

#### RATED SHORT CIRCUIT CURRENT – UPS

WITH INPUT FUSES	WITH INPUT BREAKERS
30kA SYMMETRICAL	30kA SYMMETRICAL

#### NOTES:

1. INSTALLATION MUST COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL ELECTRICAL REGULATIONS.
2. PLEASE REFER TO PRODUCT DOCUMENTATION FOR DETAILS PRIOR TO INSTALLATION AND SITE PREPARATION WORK.
3. DRAWING DEPICTS POWER SYSTEM CONNECTIONS AND IS NOT REPRESENTATIVE OF PHYSICAL LAYOUT, PLEASE REFER TO MECHANICAL DRAWINGS FOR PHYSICAL LAYOUT.
- △ 4. 3x400/230V TN-S (PROVIDED BY OTHERS). FOR OTHER (TN-C, TN-C-S, TT, IT) EARTHING PRINCIPLES, PLEASE CONTACT Schneider Electric. RECOMMENDED UPSTREAM PROTECTION IS A MINIMUM RATING TO SUPPORT MAXIMUM CURRENT, WITHOUT SELECTIVITY. IF SELECTIVITY IS REQUIRED, PLEASE CONTACT Schneider Electric.
5. ALL AC POWER CABLING IS L1, L2, L3, N, PE.
6. DUAL MAINS CONFIGURATION IS DEFAULT. FOR SINGLE MAINS INPUT PLEASE REFER SHEET-2.
7. DC CABLING TO BE 600V RATED, 2 WIRE + PE, EACH CIRCUIT TO BE RUN IN SEPARATE CONDUITS, POSITIVE, NEGATIVE + PE.
8. UPS INPUT AND OUTPUT CABLES SHOULD BE SEGREGATED.
9. POWER WIRING AND CONTROL WIRING SHOULD BE SEGREGATED.
- △ 10. FOR SYSTEM INPUT OVER CURRENT PROTECTION REFER TO SHEET-3.
- △ 11. REFER TABLE-1 FOR BATTERY CABINETS SKU NUMBERS FOR VARIOUS UPS RATINGS.
- △ 12. FOR SKU NUMBERS/RATINGS AND SITE PLANNING DATA, REFER TO SHEET-3.
- △ 13. BATTERY RUN TIME IS THEORETICAL AND CALCULATED FOR 100% LOAD BASED ON DATA PROVIDED BY BATTERY MANUFACTURER ASSUMING OPTIMUM ENVIRONMENT AND LOAD CONDITIONS.
- △ 14. REFER TABLE-2 FOR TRANSFORMER CABINET SKU NUMBERS FOR VARIOUS UPS RATINGS.

#### LEGEND:

----- AC CABLE – PROVIDED BY OTHERS.  
----- DC CABLE – PROVIDED BY OTHERS.

Applicable Regions/ Countries	TABLE-1 Empty Battery Cabinets + Battery Blocks SKU Numbers for 30 min runtime of various UPS Ratings		
	80kVA	100kVA	120kVA
Europe/Middle East/Africa	G55TE-EC80K30+ G55TE-BB80K30	G55TE-EC100K30+ G55TE-BB100K30	G55TE-EC120K30+ G55TE-BB120K30
Australia/Pacific/Japan/Greater China	G55TA-EC80K30+ G55TA-BB80K30	G55TA-EC100K30+ G55TA-BB100K30	G55TA-EC120K30+ G55TA-BB120K30

Applicable regions/ Countries	TABLE-2 Transformer SKU numbers for various ratings of UPS		
	80kVA	100kVA	120kVA
Europe/Middle East/Africa	G55TE-T80SEM	G55TE-T120SEM	G55TE-T120SEM
Australia/Pacific/Japan/Greater China	G55TA-T80SEM	G55TA-T120SEM	G55TA-T120SEM

