**APPENDIX 2**

**LOT 2 - TECHNICAL SPECIFICATIONS AND BILL OF QUANTITY**

**Note:**  There are two separate quantities of the same cable item intended for use at two different locations. For logistical efficiency, we prefer to receive the cables in two distinct shipments, rather than having to unreel and separate them upon arrival.

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| --- | --- | --- | --- |
| **ACCESSORIES** | **Specifications** | **Quantity** | **Unit** |
| Cables from PV string to combiner box - Ifalik Power | **10mm2 Cu Photovoltaic (PV) Cable Single Core**  Copper Conductors flexible, 1500Volt DC XLPE or XLPO insulated direct burial use with termite barrier IEC 62930 designed to operate at a normal continuous maximum conductor temperature of 90 °C.  permissible period of use at a maximum conductor temperature of 120 °C is limited to 20 000 h. | 400 | meter |
| Cables from PV string to combiner box - Lemotrek Power | **10mm2 Cu Photovoltaic (PV) Cable Single Core**  Copper Conductors flexible, 1500Volt DC XLPE or XLPO insulated direct burial use with termite barrier IEC 62930 designed to operate at a normal continuous maximum conductor temperature of 90 °C.  permissible period of use at a maximum conductor temperature of 120 °C is limited to 20 000 h. | 300 | meter |
| Combiner box | BHS-2-1 DC Breaker 4P DC SPD Input 2 strings Output 1 string Max Voltage 600V Rated Current of DC Breaker 25A Max Current Output 63A IP65 | 20 | box fully equipped |
| Cables from combiner box to Charge controller - Ifalik Power | **16mm2 Cu Photovoltaic (PV) Cable Single Core**  Copper Conductors flexible, 1500Volt DC XLPE or XLPO insulated direct burial use with termite barrier IEC 62930 designed to operate at a normal continuous maximum conductor temperature of 90 °C.  permissible period of use at a maximum conductor temperature of 120 °C is limited to 20 000 h. | 600 | meter |
| Cables from combiner box to Charge controller - Lemotrek Power | **16mm2 Cu Photovoltaic (PV) Cable Single Core**  Copper Conductors flexible, 1500Volt DC XLPE or XLPO insulated direct burial use with termite barrier IEC 62930 designed to operate at a normal continuous maximum conductor temperature of 90 °C.  permissible period of use at a maximum conductor temperature of 120 °C is limited to 20 000 h. | 400 | meter |
| Fuses and fuseholders and box after charge controler | **FUSE-SWITCH-DISCONNECTORS SIZE 125 A - compact 2P or 3P** switch functionality with high protection level of fuses - suitable for IEC low voltage systems NH power fuses included - panel mounting | 20 | set |
| Cables from Charge controler to Batteries - Ifalik Power | **35mm2 Cu Single Core Cable 110°C Flexible** Copper conductor, 0.6/1kV X-HF-110 insulated, HFS-110-TP sheathed Low smoke zero halogen insulation and sheath, 110°C continuous IEC 60332-3 Cat.A Low Fire Hazard range PVC-free Made with flame retardant compound Reduces toxic smoke emissions in the event of fire. Meets physical property requirements of 125°C XLPO insulation to UL 1581 Conductor flexibility Class 5 Rated Voltage 0,6/1 kV Maximum operating temperature 110 °C U.V resistance Type of conductor Stranded flexible | 300 | meter |
| Cables from Charge controler to Batteries - Lemotrek | **35mm2 Cu Single Core Cable 110°C Flexible** Copper conductor, 0.6/1kV X-HF-110 insulated, HFS-110-TP sheathed Low smoke zero halogen insulation and sheath, 110°C continuous IEC 60332-3 Cat.A Low Fire Hazard range PVC-free Made with flame retardant compound Reduces toxic smoke emissions in the event of fire. Meets physical property requirements of 125°C XLPO insulation to UL 1581 Conductor flexibility Class 5 Rated Voltage 0,6/1 kV Maximum operating temperature 110 °C U.V resistance Type of conductor Stranded flexible | 200 | meter |
