220	1	50	34/34	155	34/34	155

RATINGS: All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. Standby Ratings: The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. For dual fuel engines, use the natural gas ratings for both the primary and secondary fuels.

G4-278 (KG40) 6/20d

Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- A one-year limited warranty covers all generator set systems and components. Two- and five-year extended limited warranties are also available.
- Alternator features:
  - ○ The unique Fast-Response® X excitation system delivers excellent voltage response and short-circuit capability using a rare-earth, permanent magnet (PM)-excited alternator.
  - ○ The brushless, rotating-field alternator has broadrange reconnectability.

Lubrication

Lubricating System	60 Hz	50 Hz
Type	Full Pressure	
Oil pan capacity, L (qt.) §	5.7 (6.0)	
Oil pan capacity with filter, L (qt.) §	7.1 (7.5)	
Oil filter: quantity, type §	1, Cartridge	

§ Kohler recommends the use of Kohler Genuine oil and filters.

Cooling

	60 Hz	50 Hz
Ambient temperature, °C (°F) *	50 (122)	
Engine jacket water capacity, L (gal.)	7.3 (1.93)	
Radiator system capacity, including engine, L (gal.)	20.8 (5.5)	
Engine jacket water flow, Lpm (gpm)	129 (34.1)	108 (28.5)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	58.0 (3300)	50.6 (2880)
Water pump type	Centrifugal	
Fan diameter, including blades, mm (in.)	533 (21)	
Fan, kWm (HP)	1.7 (2.3)	1.0 (1.3)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)	

* Enclosure with enclosed silencer reduces ambient temperature capability by 5°C (9°F).

Operation Requirements

Air Requirements	60 Hz	50 Hz
Radiator-cooled cooling air, m^3/min. (scfm) †	120 (4250)	100 (3540)
Combustion air, m^3/min. (cfm)	3.7 (130)	3.1 (108)
Heat rejected to ambient air:		
Engine, kW (Btu/min.)	30.9 (1760)	26.5 (1510)
Alternator, kW (Btu/min.)	7.7 (440)	6.9 (390)

† Air density = 1.20 kg/m^3 (0.075 lbm/ft^3)

Fuel Consumption ‡	60 Hz	50 Hz
Natural Gas, m^3/hr. (cfh) at % load	**Standby Ratings**	
100%	20.7 (730)	16.6 (587)
75%	14.4 (509)	11.6 (410)
50%	9.5 (336)	7.3 (259)
25%	6.2 (218)	5.1 (179)
LP Gas, m^3/hr. (cfh) at % load	**Standby Ratings**	
100%	6.2 (219)	5.7 (203)
75%	5.2 (183)	4.4 (155)
50%	3.8 (134)	3.2 (112)
25%	2.7 (96)	2.2 (79)

‡ Nominal fuel rating: Natural gas, 37 MJ/m^3 (1000 Btu/ft^3)
LP vapor, 93 MJ/m^3 (2500 Btu/ft^3)

LP vapor conversion factors:
8.58 ft^3 = 1 lb.
0.535 m^3 = 1 kg.
36.39 ft^3 = 1 gal.

Controllers

APM402 Controller
Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus® protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-161 for additional controller features and accessories.

G4-278 (KG40) 6/20d

Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Rare- Earth Permanent Magnet
Leads: quantity, type	12, Reconnectable
4P5X, 4P7BX	4, 110- 120/220- 240 V
4Q5X, 4Q7BX	Solid State, Volts/Hz
Voltage regulator	NEMA MG1
Insulation:	Class H
Material	130° C, Standby
Temperature rise	1, Sealed
Bearing: quantity, type	Flexible Disc
Coupling	Full
Amortisseur windings	Controller Dependent
Voltage regulation, no-load to full-load	100% of Rating
One-step load acceptance	100% of Rated Standby Current
Unbalanced load capability	(35% dip for voltages below)
Peak motor starting kVA:	136 (60 Hz), 98 (50 Hz)
480 V, 400 V 4P5X (12 lead)	180 (60 Hz), 136 (50 Hz)
480 V, 400 V 4P7BX (12 lead)	93 (60 Hz), 66 (50 Hz)
240 V, 220 V 4Q5X (4 lead)	113 (60 Hz), 87 (50 Hz)
240 V, 220 V 4Q7BX (4 lead)	

- The unique Fast-Response® X excitation system delivers excellent voltage response and short-circuit capability using a rare-earth, permanent magnet (PM)-excited alternator.
- The brushless, rotating-field alternator has broadrange reconnectability.
- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.