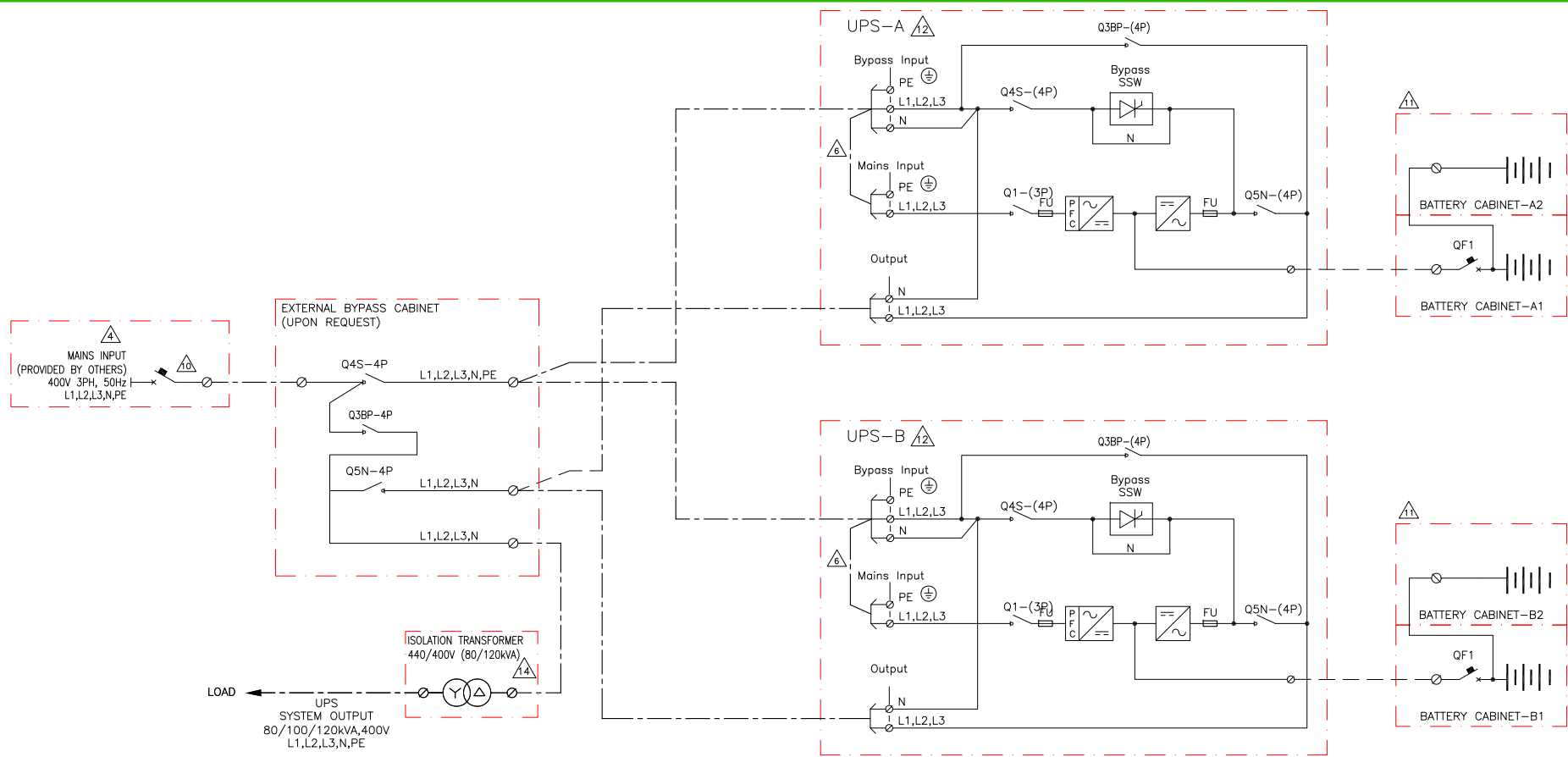
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**Schneider Electric**

