

Eclipse series Solar Inverter

Installation Manual



Applicable Models

This manual covers the following MIL-Solar inverter base models:

Eclipse 3000-II	Eclipse 4000-II	Eclipse 4600-II	Eclipse 4950-II	Eclipse 5000-II
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Including optional MyPower and Export Limited models.

INTRODUCTION

This manual provides information on how to install and commission the Eclipse series of solar inverters. General User and operating information is covered in the dedicated User manual.

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Updates to this manual

MIL-Solar reserves the right to revise this document and to make changes to the content from time to time without obligation to give prior notification of any such changes.
Please check with your Installation Company or the MIL-Systems Solar website for the latest information.







ABOUT THIS MANUAL

Definitions

Inverter	For the purposes of this manual, <i>Inverter</i> specifically means a Grid connected Solar Inverter. The Inverter is a device used to convert DC power from photo voltaic solar cells to AC power for injection into a power grid.
Mains or Grid	<p>The public mains network of electricity lines to which all categories of consumers are connected and as operated by a supply or distribution company.</p> <p>When Solar Inverters are installed on a domestic or commercial site, they are connected to this mains grid for the purpose of supplying electrical energy back into the grid.</p>

Symbols

Special symbols used throughout this manual.

	NOTICE Attention - notes and helpful hints on improving performance.
	CAUTION Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury and/or damage or failure of the Inverter.
	DANGER Indicates a hazardous situation which, if not avoided, could result in death or serious injury or potential fire risk.
	HOT SURFACES The top plate and upper surfaces of the Inverter can become hot when operating at full power on days of high ambient temperature.
	ELECTRICAL HAZARD Do not attempt to open or access internal Inverter components. DO NOT interfere with the electrical wiring or connections to the Inverter.
	CLASS I Regulatory statement. The Inverter is classified as protective class I.

Inverter specifications

Detailed technical information and specifications for the Eclipse inverter models are detailed in the datasheet: "ECLIPSE 3000 / 3600 / 4200 / 5000 Solar Inverter specification sheet"
Refer to Eclipse distributor or the web site to download a copy.

INVERTER RATINGS

General

Refer Eclipse Inverter specification datasheet for full details.

Topology	Transformerless. Non galvanically isolated.
Protective Class	Class I
Operating Temperature range	-25°C to 50°C
Maximum humidity	100% non condensing
Altitude (maximum operating)	2000 m
Environmental category	Outdoor. To be sheltered from direct rain.
Pollution Degree	PD3
Degree of Protection	IP44
Weight	23 kg

DC Inputs

Solar photovoltaic inputs only.

The PV inputs are considered Overvoltage category II.

	PV 'A'	PV 'B'
$V_{\max \text{ PV}}$	750 V d.c.	750 V d.c.
V_{MPPT}	90-600 V d.c.	90-600 V d.c.
$I_{\text{SC PV}}$	15 A d.c.	15 A d.c.
$I_{\max \text{ continuous}}$	15 A d.c.	15 A d.c.

The DC Solar inputs are internally protected against over current.
No external over-current protective device is required.

AC Output – Grid connection

Single phase a.c. only.

The a.c. mains connection is considered Overvoltage category III.

For nominal specifications and maximum ratings refer Eclipse specification sheet for specific model.

PV arrays



CAUTION

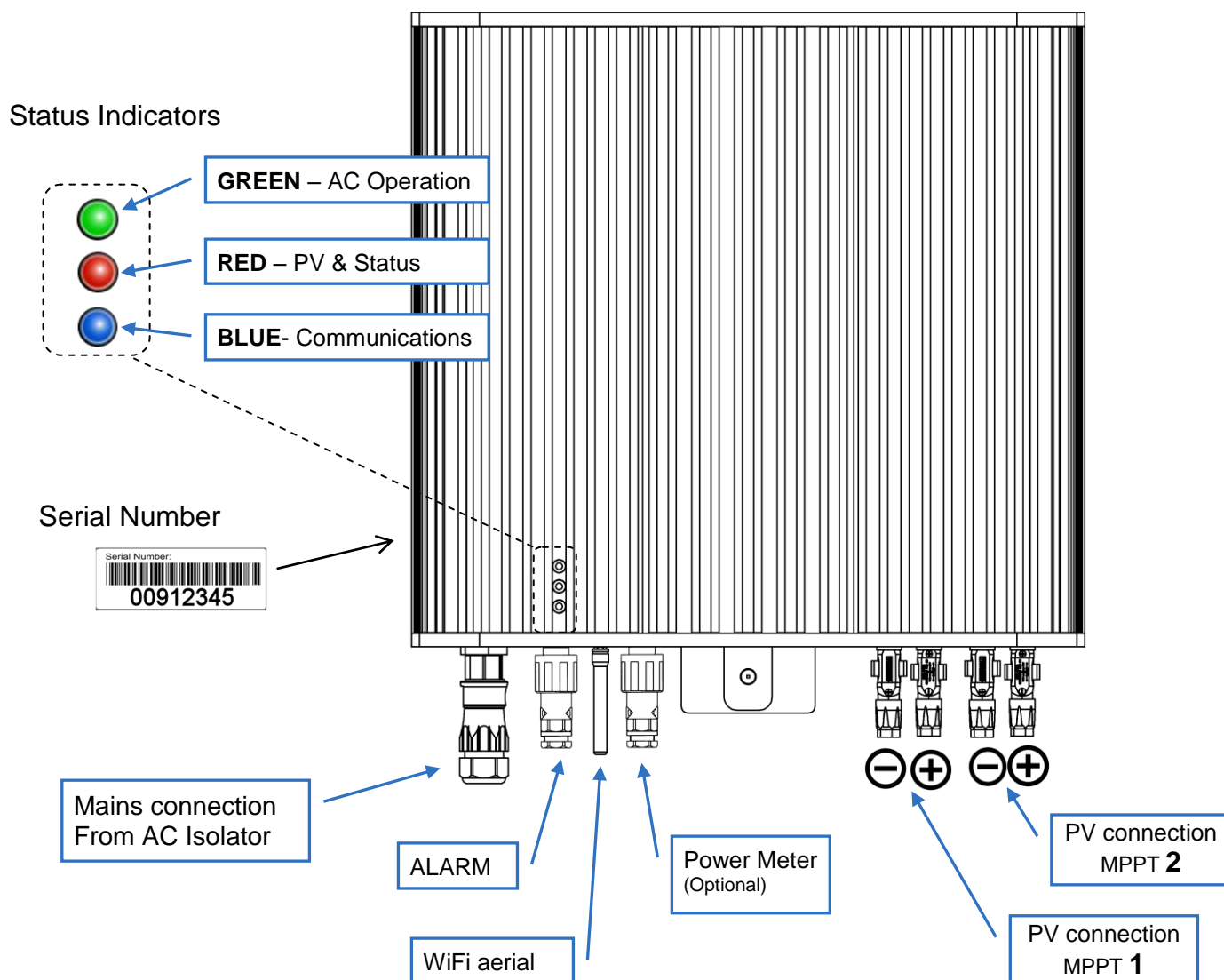
When photovoltaic arrays are exposed to light, a d.c. voltage is supplied to the PV inputs.