Application Data

Engine

Engine Specifications	60 Hz	50 Hz
Manufacturer	Kohler	
Engine: model, type	KG6208 6.2 L Natural Aspiration V-8	
Cylinder arrangement	6.2 (378)	
Displacement, L (cu. in.)	101.6 x 95.25 (4.00 x 3.75)	
Bore and stroke, mm (in.)	10.5:1	
Compression ratio	1800	1500
Rated rpm	77.0 (103)	64.3 (86)
Max. power at rated rpm, kW (HP)	Cast Aluminum	
Cylinder head material	High Silicon Aluminum	
Piston type and material	Cast Iron	
Crankshaft material	Forged Steel	
Valve (exhaust) material	Electronic	
Governor type	Isochronous	
Frequency regulation, no-load to full-load	±1.0%	
Frequency regulation, steady state	Fixed	
Frequency	Dry	
Air cleaner type, all models		

Exhaust

Exhaust System	60 Hz	50 Hz
Exhaust manifold type	Dry	
Exhaust flow at rated kW, m^3/min. (cfm)	9.9 (350)	8.3 (292)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	664 (1227)	
Maximum allowable back pressure, kPa (in. Hg)	10.2 (3.0)	
Exhaust outlet size at engine hookup, mm (in.)	76 (3.0) OD	

Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Ignition system	Electronic, Distributor	
Battery charging alternator:		
Ground (negative/positive)	Negative	
Volts (DC)	12	
Ampere rating	130	
Starter motor rated voltage (DC)	12	
Battery, recommended cold cranking amps (CCA):		
Qty., rating for - 18°C (0°F)	1, 630	
Battery voltage (DC)	12	

Fuel

Fuel System	60 Hz	50 Hz
Fuel type	Natural Gas, LP Gas, or Dual Fuel	
Fuel supply line inlet	1 NPTF	
Natural gas fuel supply pressure, kPa (in. H_2O)	1.74- 2.74 (7-11)	
LPG vapor withdrawal fuel supply pressure, kPa (in. H_2O)	1.24- 2.74 (5-11)	
Dual fuel engine, LPG vapor withdrawal fuel supply pressure, kPa (in. H_2O)	1.24 (5)	

Fuel Composition Limits *	Nat. Gas	LP Gas
Methane, % by volume	90 min.	—
Ethane, % by volume	4.0 max.	—
Propane, % by volume	1.0 max.	85 min.
Propane, % by volume	0.1 max.	5.0 max.
C_4 and higher, % by volume	0.3 max.	2.5 max.
Sulfur, ppm mass	25 max.	
Lower heating value, MJ/m^3 (Btu/ft^3), min.	33.2 (890)	84.2 (2260)

* Fuels with other compositions may be acceptable. If your fuel is outside the listed specifications, contact your local distributor for further analysis and advice.

Available Options

Approvals and Listings
- ❑ CSA Approval
- ❑ IBC Seismic Certification
- ❑ UL 2200 Listing
- ❑ Hurricane Rated Enclosure

Enclosed Unit
- ❑ Sound Enclosure (with enclosed critical silencer)
- ❑ Weather Enclosure (with enclosed critical silencer)

Open Unit
- ❑ Exhaust Silencer, Critical (kit: PA-352663)
- ❑ Flexible Exhaust Connector, Stainless Steel

Fuel System
- ❑ Dual Fuel NG/LPG (automatic changeover)
- ❑ Flexible Fuel Line (required when the generator set skid is spring mounted)
- ❑ Fuel Filter Kit

Controller
- ❑ Common Fault Relay
- ❑ Two Input/Five Output Module
- ❑ Remote Annunciator Panel
- ❑ Remote Emergency Stop
- ❑ Run Relay
- ❑ Manual Speed Adjust

Cooling System
- ❑ Block Heater, 1500 W, 110- 120 V (Required for ambient temperatures below 10°C (50°F))
- ❑ Radiator Duct Flange

Electrical System
- ❑ Alternator Strip Heater
- ❑ Battery
- ❑ Battery Charger
- ❑ Battery Charger Temperature Compensation
- ❑ Battery Heater
- ❑ Line Circuit Breaker (NEMA1 enclosure)
- ❑ Line Circuit Breaker with Shunt Trip (NEMA1 enclosure)

Miscellaneous
- ❑ Air Cleaner Restrictor Indicator
- ❑ Certified Test Report
- ❑ Engine Fluids (oil and coolant) Added
- ❑ Rated Power Factor Testing
- ❑ Rodent Guards
- ❑ Open Unit Accessory Kit (stone guards, radiator duct flange, flexible exhaust)

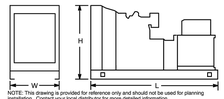
Literature
- ❑ General Maintenance
- ❑ NFPA 110
- ❑ Overhaul
- ❑ Production

Warranty
- ❑ 2-Year Basic Limited Warranty
- ❑ 5-Year Basic Limited Warranty
- ❑ 5-Year Comprehensive Limited Warranty

Other Options
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____

Dimensions and Weights

Overall Size, L x W x H, mm (in.)
Wide Skid 2200 x 1040 x 1170 (86.6 x 40.9 x 46.1)
Narrow Skid 2200 x 864 x 1170 (86.6 x 34.0 x 46.1)
Weight (radiator model), wet, kg (lb.) 807 (1780)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

DISTRIBUTED BY:

G4-278 (KG40) 6/20d

KOHLER.