| Fuses and fuseholders and box between batteries and battery inverter | **FUSE-SWITCH-DISCONNECTORS SIZE 250 A - compact 2P or 3P** switch functionality with high protection level of fuses - suitable for IEC low voltage systems NH power fuses included - panel mounting | 15 | set |
| Cables from Batteries to Battery inverter - Ifalik Power | **95mm2 Cu Single Core Cable 110°C Flexible** Copper conductor, 0.6/1kV X-HF-110 insulated, HFS-110-TP sheathed Low smoke zero halogen insulation and sheath, 110°C continuous IEC 60332-3 Cat.A Low Fire Hazard range PVC-free Made with flame retardant compound Reduces toxic smoke emissions in the event of fire. Meets physical property requirements of 125°C XLPO insulation to UL 1581 Conductor flexibility Class 5 Rated Voltage 0,6/1 kV Maximum operating temperature 110 °C U.V resistance Type of conductor Stranded flexible | 400 | meter |
| Cables from Batteries to Battery inverter - Lemotrek Power | **95mm2 Cu Single Core Cable 110°C Flexible** Copper conductor, 0.6/1kV X-HF-110 insulated, HFS-110-TP sheathed Low smoke zero halogen insulation and sheath, 110°C continuous IEC 60332-3 Cat.A Low Fire Hazard range PVC-free Made with flame retardant compound Reduces toxic smoke emissions in the event of fire. Meets physical property requirements of 125°C XLPO insulation to UL 1581 Conductor flexibility Class 5 Rated Voltage 0,6/1 kV Maximum operating temperature 110 °C U.V resistance Type of conductor Stranded flexible | 300 | meter |
| Ground Cables - Ifalik Power | 10mm2 Cu | 300 | meter |
| Ground Cables - Lemotrek Power | 10mm2 Cu | 200 | meter |
| Ground Cables - Ifalik Power | 35mm2 Cu | 300 | meter |
| Ground Cables - Lemotrek Power | 35mm2 Cu | 200 | meter |
| Terminations- Combiner | Ferrules for 10mm2 Wire | 70 | each |
| Combiner to Charger | Ferrules for 16mm2 Wire | 100 | each |
| Tools | Crimping Tool for above Ferrules | 4 | each |
| Tools | Crimping Tool for Ring Lugs (35mm2 wire and 95mm2 wire) | 2 | each |
| Tools | Crimping tool for MC4 connector | 2 | each |
| Terminations- Charger to Battery | Stud Battery Ring Lugs, Copper 35mm2 wire with 5/16 (8mm) hole size | 100 | each |
| Terminations- Battery to Inverter | Stud Battery Ring Lugs, Copper 95mm2 wire with 5/16 (8mm) hole size | 650 | each |
| PV Panels | MC4 Connector Kit, male, female connector & pins | 200 | each |
| Cable management | Flexible Non-Metal Electrical Conduits 1 inch | 400 | feet |
| Mounting cables to wall | Panduit Cable J Hook, Wall Mount, 1.31 In, PK10 | 100 | each |
| Cable management | Black Cable Tie, 8 in L, Plenum Rated, UV Stabilized, 40 lb Strength | 2000 | each |
| DC Cable management | Heat Shrink Tubing for 10mm2 Wire - Color Red | 3 | meters |
| DC Cable management | Heat Shrink Tubing for 16mm2 Wire - Color Red | 3 | meters |
| DC Cable management | Heat Shrink Tubing for 35mm2 Wire - Color Red | 3 | meters |
| DC Cable management | Heat Shrink Tubing for 95mm2 Wire - Color Red | 3 | meters |
| DC Cable management | Heat Shrink Tubing for 2AWG Wire - Color White | 5 | meters |
| DC Cable management | Heat Shrink Tubing for 2AWG Wire - Color Red | 5 | meters |
| DC Cable management | Heat Shrink Tubing for 2AWG Wire - Color Blue | 5 | meters |
| DC Cable management | Heat Shrink Tubing for 4AWG Wire - Color White | 5 | meters |
| DC Cable management | Heat Shrink Tubing for 4AWG Wire - Color Red | 5 | meters |
| DC Cable management | Heat Shrink Tubing for 4AWG Wire - Color Blue | 5 | meters |
| DC Cable management | Heat Shrink Tubing for 4/0 Wire - Color White | 5 | meters |
| DC Cable management | Heat Shrink Tubing for 4/0 Wire - Color Red | 5 | meters |
| DC Cable management | Heat Shrink Tubing for 4/0 Wire - Color Blue | 5 | meters |

