

# POWER SPECIFICATIONS

## SIGNA SERIES

(REV. DATE 18.JAN.16)

**VOLTAGE**

PRIMARY SOURCE IS REQUIRED FOR ALL INSTALLATIONS.  
RANGE OF LINE VOLTAGES:

NOMINAL VOLTAGE	PHASE	Hertz (Hz)	
380	3 $\phi$	50 $\pm$ 3	60 $\pm$ 3
400	3 $\phi$	50 $\pm$ 3	60 $\pm$ 3
415	3 $\phi$	50 $\pm$ 3	60 $\pm$ 3
<b>480</b>	<b>3<math>\phi</math></b>	<b>60<math>\pm</math>3</b>	

RECOMMENDED POWER SUPPLY: WYE-WITH GROUND OR FLOATING DELTA WITH GROUND

MAXIMUM DAILY VOLTAGE VARIATION MUST FALL WITHIN ONE OF THE RANGES IN TABLE A.

**TABLE A  
REQUIRED  
CURRENT  
PER INPUT  
VOLTAGE  
SETTING**

INPUT VOLTAGE (V) (+7.5%/-10%)	TOTAL CURRENT (A)
380	123
400	117
415	113
<b>480</b>	<b>100</b>

OVERCURRENT PROTECTION SIZED FOR 125% CONTINUOUS CURRENT. (CALCULATIONS BASED UPON NOMINAL VOLTAGE).

**PHASE-BALANCE.**

PHASE-TO-PHASE VOLTAGES MUST BE WITHIN 2 PERCENT OF THE LOWEST PHASE-TO-PHASE VOLTAGE. MAXIMUM ALLOWABLE TRANSIENT VOLTAGE EXCURSIONS ABOVE OR BELOW NOMINAL WAVESHAPES FORM NOT TO EXCEED 200V AT A MAXIMUM DURATION OF 1 CYCLE AND FREQUENCY OF 10 TIMES PER HOUR.

VOLTAGE TRANSIENT OR IMPULSE ON THE INCOMING POWER MUST BE HELD TO A MINIMUM. TRANSIENTS CAUSED BY LIGHTNING, SURGES, LOAD SWITCHING, STATIC ELECTRICITY ETC. CAN CAUSE SCAN ABORTS OR, IN EXTREME INSTANCES, COMPONENT FAILURE IN THE COMPUTER SUBSYSTEM.

**POWER DEMAND**

MAXIMUM POWER DEMAND AVERAGED OVER 5 SECONDS = 77 KVA.

SYSTEM EQUIPMENT	POWER DEMAND
PDU 5 SECOND POWER (IN ISC)	65 kVA
CRYO COMPRESSOR CONTINUOUS POWER	9 kVA

STANDBY (NO SCAN) POWER DEMAND = 17 KVA.

**TABLE B  
MAXIMUM  
POWER  
DEMAND.**

DEMAND	SIGNA SERIES
kVa *	77
POWER FACTOR AT	0.9

\* DEMAND INCLUDES POWER FOR ENTIRE MR SYSTEM. LINE VOLTAGE REGULATION AT MAXIMUM POWER DEMAND MUST BE LESS THAN OR EQUAL TO 2 PERCENT OR 4 PERCENT FROM POWER SOURCE.

**DISTRIBUTION TRANSFORMER**

FOR A SINGLE UNIT INSTALLATION, THE MINIMUM TRANSFORMER SIZE IS 225 KVA. REGULATED TRANSFORMER IS NOT REQUIRED UNLESS VOLTAGE CHANGES EXCEED  $\pm$ 10% OVER A PERIOD OF 1 HOUR OR LONGER.

REFER TO PRE-INSTALLATION MANUAL FOR ADDITIONAL INFORMATION



## FEEDER TABLE

### FEEDER TABLE

- CALCULATIONS BASED UPON NOMINAL VOLTAGE, WIRE SIZE IN AWG.
- RECOMMENDED FEEDER SIZES FROM DIST. TRANS. TO MDP, ALL CALCULATIONS BASED UPON A 20 FT. [6.1m] RUN FROM MDP TO PGR USING 1/0 AWG.
- THE GROUNDING CONDUCTOR ( ) SHALL BE COPPER AND WILL RUN IN THE SAME CONDUIT AS THE FEEDERS FROM EQUIPMENT BACK TO THE ROOM POWER SOURCE GROUNDING POINT.
- IF THE GENERAL ELECTRIC EQUIPMENT IS BEING FED BY A DELTA SECONDARY, IT IS RECOMMENDED THAT THE B PHASE ON THE SECONDARY BE CONNECTED TO GROUND TO PREVENT DAMAGE TO THE SYSTEM.
- NEUTRAL MUST BE TERMINATED PRIOR TO OR INSIDE THE MAIN DISCONNECT PANEL AND NOT BROUGHT INTO THE PGR OR HEC CABINET.
- \* MINIMUM WIRE SIZE FOR CIRCUIT BREAKER, BASED ON RECOMMENDED OVERCURRENT PROTECTION.
- **FOR A FULL SYSTEM UPS REFER TO ELECTRICAL DETAILS FOR UPS FEEDER WIRES.**

RUN LENGTH IN FEET	POWER SUPPLY VOLTAGE							
	342-418 380		360-440 400		374-456 415		432-528 480	
	FEEDER	GROUND	FEEDER	GROUND	FEEDER	GROUND	FEEDER	GROUND
100	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)
150	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)
200	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)
250	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)
300	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)
350	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)
400	4/0	(2)	* 3/0	(4)	* 3/0	(4)	* 3/0	(4)
450	250M	(2)	4/0	(2)	4/0	(2)	* 3/0	(4)

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