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KOHLERPower.com

Standard Features

- Alternator Protection
- Battery Rack and Cables
- Electronic, Isochronous Governor
- Gas Fuel System (includes fuel mixer, electronic secondary gas regulator, gas solenoid valve, and flexible fuel line between the engine and the skid-mounted fuel system components)
- Integral Vibration Isolation
- Local Emergency Stop Switch
- Oil Drain Extension
- Operation and Installation Literature

Worksheet – NEC Article 220 Part IV					
Contractor: TBD	E-Mail:				
Phone:	Cell:			Date: 02/11/2022	
Job Name: Interfaith Food Ministry	Location:				
Voltage:	120/208V				
Fuel:	Nat Gas				
Electric Service:	400A			Other:	
Net Square Footage Tenancy "A":	4,424				
GENERAL LOADS	**QTY.**	**Rating**	**Factor**	**Load (VA)**	**Load (KW)**
General Lighting (Net sq. ft. x 3 VA)	4,424	3 VA	100%		2.42
20A Small Appliance Branch Circ (x 1500VA)*	2	1,500VA	100%		3.0
*2 kitchen & 1 laundry circuit required (DO NOT include one 20A circuit per bathroom)					
Fixed Appliances (at full current rating)					
General Use Receptacles	16	.18	100%		2.88
Specialty Motors			100%		
Microwave (not counter top model)			100%		
General Use Lighting	1	2,420	100%		2.42
Dishwasher	1	1,250	100%		1.25
Refrigerator	1	725	100%		.73
Freezer			100%		
Electric Range			100%		
Wall-Mounted Oven			100%		
Counter-Mounter Cooking Surface			100%		
*See Table 220.55 for mult. cooking appliances			100%		
Water Heater			100%		
Clothes Dryer			100%		
Garage Door Opener			100%		
Septic Grinder			100%		
Other Fixed Appliances (list)			100%		
			100%		
Total General Loads				VA	10.28 kW
HEATING / COOLING LOADS					
AC / Cooling Load **Use Lock Out Modules**	2	7,680	100%		0.0 kW
Walk In Freezer	1	5,760	100%		5.76 kW
Walk In Refrigerator	1	16,600	100%		16.6 kW
*Compressor			100%		
*Supplemental Electric Heat			65%		
Electric Space Heating					
*Less than 4 separately controlled units			65%		
*4 or more separately controlled units			40%		
Electric System with Contlin, Nameplate Load			100%		
Enter the Total Heating or Cooling Loads				VA	22.36 kW
CALCULATIONS					
General Loads					10.28 kW
*1st 10 kW of General Loads		VA	100%	kW	10.0 kW
*Remaining General Loads (kW)		VA	40%	kW	.11 kW
Calculated General Load:					10.11 kW
Heating or Cooling Loads:					22.36kW
Total Calculated Load: 32.47kW = 90.19A 3Ø 120/208V					32.47kW

1.6.1 Fuel Lines

Gas lines. Never use fuel piping to ground electrical equipment. The gas supplier is responsible for installation, repair, and alteration to gas piping.

Use Schedule 40 black-iron pipe for gas piping. Copper tubing may be used if the fuel does not contain hydrogen sulfide or other ingredients that react chemically with copper.

Line size. Size piping according to the requirements of the equipment. The type of fuel, the distance it must travel from gas meter/tank to fuel shutoff solenoid, and the amount consumed by the engine must be considered when determining fuel line pipe size.

In addition to actual fuel consumption, consider the following pressure loss factors:

- Pipe length
- Other appliances on the same fuel supply
- Number of fittings

Measure the pipe length from the primary gas pressure regulator to the pipe connection on the generator set fuel inlet. Add 2.4 m (8 ft.) to the measured length for each 90 degree elbow. Use the pipe size indicated in Figure 1-19 for the total length of pipe.

Figure 1-19 is based on gas pressures of 3.4 kPa (0.5 psi, 13.8 in. water column) or less and a pressure drop of 0.12 kPa (0.018 psi, 0.5 in. water column) with a 0.60 specific gravity and with a normal amount of restriction from fittings. The fuel flow has been corrected for specific gravity to determine the pipe sizes shown in the table.

Flexible connections. Rigid mount the piping but protect it from vibration. Use flexible connections spanning a minimum of 152 mm (6 in.) between the stationary piping and the engine fuel inlet connection.

Model	Fuel	Corr. Factor	Maximum Fuel Flow Rate@ Full Load (corrected) m^3/hr	cfh	Nominal Iron Pipe Size, in. Pipe Length, m (ft) 3.0 (10)	6.1 (20)	12.2 (40)	18.3 (60)	24.4 (80)	30.5 (100)	45.7 (150)	61.0 (200)
48RCLB	NG	0.962	25.8	909.9	1 1/4	1 1/4	1 1/2	2	2	2	2	2 1/2
	LPG	0.633	14.1	5498.3	1	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	1 1/2	2
60RCLA	NG	0.962	29.8	1053	1 1/4	1 1/2	2	2	2	2	2 1/2	2 1/2
	LPG	0.633	16.0	564.1	1	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	2	2

Figure 1-19 Fuel Pipe Sizes

General Notes

NOTES:

LICENSED ELECTRICAL CONTRACTOR GRASS VALLEY ELECTRIC CLASSIFICATION C-10 LICENSE NO 392506 STATE OF CALIFORNIA

No.	Revision/Issue	Date

Grass Valley Electric
G. Brady Pryor
Phone: (530) 273-7543
Cell: (530) 913-3384
Fax: (530) 273-3450
bradypryor@sbcglobal.net
Lic. #392506
10973 Rough & Ready Hwy
Grass Valley, California 95945

Project Name and Address:
INTERFAITH FOOD MINISTRY
440 HENDERSON STREET
GRASS VALLEY, CA

Project No.	Sheet
	GENERATOR SPECIFICATION
Date 3-16-2022	
Scale N/A	E2.0

C:\Users\David\Documents\~Clients\Pryor\Pryor Client CAD\Interfaith Food Ministry\Interfaith Food Ministry DBD Ver 2.dwg, 05/10/22 01:28:00pm

KOHLER.

Model: RXT

Automatic Transfer Switch
100- 400 Amps

ISO 9001 KOHLER NATIONALLY REGISTERED

Model RXT Automatic Transfer Switch

The Model RXT automatic transfer switch is designed for use only with Kohler® generator sets equipped with the RDC2 generator set/transfer switch controller. The transfer switch operation is controlled by the RDC2 controller.

Standard Features

- Allows utility voltage display on the RDC2 generator set/transfer switch controller, available exclusively on Kohler® residential and light commercial generator sets
- UL listed
  - UL 1008 listed, file #E58962
  - Models with load centers use UL 67 listed components
- CSA certification, file #LR58301, is available for:
  - Standard ATS without load center (single and three-phase)
  - Service entrance ATS 100, 200, 300, and 400 amp models
- Corrosion-resistant NEMA 3R aluminum enclosure
  - Padlockable
  - Approved for indoor or outdoor installation
  - ANSI 49 gray
- NEMA 1 enclosure available on 100 amp load center models
- Contactor electrically and mechanically interlocked
- Double throw inherently interlocked design
- Contactor manually operable for maintenance purposes
- Silver alloy main contacts
- Transfer switches are 100% equipment rated and can be applied at the rated current without derating (non-service entrance models)
- Service entrance models include disconnect circuit breaker on the utility (normal) source side (80% rated)
- Five-year limited warranty

Standard Interface Board

- Standard interface board connects to the Model RDC2 generator set/transfer switch controller.
- Includes a load control contact that provides a 5 minute time delay for startup of selected loads after transfer to the emergency source. Use for large motor loads.

Combined Interface/ Load Management Board

- Optional combined interface/load management board replaces the standard interface board and connects to the Model RDC2 generator set/transfer switch controller.
- The combined board is available on single-phase standard and service entrance models. (Not available on 3-phase or load center models.)
- The combined board automatically manages up to six residential loads:
  - Up to four customer-supplied power relay modules can be connected for management of non-essential secondary loads.
  - Two HVAC relays are included for control of two independent air conditioner loads.

Available Models

- 100, 200, and 400 amp standard and service entrance models are available.
- 150 and 300 amp service entrance models are also available.
- Combined interface/load management board is available on single-phase standard and service entrance models. (Not available on 3-phase or load center models.)
- 100 amp standard single-phase models are available with or without a 16-space load center. Up to 8 tandem breakers can be used for a total of 24 circuits.
- 100 amp standard single phase model with a 12-space load center and a NEMA 1 enclosure is available as a standalone non-configurable spec (GM85273-SA_).
- See page 7 for more information.

Codes and Standards

The ATS meets or exceeds the requirements of the following specifications:

- Underwriters Laboratories UL 1008, Standard for Automatic Transfer Switches for Use in Emergency Systems, file #E58962
- Underwriters Laboratories UL 508, Standard for Industrial Control Equipment
- CSA certification available, file #LR58301 (not available for 150, 300, or 400 amp service entrance or 100 amp load center models). Must be selected when the transfer switch is ordered.
- NFPA 70, National Electrical Code
- NFPA 110, Emergency and Standby Power Systems
- NEMA Standard ICI0- 1993, AC Automatic Transfer Switches

Specifications

Standard Interface Board	
Controller interface connections A and B	#20 AWG shielded twisted-pair Belden 9402 or 8762 or equivalent
Controller interface connections PWR and COM	#12- 20 AWG (see ATS Installation Manual)
Load control contact rating	10 A @ 250 VAC
Load control connections	#12- 18 AWG

Note: For combined interface/load management board specifications, see page 3.

