

Sungrow 100kW Solar + Battery System

Bill of Materials

BOM#	Item	Qty	UoM	Part #
1	Solar PV Modules	160	each	620W Monocrystalline
	620W Monocrystalline Solar Panel			JA Solar JAM72S30-620/MR
				or Trina Solar TSM-620DE21

| 2 | Inverter | 1 | each | SG100CX-P2 ||| Sungrow 100kW String Inverter ||||| (400V ±10%, 50 Hz ±5%, 3Phase, 4 Wire) ||||

| 3 | Battery Energy Storage System | 1 | set | SBR200 ||| Sungrow 200kWh Battery System ||| PowerTitan ST2236UX ||| Including: Battery Modules, PCS, EMS, ||| or equivalent ||| Fire Suppression, HVAC, Monitoring ||||

SOLAR ARRAY FRAMING

| 4 | Standard Rail 4200mm Length | 480 | each | ER-R-ST-4200 || 5 | Standard Rail 2560mm Length | 80 | each | ER-R-ST-2560 || 6 | Splice Kit for Standard Rail | 450 | each | ER-SP-ST ||| Complete with Nuts, Bolts and Fasteners |||| 7 | End Cap for Standard Rail | 200 | each | EZ-CAP-ST || 8 | Tin Interface Complete | 560 | each | ER-I-05 ||| Supplied with 90mm Wood Screw |||| 9 | EPDM Rubber Pad | 560 | each | EZ-RB-65/45/12 || 10 | End Clamp, Standard | 320 | each | ER-EC-ST || 11 | Inter Clamp, Standard | 1280 | each | ER-IC-ST || 12 | Universal Cable Clip for PV Panels | 400 | each | EZ-CC-PV/4 ||| for holding 4 Cables |||| 13 | DC Isolator Mounting Bracket | 20 | each | EZ-IB-SR240/100 |

SOLAR ARRAY FRAME EARTHING

| 14 | Bonding Jumper for Frame Expansion Joints | 450 | each | WEEB-BNDJMP6.7 ||| Tin Plated Braided Copper with Stainless ||| UPC: 7818105373677 ||| Steel WEEB Type Serrated Washer |||| 15 | PV-ezRack Grounding Lug (standard) | 350 | each | EZ-GL-ST || 16 | Stainless Steel Serrated Washer | 350 | each | WEEB-8.0 ||| for Grounding Lug (WEEB Type) ||| UPC: 7818105373055 || 17 | Stainless Steel Serrated Clip | 1600 | each | EZ-GC-ST ||| for Module to Frame Grounding |||| 18 | Copper Cable (16mm²) | 300 | meter | BAAP15AA001AAHN ||| Solar Array Frame Earthing ||| GTIN: 9319215008836 || 19 | Copper Cable (50mm²) | 400 | meter | BAAC19AA001AAHN ||| Solar Array Frame Earthing ||| GTIN: 9319215251171 || 20 | Termination Lugs for 50mm² | 24 | each | DIN 46235 (KU/-V) ||| Copper Earthing Cable |||| 21 | Split Bolt Type Bonding Connectors | 40 | each | SBC25 ||| for mating 50mm² and 16mm² Cable |||| 22 | Earth Bar and Wall Mounting Kit | 2 | each | BBFC-4-24-36-KIT ||| (1000mm × 100mm × 10mm) |||| 23 | Copper Cable (95mm²) | 200 | meter | BAAC22AA001AAHN ||| Solar Array Frame Earthing ||| GTIN: 9319215261767 || 24 | Lugs for 95mm² Earthing Cable | 12 | each | DIN 46235 (KU/-V) |

DC WIRING AND ACCESSORIES

| **25** | 6mm² Single Core Solar Cable | 4000 | meter | SolaFlex BDSR07PV001 | | | Rated for 1000 VDC (Black) | | | | **26** | 6mm² Single Core Solar Cable | 4000 | meter | SolaFlex BDSR07PV001 | | | Rated for 1000 VDC (Red) | | | | **27** | MC4 Inline DC String Fuse Holder | 80 | each | Solar MC4 Fuse Holder | | | (Rated 32A and 1000V) IP67 | | | | **28** | DC Fuse Link 20A & 1000VDC | 80 | each | FEEO FDS-32 series | | **29** | MC4 Connector Male | 400 | each | IP67 FMC4 Series | | | UV Resistant, 32A, 1000VDC | | | | **30** | MC4 Connector Female | 400 | each | IP67 FMC4 Series | | | UV Resistant, 32A, 1000VDC | | | | **31** | Solar Array 4 Pole DC Isolator Switch | 20 | each | BYH-32M or BYT-32M | | | Outdoor IP66, Pre-Wired MC4, 1000V, 32A | | | FEEO FDIS-32 series |

BATTERY DC WIRING

| **32** | 70mm² DC Cable for Battery | 500 | meter | LSZH DC Cable | | | Low Smoke Zero Halogen | | | IEC 60092-376 | | **33** | 120mm² DC Cable for Battery | 200 | meter | LSZH DC Cable | | | Low Smoke Zero Halogen | | | IEC 60092-376 | | **34** | Battery DC Fuse 400A | 4 | each | MEGA Fuse 400A | | **35** | Battery DC Isolator 1000V 630A | 2 | each | Sungrow Battery Isolator |