TITLE: MGE GALAXY 5500 OFFSHORE/MARINE  
Input: 380/400/415V AC 40-65HZ 3PH DUAL MAINS  
Output: 380/400/415V AC 50/60HZ 3PH 60/80/100/120kVA  
1+1 UPS WITH BATTERY CABINETS AND O/P XFMR  
SYSTEM ONE LINE DIAGRAM  
PROJECT: DRAWINGS SHEET 1 OF 3

DWG NO: G55TUPU80K120HBOTR2-SD  
DRAWN: BALAMURUGAN  
ENGINEER: C PARENTI  
APPROVED: T GOVAERT

REV: 0  
10-JUL-14  
17-JUL-14  
17-JUL-14  
ANGLE PROJECTION  
N/A



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**Input:** 380/400/415V AC 40-65HZ 3PH SINGLE MAINS  
**Output:** 380/400/415V AC 50/60HZ 3PH 60/80/100/120kVA  
1+1 UPS WITH BATTERY CABINETS AND O/P XFMR  
**SYSTEM ONE LINE DIAGRAM**  
**PROJECT:** DRAWINGS **SHEET 2 OF 3**

**DWG NO:** G55TUPU80K120HBOTR2-SD  
**DRAWN:** BALAMURUGAN  
**ENGINEER:** C PARENTI  
**APPROVED:** T GOVAERT  
**REV:** 0  
**10-JUL-14**  
**17-JUL-14**  
**17-JUL-14**  
**ANGLE PROJECTION**  
**N/A**

Galaxy 5500® 80-120kVA Marine & Off Shore Unitary UPS Site Planning Data

Battery voltage when charged at 20 deg C:  
Minimum Number of Cells=180, Ubat=408V (sealed lead acid); Ubat=396V (Vented lead acid)  
Minimum Number of Cells=216, Ubat=490V (sealed lead acid); Ubat=486V (Vented lead acid)  
Input Voltage : 380/400/415V AC, Bypass Voltage: 380-443V AC, Output Voltage : 380/400/415V AC

UPS Rating and System Output kVA / kW	SKU Number	UPS Mains Input <sup>1</sup>		UPS Bypass Input <sup>1</sup>	Nominal Output Current (A)	Nominal Discharge Current (A) / Maximum Discharge Current (A) @100%Load	UPS - Recommended OCPD Ratings <sup>5</sup>				Minimum sizes for input copper cables (<100 m) <sup>19</sup>					UPS Mechanical Data (Excludes Battery Cabinets)			UPS Heat Loss (kW) <sup>15</sup>	Recommended air throughput (m <sup>3</sup> /h)
		Nominal Current (A)	Maximum Current (A)	Nominal Current (A)			UPS Upstream protection			UPS Downstream protection in reference with Upstream protection	Dual utility/ mains system-AC Input (Sq.mm)	Dual utility/ mains system-AC Bypass (Sq.mm)	Single utility/ mains system-AC Input & AC Bypass (Sq.mm)	Load- circuit (Sq.mm)	Battery / terminal connection (<15m) (Sq.mm)	Typical Dimensions H x W x D (mm)	Weight (Kg)	Floor Loading data in Kg/m <sup>2</sup>		
							Upstream CB on dual utility/mains system- AC Input	Upstream CB on dual utility/mains system- AC Bypass	Upstream CB on Single utility/mains system											
80 / 72	G55TUPM80HXS16	115	116	116	116	226 /268	NSX 160F 3P- TM160D	NSX 160F 4P- TM160D	NSX 160F 4P- TM160D	C60N C 25A/ C60N B 50A	50	50	50	50	95	2130x735x950	556	796	4.86	2556
	G55TUPM80HMS17															2250x735x1100	588	727		
100 / 90	G55TUPM100HXS16	143	145	145	145	282 /338	NSX 250F 3P- TM200D	NSX 250F 4P- TM250D	NSX 250F 4P- TM250D	C60N C 32A/ C120N B 63A/ NSX100 TMG 63A	70	70	70	2 x 50	2130x735x950	556	796	6.90		
	G55TUPM100HMS17																		2250x735x1100	
120 / 108	G55TUPM120HXS16	171	173	174	174	347 / 402	NSX 250F 3P- TM200D	NSX 250F 4P- TM250D	NSX 250F 4P- TM250D	C60N C 32A/ C120N B 63A/ NSX100 TMG 63A	70	70	70	2 x 70	2130x735x950	556	796	8.41		
	G55TUPM120HMS17																		2250x735x1100	