Environmental Specifications	
Operating temperature	- 20°C to 70°C (- 4°F to 158°F)
Storage temperature	- 40°C to 85°C (- 40°F to 185°F)
Humidity	5 to 95% noncondensing

Contact Ratings	
Engine start	10 A @ 32 VDC SPST normally closed (NC)
Load control	10 A @ 125 VAC SPST normally open (NO)

Auxiliary Position-Indicating Contacts		
Model	**Number of contacts Normal, Emergency**	**Contact Rating**
100- 200A 1 Ph	1, 1 Optional	15 A @ 250VAC
100- 200 A 1 Ph SE	1, 1 Optional	15 A @ 250VAC
300- 400 A 1 Ph SE	2, 2 Standard 1, 1 Optional	10 A @ 480 VAC
400 A 1 Ph and 3Ph/3P	2, 2 Standard 1, 1 Optional	10 A @ 480 VAC
400 A 3Ph/4P	8, 8 Standard	10 A @ 480 VAC

Cable Sizes

AL/CU UL-Listed Solderless Screw-Type Terminals for External Power Connections

Switch Size, Amps	Switch	Ph.	Range of Wire Sizes, Cu/Al: Normal (per phase)	Emergency and Load (per phase)	Neutral	Ground
100	Standard	1	(1) #14 - 1/0 AWG	(1) #14 – 1/0 AWG	(5) #12 - 250 KCMIL (Cu) or (5) #10 - 250 KCMIL (Al)	(9) #6 – #14 AWG or (4) #14 - 1/0 AWG
	12- or 16-space load center (NEMA 1)	1	(1) #14 – 1/0 AWG	Emerg: (1) #14 – 1/0 AWG Load: per customer-supplied circuit breaker	(26) #4 - 14 AWG or (2) #14 - 1/0 AWG or (1) #6 - 2/0 AWG	
	16-space load center (NEMA 3R)	1	(1) #14 – 1/0 AWG		(26) #4 - 14 AWG or (2) #14 - 1/0 AWG or (1) 2/0 AWG	
	Service Entrance	1	(1) #12 – 2/0 AWG	(1) #14 – 1/0 AWG	(5) #12 - 250 KCMIL (Cu) or (5) #10 - 250 KCMIL (Al)	
	3-Phase	3	(1) #14 – 4/0 AWG	(1) #14 – 4/0 AWG	(3) #14 – 1/0 AWG	
150 200	Service Entrance	1	(1) #4 – 300 KCMIL	(1) #6 – 250 KCMIL	(5) #12 - 250 KCMIL (Cu) or (5) #10 - 250 KCMIL (Al)	
200	Standard	1	(1) #6 AWG - 250 KCMIL	(1) #6 – 250 KCMIL	(5) #12 - 250 KCMIL (Cu) or (5) #10 - 250 KCMIL (Al)	
	3-Phase	3	(1) #14 – 4/0 AWG	(1) #14 – 4/0 AWG	(3) #14 - 1/0 AWG	
300 400	Service Entrance	1	(1) #1 - 600 KCMIL or (2) #1 – 250 KCMIL	(2) 1/0 - 250 KCMIL or (1) #4 - 600 KCMIL	(1/2) 1/0 - 250 KCMIL or (6) #4 AWG - 600 KCMIL	(6) #6 – 3/0 AWG
400	Standard	1 3	(1) #4 - 600 KCMIL or (2) 1/0 – 250 KCMIL	(1) #4 - 600 KCMIL or (2) 1/0 – 250 KCMIL	(3) #4 AWG - 600 KCMIL or (6) 1/0 AWG – 250 KCMIL	

Note: Data is subject to change. Refer to the transfer switch dimension drawings and wiring diagrams for planning and installation.

Optional Combined Interface/Load Management Board

The RXT transfer switch is available with either a standard interface board or a combined interface/load management board. The combined board allows load management as described below.

Load Management

- The combined load management board disconnects non-critical loads to prevent generator overload, in compliance with NEC.
- The combined load management board monitors generator current and frequency to determine when to add or shed loads. This monitoring prevents frequency drops that can damage valuable electronics like computers and televisions.
- Load management allows the use of a smaller generator set.

Operation

- Loads are automatically added or shed based on generator capacity.
- The load control system uses dynamic logic to prevent shedding important loads unnecessarily when air conditioning, refrigerator, or water pump motors start (patent pending).
- The load management board and generator communicate to provide smart power management. The time to shed loads decreases as each load is shed to quickly adapt to critical power requirements.
- Load shed power level and frequency setpoints can be adjusted using a personal computer (laptop) and Kohler® SiteTech™ software, which is only available to Kohler-authorized distributors and dealers.

Priority Setting

- Loads are added and shed according to their priority. Load 1 is the top priority, which is added first and shed last. Load 6 is the lowest priority.
- Less critical loads can be turned off automatically when essential appliances are running.
- Load priorities are hard-wired at installation.

Viewing Load Shed Outputs with OnCue® Plus

- Use Kohler's OnCue® Plus Generator Management System (sold separately) to view load status (On or Off) for loads connected to the load shed relays.
- Use OnCue® Plus to remotely monitor when loads are shed or added.
- The load shed outputs can be labeled in OnCue® Plus.

Current Transformer

- The combined load management board option includes a 400 amp current transformer (CT) for load monitoring.
- A larger diameter CT is available for applications that require larger cables.
- A 500 amp CT is available for use with a 60RCL generator.
- See the table below for current transformer specifications and optional kit numbers.