PV arrays connected to the Eclipse Inverters should be FLOATING – not grounded

PV inputs are internally protected for over current – no external protective device is required for current limiting or short circuit protection.

OVERVIEW OF ECLIPSE FEATURES

Front view and connections



Status indicators

The Eclipse inverter has a discrete set of three LED indicators for displaying information about the current state of operation. These indicators have different colours associated with their function.

For further details, refer to relevant sections on normal Eclipse operation and communications, and alerts and alarms later in this manual.


Serial Number


Your MIL-Solar Eclipse Inverter has been given a unique serial number at time of manufacture. This serial number is required for registering your equipment for electrical installation and for any warranty or service claims.

The serial number is displayed on a label located on the lower face of the inverter near the mains connection.

INSTALLING THE ECLIPSE INVERTER










Safety considerations



	DANGER	Danger to life and property. Breach of Government legislation. Voiding of Warranty.
All electrical installation and commissioning work undertaken on the inverter, and the related connections to isolators, photovoltaic panels and house wiring systems must only be carried out by suitably qualified and licensed personnel.		

	WARNING Failure to install or operate the Inverter in the manner as specified by these Installation instructions may impair, or render inoperable, the protection systems provided by the equipment.
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Selecting the Mounting Location

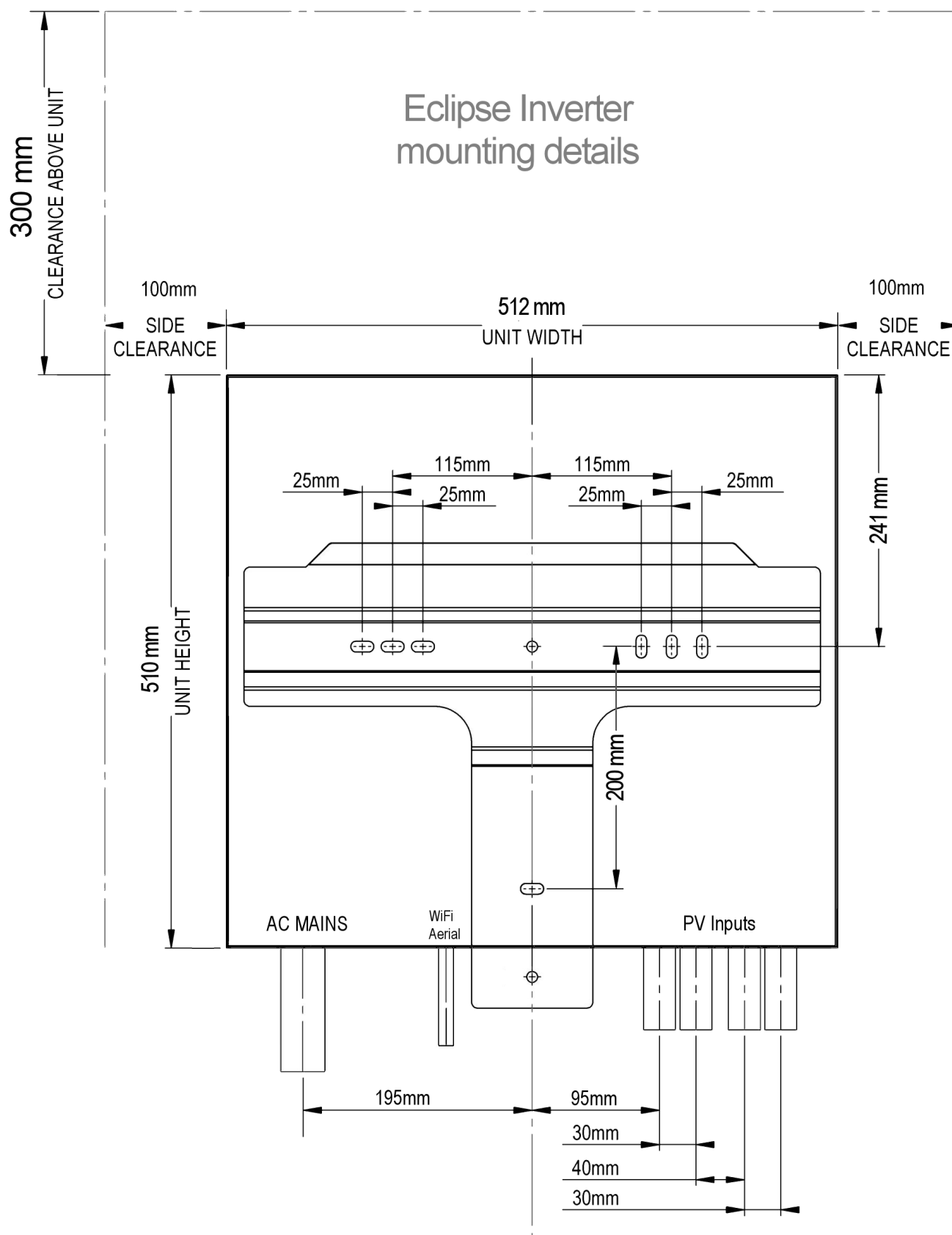
When selecting where to install your Eclipse inverter, you must consider and address all of the following points:

 Air circulation	Solar Inverters generate heat when operating. They must only be installed in areas with adequate, natural, free flowing ventilation.
 Vertical orientation	The Inverter must be mounted in a vertical orientation to ensure proper cooling. The end of the housing with the connection points must always point downwards. Do not mount tilted at an angle to the vertical. Do not mount horizontally.
 Direct Sunlight	Do not expose the inverter to direct sunlight to avoid power reduction due to excessive heating. Optimal operating performance is achieved when the ambient is below 40° C
 Shielded location	The Inverter can be located on a building in an outdoor location but should be mounted in a position that is sheltered from direct weather such as rain and hail.
 Wall mounting requirements	The mounting method and location must be suitable for the inverter's weight and dimensions and it must be mounted on a solid surface. (Refer "Mounting" section on page 9 for mounting instructions)
 Access	Access to the Inverter, and especially any associated isolating switches, must be in accordance with the specific requirements of the relevant AUS/NZ standards. The mounting location must at all times be clear and have safe access without the use of additional aids such as ladders or lifting platforms.
 User Visibility	Mount the Inverter at a height, and in such a position that visibility can not be blocked to allow the operating status LEDs to be seen at all times.
 Noise	The inverter can make noises when in use, which may be perceived as a nuisance in a living or sleeping area. Do not mount the unit on plasterboard walls or similar to avoid audible vibrations.
 Location regards other equipment	The minimum horizontal clearance distances to walls and other objects to ensure sufficient air circulation is achieved for heat dissipation is 100 mm . Special consideration must be given where multiple Inverters are installed in the same area. As a minimum, all clearance distances are additive. DO NOT mount Inverters above each other or other heat generating equipment.

	CAUTION – High temperature Parts of the enclosure can become hot in normal operation in high ambients. The upper surface of the enclosure and the enclosure body may become hot to touch.
	CAUTION - Radiation Do not install the Inverter in a location where people may be closer than 20 cm distance for any length of time.

Mounting Location – minimum clearances

When selecting where to install your Eclipse inverter, you must allow for the minimum clearances from the Inverter having determined the appropriate load bearing mounting points.



Wifi access

If the Eclipse inverter's WiFi connection is to be used continually by the customer, then consideration must be given to any metal structures near or around the inverter which can affect the WiFi signal.

Mounting

The Wall Mount must be attached to a flat surface such as timber or masonry or a dedicated pole assembly. The Wall Mount contains eight pre-drilled 8mm holes for attaching it to the wall. Mark and drill at least four mounting holes, using the bracket as a template and attach the Wall Mount securely to the wall.

Weight bearing

The weight for the specific Eclipse inverter model can be found on the specification sheet. The wall structure on which the inverter is to be mounted must adequately support this weight.

A minimum of FOUR M6 fasteners must be used with the mounting plate and securely installed into the supporting structure. Always use correct fasteners for the structure being fixed to.