Notes

- Rated currents with battery float charging.
- Input and bypass cables must be run in separate conduits from output cables. Not more than three conductors in raceway assumed; ambient temperature of 30°C (86°F) assumed.
- If initial load is less than UPS' rated output, it is recommended that AC input, battery, and AC output wiring and over current protection be sized to UPS' full load rating to accommodate possible future expansion.
- DC cables should be sized for a total maximum of less than 1% of CB rating.
- OCPD = Over current Protection Device. Recommended represents 125% of nominal full load current (continuous).
- Minimum-sized grounding conductors are recommended. Parity-sized ground conductors are recommended. Neutral conductors to be sized for full capacity.
- Wiring requirements:  
AC Input/Output: 3Ø, 3 or 4 wire + ground, depending on UPS configuration. See Installation Manual and submittal drawings for specific instructions. DC Input: 2 wire (positive and negative) + ground
- All wiring to be in accordance with all applicable national and/or local electrical codes.
- Control wiring and power wiring must be run in separate conduit.
- Backup emergency generator must be properly sized for UPS application and equipped with an isochronous governor for frequency regulation, and a UPS-compatible voltage regulator for voltage stability.
- If site configuration requires an external maintenance bypass, phase parity between UPS input and UPS bypass must be ensured. Consult applications engineer.
- The terminals have minimum size requirements for cables.
- Input : THDI < 6% at full load, <8% at 25-75% load.
- Output : THDU ≤1% Phase to Phase, ≤1.5% Phase to Neutral for Linear Loads.  
≤2% Phase to Phase, ≤3.5% Phase to Neutral for Non Linear Loads.
- Heat losses refers to maximum loading and fully charged batteries
- Applicable for Off Shore application.
- Applicable for Marine application.
- ECO mode is available with Unitary configuration.
- Cables sizes are determined for copper conductors (for aluminium conductors, increase the size by 30%). Size calculations also take into account a voltage of 400V and grouping of four cables.  
Connections are made to pre-drilled terminals. Hole diameter: 6.5mm (8.5mm for 120kVA).  
PE cables (Protective Earth Cables) connect to the earthing terminal. Hole diameter: 6.5mm (8.5mm for 120kVA)

EFFICIENCY FOR SINGLE SYSTEM IN DOBULE CONVERSION MODE

UPS RATING IN kVA	25% LOAD	50% LOAD	75% LOAD	100% LOAD
80	90.22	92.14	93.33	93.41
100	90.25	93.33	93.76	93.56
120	91.24	93.41	93.79	93.07

EFFICIENCY FOR SINGLE SYSTEM IN ECO MODE

UPS RATING IN kVA	25% LOAD	50% LOAD	75% LOAD	100% LOAD
80	97.19	98.21	98.52	98.64
100	97.54	98.48	98.67	98.81
120	97.88	98.58	98.77	98.33

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Output: 380/400/415V AC 50/60HZ 3PH 60/80/100/120kVA  
1+1 UPS WITH BATTERY CABINETS AND O/P XFMR  
SITE PLANNING DATA  
PROJECT: DRAWINGS SHEET 3 OF 3

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DRAWN: BALAMURUGAN  
ENGINEER: C PARENTI  
APPROVED: T GOVAERT

REV: 0  
ANGLE  
PROJECTION  
N/A