Load Shed Specifications

Connection	Rating	Connection
Pilot Relays*	125VAC, 10 A total (general purpose) 120VAC, 125VA (pilot duty)	#12- 20 AWG
HVAC Relays (qty. 2)	125VAC, 10 A (general purpose) 120VAC, 125VA (pilot duty)	#12- 20 AWG
RBUS Communication and Power Connections to the RDC2 controller	0.5 A @ 12 VDC	Use Belden #9402 or equivalent 20 AWG shielded, twisted-pair communications cable †

* Four (4) pilot relays are provided for customer-supplied normally closed load-switching contactors/relays. The combination of four load relay outputs cannot exceed 10 amps total current draw. Kohler® power relay modules are recommended.

† For long distances, use an equivalent shielded, twisted-pair cable for RBUS connections and individual 12- 20 AWG wires (qty. 2) for power connections.

Current Transformer Specifications

Ratio (Amps:VAC)	Outer Diameter mm (in.)	Inner Diameter mm (in.)	Service Part Number	Sales Kit Part Number	CT Availability
400:3	63.5 (2.5)	28.7 (1.13)	GM83929	N/A	Included with combined board
400:3	111.8 (4.4)	57.2 (2.25)	GM17250	GM17250-KP1-QS	Sold Separately
500:3	171.5 (6.75)	108.0 (4.25)	GM60264	GM17250-KP2-QS	Sold Separately (use with 60RCL)

Withstand and Close-On Ratings (WCR)

Service Entrance Transfer Switch Ratings

The service entrance transfer switch is factory-equipped with a normal source disconnect circuit breaker.

Suitable for the control of motors, electric discharge lamps, tungsten filament lamps and electric heating equipment where the sum of motor full-load ampere ratings and the ampere ratings of other loads do not exceed the ampere rating of the switch and the tungsten load does not exceed 30 percent of switch rating.

Switch Rating, Amps *	WCR, RMS Symmetrical Amps at 240 VAC
100, 150, 200	22,000
300, 400	35,000

* Continuous load current not to exceed 80% of switch rating.

Contactor Ratings with Coordinated Circuit Breakers

Single-phase transfer switches are UL listed at 240 VAC maximum. Three-phase transfer switches are rated at 480 VAC maximum. The following table lists contactor withstand current ratings (WCR) for 100- 400 ampere non-service entrance rated switches with specific manufacturer's circuit breakers per UL and Canadian safety standards. Suitable for the control of motors, electric discharge lamps, tungsten filament lamps and electric heating equipment where the sum of motor full-load ampere ratings and the ampere ratings of other loads do not exceed the ampere rating of the switch and the tungsten load does not exceed 30 percent of switch rating.

The transfer switch is rated for use on a circuit capable of delivering not more than the RMS symmetrical amperes maximum as shown in the tables below, but no greater than the interrupting capacity of the selected breaker.

WCR Ratings with Specific Manufacturer's Molded-Case Circuit Breakers

Switch Rating, Amps	Voltage, max.	Number of Poles/ Phases	WCR, RMS Symmetrical Amps	Manufacturer	Type or Class	Maximum Size, Amps
100	240	2 pole/ 1 phase	10,000	Any Breaker *	Any Breaker (0.025 seconds max.)	—
100	240	3 phase	150,000	Square D	HR	250
			125,000		HL	150
			100,000		BJ, HJ	125
			65,000		BG, HG	125
			42,000		QG, QJ	125
			25,000		HD	150
					BD	125
	480		22,000	GE	THED	150
			65,000		HL, HR	150
			50,000	Square D	BJ	125
			35,000		HG, HJ	150
					BG	125
			18,000		BD, HD	125
150 200	240	3 pole/ 1 phase	10,000	Any Breaker *	Any Breaker (0.025 seconds max.)	—
200	240	3 phase	200,000	Square D	JR	250
			125,000		JL	250
			100,000		JJ	250
			65,000		JG	250
			42,000		QG, QJ	225
			25,000		JD	250
	480		85,000		JL, JR	250
			30,000		JG, JJ	250
			18,000		JD	250

* For higher WCR values, contact the factory for additional specific breaker ratings.