CAUTION – Wall mounting strength

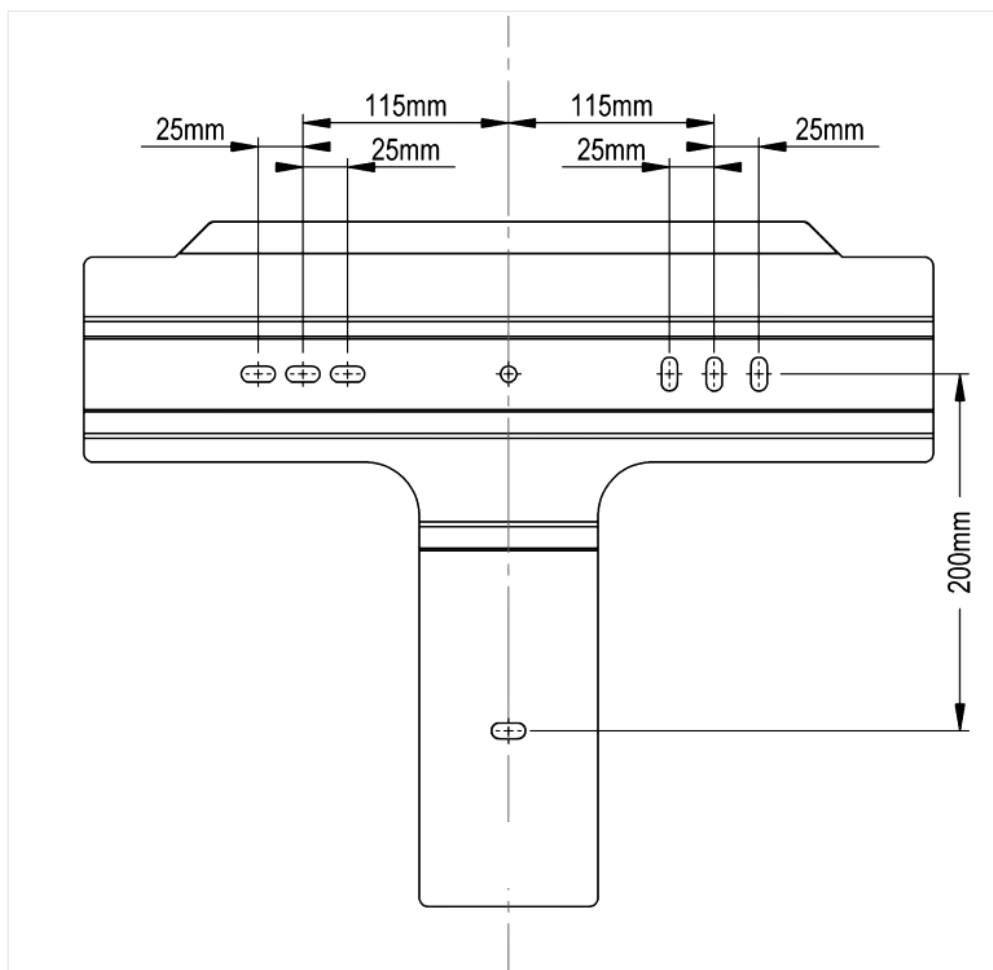
DO NOT mount on plasterboard, thin sheet cladding or sheetmetal unless you can absolutely ensure that all mounting points are fixed into suitably supporting structural members such as timber or metal studs.



CAUTION – Dissimilar metals

DO NOT mount directly onto galvanised steel.

Mounting bracket template



WARANTY

*If the inverter is incorrectly installed it will invalidate the warranty.
Please see the warranty terms and conditions on our website.*

Install Inverter on wall bracket



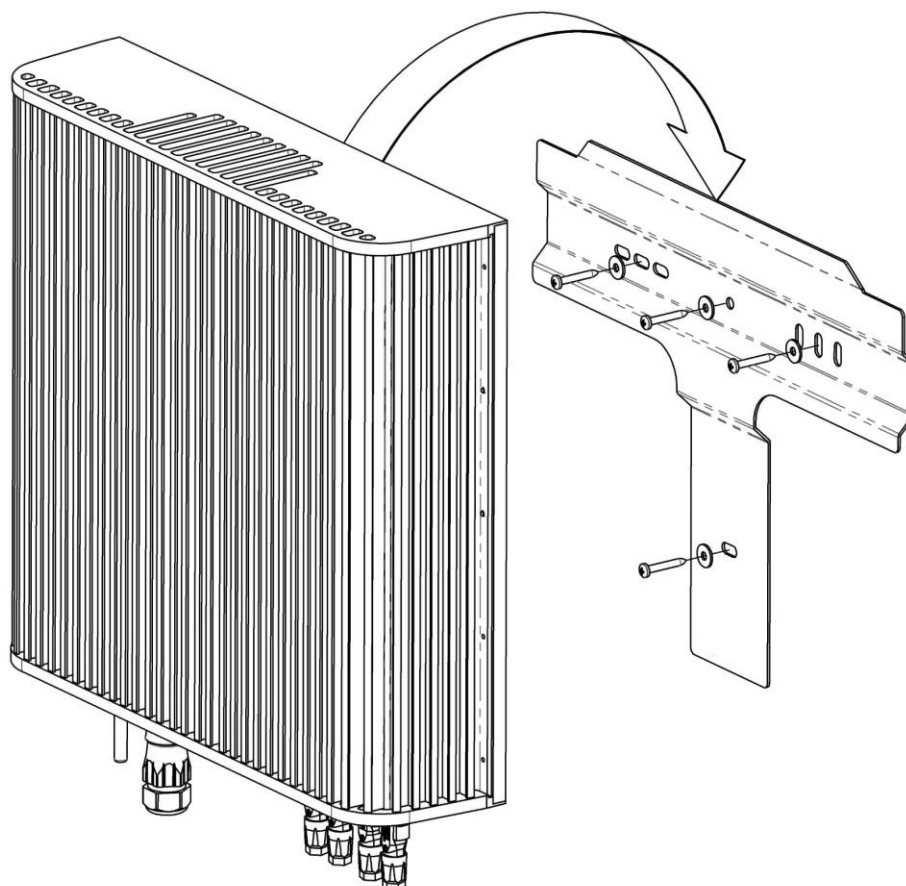
CAUTION – Manual Handling

The Inverter weighs over 23 kg

Care must be taken when lifting and placing the Inverter on wall bracket.

