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**ROOFTOP LOCATION INVERTER LOCATION** MAIN SWITCHBOARD LOCATION 2 x 1C PV1-F 2.5mm<sup>2</sup> SOLAR CABLE MAX LENGTH 30m 2 x 1C PV1-F 4 mm<sup>2</sup> 2C+E 2.5mm<sup>2</sup> SOLAR CABLE Cu/PVC/PVC <1m (V-90) (SEE NOTE 3) (SEE NOTE 3) MAX LENGTH 20m (SEE NOTES 5 & 6) Connect to Phase 1 1 NO. ROOFTOP 1 NO. GROUND LEVEL WINAICO WST-310M6 DC ISOLATORS DC ISOLATORS 482.0 VDC 13A 482.0 VDC 13A 1 STRING OF 11 PANELS MAIN SWITCHBOARD Voc 442.8 V STRING Isc 10.06 A (SEE NOTE 1) (SEE NOTE 2) (SEE NOTE 2) RADIO COMMS (SEE NOTE 10) INV1 EXPORT LIMITING SYSTEM REVENUE METERING CTs DELTA H5A Flex **SWITCH** 25A 1P CT's supplied with P3E 5 kVA INVERTER AC ISOLATOR (SEE NOTE 4) 25A 2 NO. ROOFTOP DC ISOLATORS 2 NO. GROUND LEVEL DC ISOLATORS MAINS 1P MCB PROTECTION ~~~ WINAICO WST-310M6 438.0 VDC 438.0 VDC (SEE NOTE 10 1 STRING OF 10 PANELS Voc 402.5 V STRING Isc 10.06 A (SEE NOTE 1) (SEE NOTE 2) (SEE NOTE 2) (SEE NOTE 9) TO EXISTING LOADS kWh  $\leftarrow$ DNSP (SEE NOTE 9) REVENUE METER WINAICO WST-310M6 1 STRING OF 10 PANELS UPGRADE TO **BI-DIRECTIONAL** Voc 402.5 V STRING Isc 10.06 A (SEE NOTE 1) TYPE PATCH CABLE Shorting link EXISTING to be provided RADIO COMMS (SEE NOTE 10) LOADS between these 2 SIMILAR INV2 DELTA H5A Flex 5 kVA INVERTER AC ISOLATOR (SEE NOTE 4) 25A 1P MCB MAINS PROTECTION 1 NO. ROOFTOP 1 NO. GROUND LEVEL WINAICO WST-310M6 1 STRING OF 11 PANELS DC ISOLATORS DC ISOLATORS 482.0 VDC 482.0 VDC  $\bot$ Installer to enable phase Voc 442.8 V STRING Isc 10.06 A (SEE NOTE 1) interlock function such (SEE NOTE 2) (SEE NOTE 2) (SEE NOTE 9) that if one inverter is in a fault condition the other inverter will disconnect. Connect to Phase 2 BOND EARTH TO PV ARRAY FRAMING (SEE NOTE 7)



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PV Electrical Schematic 2xH5A-Flex-13 kWp WINAICO 310Wp

DRAWING NUMBER:

WINAICO-2xH5A-13-A1

SHEET 1 of 1

The PV array maximum voltage and Is/c shown have been calculated based on an assumed minimum temperature of -5 degrees and the temperature coefficient on the datasheet. These values are temperature dependant and should be calculate of each individual system.

The voltage ratings of the DC and ground level DC isolators have been calculated based in the conditions mentioned in no and should be calculated for each individual system.

Ensure that DC isolators comply with AS/NZS5033.2014 appendix 58.

DC cabling has been sized based on an installation method of "enclosed touching" and has allowed for a 15m cable run for the roof level DC isolator to the furthest panel. If the actual installation does not meet these requirements, cables should be resized.

switchboard to which they are connected.

The maximum length shown allows for 2's voltage rise between the inverter terminals and the main switchboard, this does no guarantee compliance with all required regulations with regard to voltage rise. The actual location of the point of connection vary depending the area and supply arrangement. It is the responsibility of the installer to verify compliance of each individue.

The installation method of this cable has been assumed to be "enclosed touching". If actual installation method is different, cable should be resized to suit.

cable should be resized to suit.

Bond earthing to army farming and use Weeb washers between panels and framing. Framing should be bonded so that continuity is maintained even with the removal of a PV module.

All work shall be in accordance with AS/NZS3000 2018, AS/NZS3008.1.1 2017, AS/NZS4777.1 2016, AS/NZS4777.2 2015 and AS/NZSS033 2014 RIN ASYMCADUAS AS U14

Inverters to be export limited to ensure that no more than 5KVA can be exported to the grid. Installer to commission DC1 Data Collector + Inverters to ensure that this is the case. DC1 Data Collector can be powered by a 9-24V DC supply or a 5V micro USB cable.

DC1 Data Collector and INV1 +INV2 communicate via radio in order to achieve export control and interlock requirements. If for any reason this radio link is interrupted, INV1 & INV2 will reduce their output to zero in compliance with section AS4777.1 2016 3.4.8.3(c) and the interlock requirement.

REVISION REGISTER: For Approval RM20/06/19

DRWN CHCKD DATE

REV NOTE