WCR Ratings with Specific Manufacturer's Molded-Case Circuit Breakers

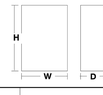
Switch Rating, Amps	Voltage, max.	Number of Poles/ Phases	WCR, RMS Symmetrical Amps	Manufacturer	Type or Class	Maximum Size, Amps
300 400	240	1 phase	65,000	GE	THLC4	350
	480		42,000	Eaton/ Cutler Hammer	HMC	800
				GE	THKM3F	1200
	240	3 pole/ 3 phase	65,000	GE	THLC4	350
	480		42,000	Eaton/ Cutler Hammer	HMC	800
				GE	THKM3F	1200
	240	4 pole/ 3 phase	65,000	GE	THQMV	225
					SGL1, SGL4, SGL6, SGP1, SGP4, SGP6	600
				Eaton/ Cutler Hammer	LDC, CLDC, HLD, CHLD	600
				Square D	LJ, LL, LR	600
					QG, QJ	250
				Siemens / ITE	HLD6, HLXD6	600
	480		50,000	Eaton/ Cutler Hammer	JGH, JGC, NHH	250
					HKD, CHKD, KDC, HKDB, CHKDB, LHH	400
					CHLD, LDC, CLDC, LGH*, LGC*, LGU*, LGX*	600
					MDL, CMDL, HMDL, CHMDL, NGS, NGH, NGC, MDLB, CMDLB, HMDLB, CHMDLB	800
					NGU	1600
				GE	TBC4	400
					TBC6, TJL4V, TJL1S-6S, SGL1, SGL4, SGL6, SGP1, SGP4, SGP6, FGN, FGH, FGL, FGP	600
					TBC8, TKL4V, TKH6S- 12S, TKL8S- 12S, SKH8, SKL8, SKP8, TB8	800
				Square D	HFD6, HFXD6, HFG, LFG	250
				Siemens / ITE	HJD6, HJXD6, SHJD6, HHJD6, HHJXD6, GJD6, SCJD6, HJG, LLG, LzG	400
					HLD6, HLXD6, SHLD6, HHLD6, HHLXD6, CLD6, SCLD6, HLG	600
					LMD6, LMXD6, HLMD6, HLMXD6, MD8, MXD8, HMD6, HMXD6, SMD6, SHMD6, CMD6, SCMD6, HMG, LMG	800
				Square D	CK400N, CK400NN, CK400H, CK400HH, CJ400L, NSJ400	400
					LC, DJ, DL, LJ, LL, LR, LI, NSJ600	600
					CK600N, CK600NN, CK600H, CK600HH, MJ	800
					CK1000HH	1000
					PK, PJ, PL, MH, MasterPact STR 28D, CK1200HH	1200

* With Digitrip 310+ LS or LSG Inst. Override set to 12X.

Dimensions and Weights

Note: Always use the transfer switch dimension drawing for planning and installation. Weights and dimensions may vary for different configurations. See the Operation/Installation Manual or your local distributor for dimension drawings.

Note: Transfer switch weights and dimensions shown in the table do not include packaging. **To estimate the shipping weight, add 3 kg (5 lbs.) or 10% (whichever is larger) to the weight shown.**



Amps	Description	Dimensions, H x W x D, mm (in.) ♀		Weight § kg (lb.)		Dimension Drawing
100	Single phase	623 x 335 x 180	(24.5 x 13.2 x 7.1)	7	(15)	ADV-8688
	With 12-space load center (NEMA 1)	610 x 330 x 154	(24.0 x 13.0 x 6.0)	12	(26)	ADV-9186
	With 16-space load center (NEMA 1)	610 x 330 x 154	(24.0 x 13.0 x 6.0)	12	(26)	ADV-9187
	With 16-space load center	614 x 335 x 180	(24.2 x 13.2 x 7.1)	8	(18)	ADV-9188
	Three phase 3-pole	673 x 462 x 228	(26.5 x 18.2 x 9.0)	15	(33)	ADV-9755
	Three phase 4-pole	673 x 462 x 228	(26.5 x 18.2 x 9.0)	15	(33)	ADV-9755
	Service entrance (ASE)	734 x 416 x 175	(28.9 x 16.4 x 6.9)	10	(22)	ADV-9046
	Service entrance (CSE)	754 x 416 x 175	(29.7 x 16.4 x 6.9)	14	(30)	ADV-8797
150	Service entrance (ASE)	734 x 416 x 175	(28.9 x 16.4 x 6.9)	12	(26)	ADV-9046
200	Service entrance (ASE)	734 x 416 x 175	(28.9 x 16.4 x 6.9)	12	(26)	ADV-9046
	Service entrance (CSE)	754 x 416 x 175	(29.7 x 16.4 x 6.9)	16	(36)	ADV-8798
	Single phase	623 x 335 x 180	(24.5 x 13.2 x 7.1)	7	(15)	ADV-9688
	Three phase	673 x 462 x 228	(26.5 x 18.2 x 9.0)	15	(33)	ADV-9755
300	Service entrance	1452 x 629 x 329	(57.2 x 24.8 x 12.9)	59	(130)	ADV-9768
400	Single phase	1222 x 610 x 343	(48.1 x 24.0 x 13.5)	45	(100)	ADV-9756
	3-Pole	1222 x 610 x 343	(48.1 x 24.0 x 13.5)	47	(104)	ADV-9756
	4-Pole	1702x 610 x 514	(67.0 x 24.0 x 20.2)	188	(414)	ADV-9757
	Service entrance	1452 x 629 x 329	(57.2 x 24.8 x 12.9)	59	(130)	ADV-9768

♀ Depth does not include the padlock hasp on the front of the enclosure.
§ Transfer switch weights are approximate and do not include packaging.

Note: Enclosures are type NEMA 3R except as noted.