Lift and place the top of the Inverter over the wall bracket and lower it until the Inverter weight is borne by the mounting bracket.

Slide slightly from side to side to ensure that it has dropped into its fully seated position.



When correctly in place and seated on the wall bracket, the bottom end of the Inverter should swing back over the locking tab.



Secure the Inverter to the bracket

Before undertaking any wiring or connections, the Inverter must be secured to the mounting bracket using the M5 fastener provided.

WIRING



ELECTRICAL SAFETY STANDARDS - QUALIFIED PERSONAL ONLY

All wiring must be in strict accordance with all local electrical and safety regulations, and in full compliance with all applicable standards as required by AS/NZS3000. All wiring and electrical works must be carried out by suitably qualified and licensed electricians.



CAUTION

Using undersized wiring can result in a serious safety and fire risk to equipment and property.

Mains connection

Recommended AC circuit breaker sizes

2.5kW	3.0kW	3.8kW	4.2kW	5.0kW
16A	20A	20A	32A	32A

The breaker must be rated for bidirectional power flow.

Sizing of all AC wiring for the Inverter must comply with AS/NZS electrical standards in accordance with the AC breaker and Isolator employed.




Wire size is critical as undersized wiring can lead to significant power losses and a reduction in system efficiency.

AC Isolator

The Inverter connection made to the AC energy source must comply with Section 4 of AS/NZS 4777.1. The AC wiring scheme to the inverter must include an isolating device in compliance with this standard and be capable of safely disconnecting under conditions of the maximum ratings as specified above.

Mains connection to the Inverter

The mains connection to the Eclipse series Inverters is by way of an external connector.

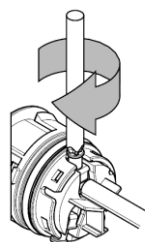
Description	Wieland - RST25i3 <i>gesis</i> ® Female, 3-pole circular connector for permanent installation according to IEC 61535	
Voltage rating	250 V	IP66/68
Current rating	25 A (32 A with 6 mm ² wiring)	
Part No.	Wieland 96.031.4154.3	Cable O.D. 10 mm – 14 mm
Part No.	Wieland 96.031.4554.3	Cable O.D. 13 mm – 18 mm



For models requiring 32 A circuits, 6.0 mm² conductors must be used.

Screw terminal
tightening torque:

0.8 – 1 Nm



Earthing

The overall Solar PV system, including the photovoltaic modules and mountings, must be grounded in accordance with all local regulations and applicable standards.

The grounding connection provided on the Inverter mains connection plug is for grounding of the Inverter unit only. Do not use for grounding other parts of the system.

Ground conductor - Minimum cross section

The ground conductor must be sized in accordance with the installed circuit breaker.

Photovoltaic input



All PV panels and modules used with an Eclipse Inverter must have an IEC 61730 Class A rating as required by IEC 62109.

PV Input - Maximum Ratings

	PV Input 1	PV Input 2
Maximum Input Voltage	Maximum Operating Input Current	
750 V	12 A	12 A



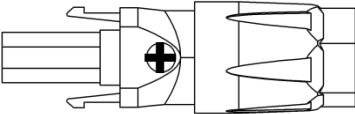
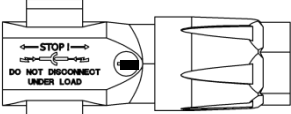
PV Isolator

All Inverter connections made to PV energy sources must comply with Section 4 of AS/NZS 4777.1

All PV array wiring connected to the inverter must include isolating devices in compliance with AS/NZS 5033 capable of safely disconnecting under conditions of the maximum input ratings as specified above.

If two different PV circuits are to be used for the dual, independent Inverter PV inputs, then two appropriately rated Isolators are required or a combined Isolator capable of breaking both circuits independently.

PV array – Cable connectors

	POSITIVE 	NEGATIVE 
Physical		
Manufacturer	Phoenix	Phoenix
Part No.	1774674	1774687
Description	Cable Plug PV-CF-S 2,5-6 (+)	Cable receptacle PV-CM-S 2,5-6 (-)

Terminations of the PV system wiring to the connectors must be carried out in strict accordance with the connector manufacturers' instructions and using the specified tools as applicable.



CAUTION – Do not substitute alternate connectors!

Only use the exact make and model of PV connector as specified.

Alarm Output

Alarm Output specifications

The Alarm output provided by the Eclipse Inverter is a normally open relay contact.

Ratings

Maximum Voltage: **240V a.c. or 30V d.c.**

Maximum Current: **1A – resistive only**

Inverter Alarm Connection

The Eclipse Inverters are supplied with a screw terminal style connector for terminating the Alarm wiring at the Inverter. It comprises of two parts – terminal insert and outer housing.