AC GROUNDING AND ACCESSORIES

| **36** | AC Earthing Cable (35mm² Copper) | 150 | meter | BAAX03AA001AAHT | | | for Inverter and Battery System | | | | **37** | Lugs for AC Earthing Cable (35mm²) | 12 | each | DIN 46235 (KU/-V) | | **38** | AC Earthing Cable (120mm²) | 200 | meter | BAAX07AA001AAHT | | | for Main Distribution | | | | **39** | Lugs for AC Earthing Cable (120mm²) | 16 | each | DIN 46235 (KU/-V) | | **40** | Earth Bar and Wall Mounting Kit | 2 | each | BBFC-4-24-36-KIT | | | (1500mm × 100mm × 10mm) | | | | **41** | Grounding Rods (1500mm × 25mm) | 6 | each | ERC 315 | | | Solid Copper with Driving Accessories | | | ERCS 25, ERCD 25 | | **42** | U-Bolt Clamp Double Plate Type | 12 | each | ERU 770 |

AC POWER CONDUCTORS

| **43** | 95mm² Single Core Copper Cable | 300 | meter | BDSX05AA001OMNA | | | for Inverter AC Output | | | GTIN: 9319215302804 | | **44** | Lugs for 95mm² Single Core Cable | 24 | each | DIN 46235 (KU/-V) | | **45** | 300mm² Single Core Copper Cable | 250 | meter | BDSE90AA001OMNA | | | Main AC Distribution | | | GTIN: 9319215302842 | | **46** | Lugs for 300mm² Single Core Cable | 20 | each | DIN 46235 (KU/-V) |

AC EQUIPMENT

| **47** | AC Combiner & Switchboard | 1 | each | Custom Assembly | | | 415V, 3 Phase, 4 Wire with Neutral | | | IP65 Rated | | | Including: 125A MCCB, 400A MCCB, | | | | SPD, Three Phase AC Meter, CTs | | | | **48** | MCCB 125A, 415V, 3Phase | 1 | each | T4L 250 TMA 125 | | | for Inverter Output | | | ABB 1SDA054229R1 | | **49** | MCCB 400A, 415V, 3Phase | 1 | each | T5L 400 TMA 400 | | | for Combined AC Output | | | ABB 1SDA054448R1 | | **50** | Surge Protection Device | 3 | each | OVR T1-T2 N 100-255 P QS | | | for AC Switchboard | | | ABB 2CTB825101R0500 | | **51** | Three Phase Energy Meter | 1 | each | ZMD405CT440607 | | **52** | Current Transformers | 3 | each | SCT36-400/5A | | **53** | Switch Disconnecter 400A | 1 | each | ABB OKA400P3B | | | | 1SCA142612R1001 |

BATTERY MONITORING & CONTROL

| **54** | Battery Management System | 1 | set | Sungrow iSolarCloud | | | Remote Monitoring Platform | | | |
55 | Energy Management System | 1 | each | Sungrow EMS | | **56** | Communication Gateway | 1 | each |
Sungrow WiNet-S | | **57** | RS485 Communication Cable | 200 | meter | Shielded Twisted Pair |

CONDUIT SYSTEMS

All Parts UV Resistant HDPVC (AS/NZS 2053.2)

| **58** | 50mm Diameter HDPVC Conduit | 600 | meter | Orange UV Resistant | | **59** | 90° Elbow Bends for
50mm Conduit | 80 | each | UV Resistant HDPVC | | **60** | Saddles for 50mm Conduit | 750 | each | Orange
HDPVC | | **61** | Inspection Elbows for 50mm Conduit | 40 | each | Orange HDPVC | | **62** | Solid Coupling
50mm | 120 | each | UV Resistant HDPVC | | **63** | 32mm Diameter HDPVC Conduit | 500 | meter | Orange
UV Resistant | | **64** | 90° Elbow Bends for 32mm Conduit | 100 | each | UV Resistant HDPVC | | **65** | Saddles
for 32mm Conduit | 600 | each | Orange HDPVC | | **66** | Solid Coupling 32mm | 80 | each | UV Resistant
HDPVC | | **67** | 100mm Diameter HDPVC Conduit | 100 | meter | Orange UV Resistant | | for Battery DC
Cables | | | | **68** | 90° Elbow Bends for 100mm Conduit | 12 | each | UV Resistant HDPVC | | **69** | Saddles for
100mm Conduit | 120 | each | Orange HDPVC | | **70** | HDPVC Conduit Adaptor with Lock Ring | 150 | each |
AS/NZS 2053.2 | | **71** | Junction Boxes 4-Way for 32mm | 25 | each | UV Resistant HDPVC | | **72** | Stainless
Steel Cable Ties | 2000 | each | 8mm × 300mm | | | | YC2-1-8300 |

SYSTEM SPECIFICATIONS SUMMARY

- **Solar Array Capacity:** 99.2kW DC (160 × 620W)
- **Inverter Capacity:** 100kW AC
- **Battery Capacity:** 200kWh
- **System Voltage:** 415V AC, 3-Phase
- **DC Voltage Range:** 200V - 1000V
- **Battery Voltage:** 1000V DC nominal
- **Grid Connection:** 3-Phase + Neutral + Earth
- **Protection Rating:** IP65 (outdoor equipment)
- **Compliance:** AS/NZS 4777, AS/NZS 5139, IEC 62619

NOTES:

1. All electrical work must be performed by licensed electricians
2. System design requires engineering approval for grid connection
3. Battery system includes integrated fire suppression and thermal management
4. All components must comply with local electrical codes and standards
5. Commissioning and testing required before system activation