Accessories

❑ **Auxiliary position-indicating contacts**
- Standard on 300- 400 amp models, optional for others
- One closed on normal position and one closed on emergency position
- Form C contacts rated 15 A @ 250 VAC

❑ **Power relay modules**
- 50 amp DPST power relay mounted in a NEMA type 3R enclosure
- Use up to four modules with the combined interface/load management board
- UL/cUL listed
- Dimensions: 172 x 233 x 92 mm (6.8 x 9.2 x 3.6 in.)
- For more information, see specification sheet G6-143

❑ **Status indicator kit for standard interface board**
- LEDs indicate normal and emergency source availability and contactor position
- Mounts on the outside of the RXT enclosure
- View transfer switch status without removing enclosure cover
- An overhang on the enclosure protects the indicator panel and ribbon cable opening
- Dimensions: 92 mm x 42 mm (3.62 in. x 1.65 in.)
- Connects to the standard interface board only
- Not available for 400 amp/4 pole model
- For more information on the status indicator kit, see specification sheet G11-123

❑ **Status indicator kit for combined interface/load management board**
- LEDs indicate normal and emergency source availability and contactor position
- Dual color LEDs for each load indicate load status (powered or shed) and flash during a test
- Load shed test button allows the operator to cycle the load shed relays in order of priority (when generator is in RUN mode)
- Mounts on the outside of the RXT enclosure
- View transfer switch and load status without removing enclosure cover
- An overhang on the enclosure protects the indicator panel and ribbon cable opening
- Dimensions: 183 mm x 42 mm (7.20 in. x 1.65 in.)
- Connects to the combined interface/load management board only
- Not available for 400 amp/4 pole model
- For more information on the status indicator kit, see specification sheet G11-123

❑ **Auxiliary circuit breaker (service entrance models only)**
- Single-pole type QO circuit breaker
- Mounts on a bracket inside the enclosure
- 15 amp and 20 amp circuit breakers are available

Available Models

All Model RXT transfer switches are standard-transition 60 Hz automatic transfer switches. Letters in parentheses refer to the model designation code described on the last page.

Amps	Description (Connections)	Voltages 208 (C)	240 (F)	480 (M)	Poles	Phases	WCR § RMS Symmetrical Amps
100	Standard (A)		●		2 (N)	1	10,000
	Standard, with 16-space load center (B) ¶		●		2 (N)	1	10,000
	Standard, with 12-space load center **		●		2 (N)	1	10,000
	Service entrance (ASE, CSE)		●		2 (N)	1	22,000
	Standard, 3-phase (A)	●	●	●	3 (T) or 4 (V)	3	10,000
150	Service entrance (ASE)		●		2 (N)	1	22,000
200	Standard (A)		●		2 (N)	1	10,000
	Service entrance (ASE, CSE)		●		2 (N)	1	22,000
	Standard, 3-phase (A)	●	●	●	3 (T) or 4 (V)	3	10,000
300	Service entrance (ASE, CSE)		●		2 (N)	1	35,000
400	Standard (A)		●		2 (N)	1	35,000
	Service entrance (ASE, CSE)		●		2 (N)	1	35,000
	Standard, 3-phase (A)	●	●	●	3 (T) or 4 (V)	3	42,000 @ 480V 65,000 @ 240 V

§ Withstand and close-on rating. See pages 3-5 for WCR information and specific breaker ratings.
¶ With 16-space load center and NEMA 1 or NEMA 3R enclosure. Up to 8 tandem breakers can be used, for a maximum of 24 circuits.
** GM85273- SA_ with 12-space load center and NEMA 1 enclosure.

Note: Combined interface board is available on single-phase standard or service entrance models. (Not available on 3-phase or load center models.)

KOHLER.

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KOHLERPower.com

Model Designation

Record the transfer switch model designation in the boxes. The transfer switch model designation defines ratings and characteristics as explained below.

Sample Model Designation: RXT-JFNC-0200A

Model
RXT: Kohler Automatic Transfer Switch

Controls
J: Interface for RDC2 Controller (standard or combined interface/load management)

Voltage/Frequency
C: 208 Volts/60 Hz (3-phase only)
F: 240 Volts/60 Hz
M: 480 Volts/60 Hz (3-phase only)

Number of Poles/Wires
N: 2-pole, 3-wire, solid neutral (120/240 V only)
T: 3-pole, 4-wire, solid neutral
V: 4-pole, 4-wire, switched neutral

Enclosure
A: NEMA 1 *
C: NEMA 3R

* NEMA 1 enclosure is available on 100 amp load center models only.

Current Rating
0100: 100 amps
0150: 150 amps
0200: 200 amps
0300: 300 amps
0400: 400 amps

Connections
A: No load center
B: With load center (100 amp single-phase only)
ASE: Service entrance rated
CSE: Service entrance rated with CSA certification (not available for 150 amp models)

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Availability is subject to change without notice. Kohler Co. reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever. Contact your local Kohler® generator distributor for availability.

General Notes

NOTES:

No.	Revision/Issue	Date

LICENSED ELECTRICAL CONTRACTOR — GRASS VALLEY ELECTRIC — CLASSIFICATION C-10 — LICENSE NO 392506 — STATE OF CALIFORNIA

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Project Name and Address:

INTERFAITH FOOD MINISTRY
440 HENDERSON STREET
GRASS VALLEY, CA

Project No.	Sheet
Date 3-16-2022	TRANSFER SWITCH SPECIFICATION
Scale N/A	E3.0

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