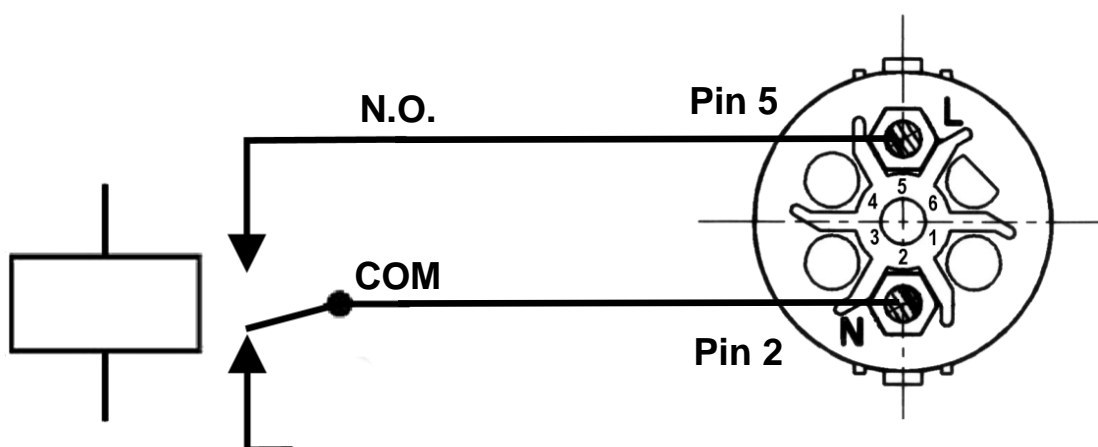
MS Part No. 5884 - CON Eclipse Inverter ALARM output



2 PIN

Note: The Alarm output is the two pin connector..

Inverter Alarm connector wiring.



COMMISSIONING

Pre commissioning checks

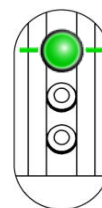
Check the following requirements before commissioning:

- The Inverter is correctly installed, mounted and secured to mounting bracket at bottom
- Correct installation of AC distribution at switchboard
- The AC circuit breaker is connected and operating correctly
- Correct wiring of AC Isolator and connection of the AC cable to the Inverter
- Correct connection of protective earth
- Complete connection of all DC cables (PV strings)
- Correct polarity of all DC PV connections

Power ON and Grid connect

1. Switch ON the mains circuit breaker and the mains Isolator.

Successful power up initialisation is indicated by a slow blinking green LED. (AC ON, No DC input)

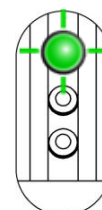


2. Switch ON the DC Isolators for the PV panels.

3. Grid connecting.

When the Inverter determines that there is sufficient PV power input, it will initiate the one minute grid connect count down delay.

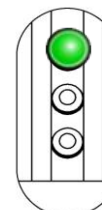
The GREEN LED will flash at a 1 second rate for 60 counts.



4. Grid connected - Generating.

Once the one minute grid connect delay has expired, the Inverter will synchronise with the grid activate it's internal connection relay.

Successful grid connection is indicated by a constant green LED. (Normal operating state)



Exceptions

Refer section "Trouble shooting" on page 18 for assistance in diagnosing any exception events.

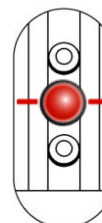
Power OFF - AC

Switch OFF the mains Isolator.

The status LEDs will revert to SLOW flash indicating awaiting for AC Isolator to be turned ON.

GREEN – OFF

RED – SLOW flash



Commissioning – status display

Refer section "Inverter Operation" on page 16 for the corresponding Status messages shown on the Inverter display as accessed by a web browser.

Inverter Settings

Set the Inverter Date/Time and Name

Date – Time

To ensure all data records that are automatically logged by the Inverter are referenced correctly, the Inverter must have the correct Date and Time.

The Date/Time can be verified and/or set by accessing the **[User Setup]** tab under the **Status** menu.

NOW

Can be selected to fill the Date/Time field as per the current values in your device.

Submit

Any changes made to values on this page must be submitted before taking effect in the Inverter.

The screenshot shows the 'User Setup' screen of the MIL-Systems app. At the top, there's a status bar with 'Optus' and '11:50 am'. The app header shows 'MIL-Systems' and a menu icon. Below the header, there's a 'User Setup' section. A blue note box states: 'NOTE: Fields that are not changed explicitly by the user will retain their existing value in the system.' The 'Date:' field is set to '27 Mar 2014' with a dropdown arrow. The 'Time:' field is set to '11:48 am' with a dropdown arrow. Below these is an orange button labeled 'Set Date/Time to NOW'. The 'Inverter Name:' field is an empty text box with a note 'Maximum length: 40 characters.' Below that, 'PVOOutput Logging:' is set to 'Enabled' with a checked checkbox. At the bottom is a blue 'Submit' button. Arrows from the 'NOW' and 'Submit' text boxes point to the 'Set Date/Time to NOW' button and the 'Submit' button respectively.



Inverter settings such as Date/Time can be set in advance prior to installation on site. Settings will be retained for a minimum of 10 days without power.

Inverter Name

The Eclipse Inverter can be given a unique name as determined by the User. This personalised 'naming' can be particularly useful where:

- The User or the Installation Company wishes to regularly access data from the inverter over the internet using a local network connection. Choosing your own name can make it easy to identify.
- Automatic uploading of data to PVOOutput is to be enabled. The PVOOutput site uses the Inverter name for identification of your system.

This screenshot is identical to the one above, showing the 'User Setup' screen. However, the 'Inverter Name:' text box is highlighted with a red rectangular border to draw attention to it.

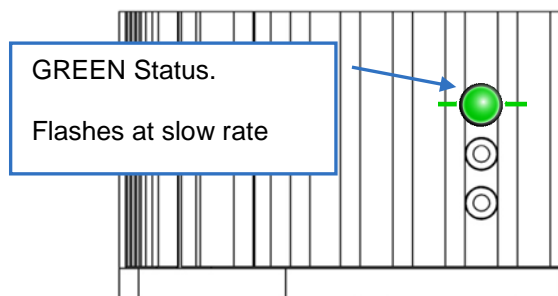
INVERTER OPERATION

Normal Power up and Grid connection

The Inverter is powered up by switching ON the **AC** Isolator switch installed beside the Inverter or in the adjacent meter box.

AC On

When power is first turned **ON** at the AC Isolator, (No DC at this stage), the Green power indicator will slowly flash. At this point, the Inverter is awaiting DC power from the PV panels.

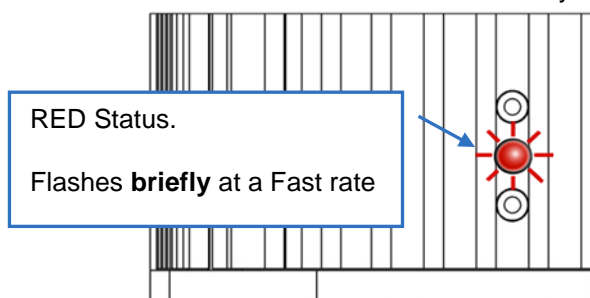


Status	
Time Exporting	00:00
Inverter	AC ON – Low solar
PV Panel	Solar available
WiFi network	Local 0012456

AC On, DC turned On

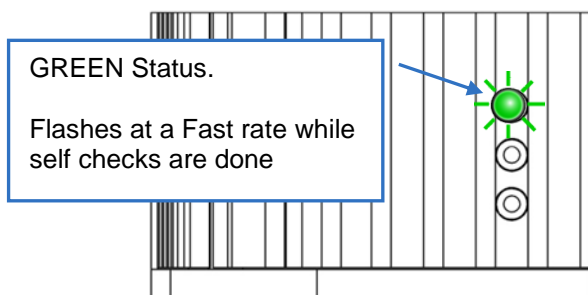
When DC Power is then available, the Inverter will go through two initialisation stages:

1/ Internal checks. RED indicator briefly fast flashing.



Status	
Time Exporting	00:00
Inverter	AC ON - Initialising
PV Panel	Solar available
WiFi network	Local 0012456

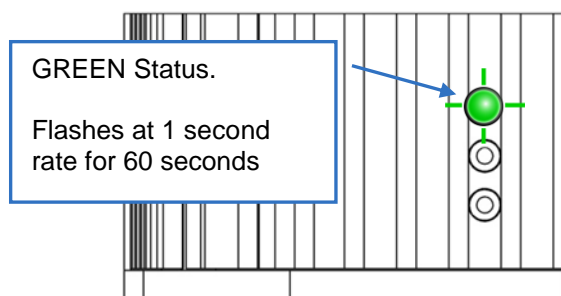
2/ Internal checks. Earth leakage, Relays, AC wiring, etc.



Status	
Time Exporting	00:00
Inverter	AC ON - Initialising
PV Panel	Solar available
WiFi network	Local 0012456

Grid Connecting

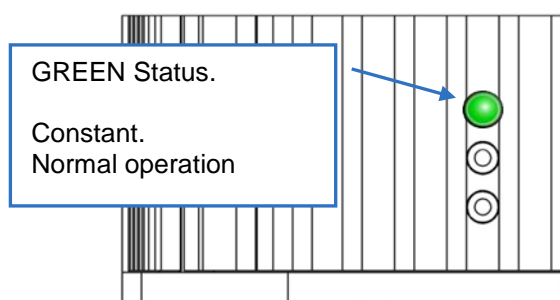
When there is sufficient Solar power available for the Inverter to begin generation, the Inverter will perform a 60 second count down sequence before connecting, or reconnecting, to the grid.



Status	
Time Exporting	00:00
Inverter	Connecting 58 secs
PV Panel	Solar available
WiFi network	Local 0012456

Normal Grid Connected condition

Once connected to the grid, the status display of the Inverter will revert to the normal running condition.

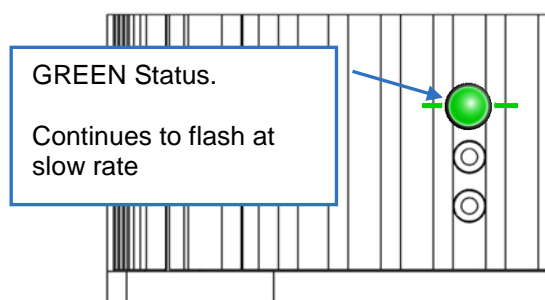


Status	
Time Exporting	00:00
Inverter	Solar Generating
PV Panel	Solar available
WiFi network	Local 0012456

Low or no solar power input



If there is little or no Solar input, the Inverter will not connect to the grid.



Status	
Time Exporting	00:00
Inverter	AC ON – low Solar
PV Panel	Solar available
WiFi network	Local 0012456

Transient supply events

There are conditions and transient events that can occur on the mains supply to your home/office that will be reported on your Eclipse Inverter.

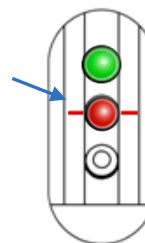
These events can occur from time to time on the mains supply and the Inverter is programmed to **automatically** deal with these conditions. The status of the response will be shown only while it persists and will be cleared when the Inverter returns to normal operation.

Status display examples

AC - Over Voltage
AC - Under Voltage
AC - Over Frequency
AC - Under Frequency
Loss of synchronisation

RED

Flashes at slow rate.
Automatically restarts.



A review of any such events can be done by analysing the event log recorded internally by the Inverter.



You do not need to do anything when such status events are shown.

The Eclipse Inverter will automatically return to normal operation when conditions allow it to.

TROUBLE SHOOTING

Alerts

Low or no PV Solar input - NIGHT

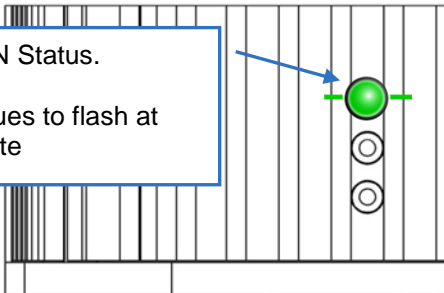
The Eclipse Inverter continually monitors the solar input from the PV panels.
This status is displayed whenever there is insufficient solar energy for the Inverter to operate.



This is the **NORMAL** status if there is no sun or very low solar input.

GREEN Status.

Continues to flash at slow rate



Status

Time Exporting	00:00
Inverter	AC ON – low Solar
PV Panel	Solar available
WiFi network	Local 0012456



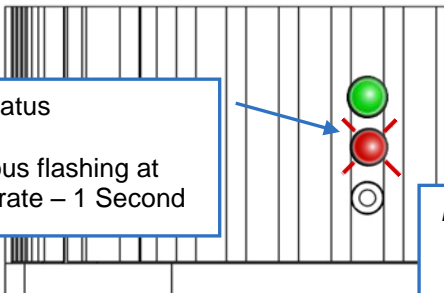
This status will also be displayed if the solar panel isolators are turned OFF.
Check the solar panel switches (DC) and ensure they are all turned “ON”.

Grid Disturbance

The Eclipse Inverter continually monitors the mains supply while it is operating.
If the mains supply goes outside of set limits for over/under voltage or frequency then it will temporarily disconnect and display this status.

RED - Status

Continuous flashing at medium rate – 1 Second



Status

Time Exporting	00:00
Inverter	Mains status
PV Panel	Solar available
WiFi network	Local 0012456

Examples:

Mains Over Voltage
Mains Under Voltage
Mains Over Frequency
Mains Under Frequency

These are normal transitory occurrences of the mains supply that should only occur infrequently.

If you find they are occurring regularly, then contact your solar system supplier and have them monitor and review your mains conditions.

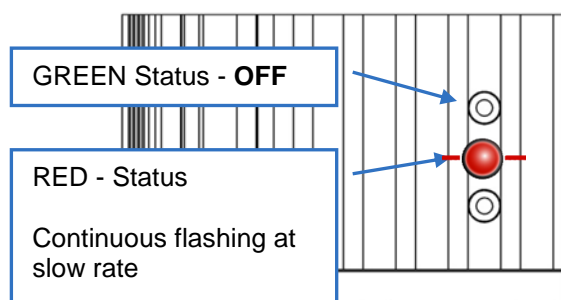


You do not need to do anything.

The Inverter will continue to monitor the mains conditions and automatically reconnect when it returns to normal. **This condition is not a fault of the Inverter.**

No AC mains - Solar Power available

The Inverter is being powered by the PV panels. It has detected that there is no AC mains.



Status	
Time Exporting	00:00
Inverter	AC OFF
PV Panel	Solar Available
WiFi network	Local 0012456



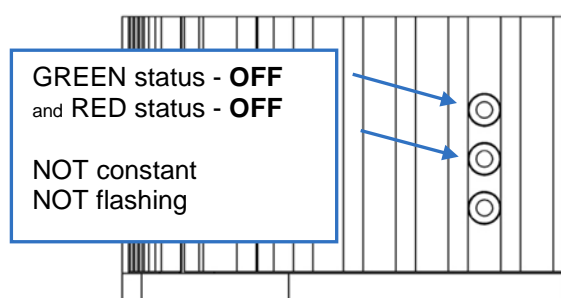
AC mains OFF

Check AC Isolator switch adjacent to the Inverter and/or the circuit breaker in the Switchboard.

No AC mains and no Solar Panel power

The Inverter will operate and display status when either AC – mains power is available **OR** there is power available from the PV panels.

If there is no LED display what so ever, then there must be no power available from either the AC (mains) or DC (Solar Panels)



Status	
Time Exporting	00:00
Inverter	AC OFF
PV Panel	LOW SOLAR
WiFi network	Local 0012456

Note: Status Display

The browser Status Display can not be updated by the Inverter when there is no power.

It will not show current information.

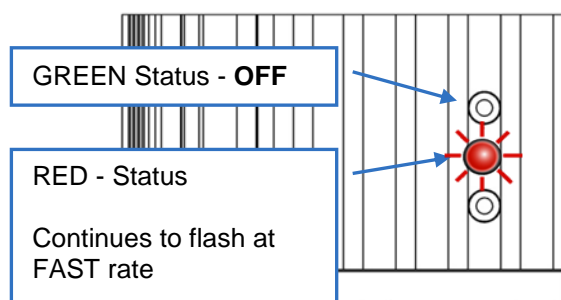


No Power supply.

Check Isolator switches and/or circuit breaker.

Initialisation disruption - No AC mains

The Inverter is being powered by the PV panels. It has detected that there is no AC mains. An initialisation disruption has occurred on start-up.



Status	
Time Exporting	00:00
Inverter	AC OFF
PV Panel	Solar Available
WiFi network	Local 0012456



AC mains is OFF

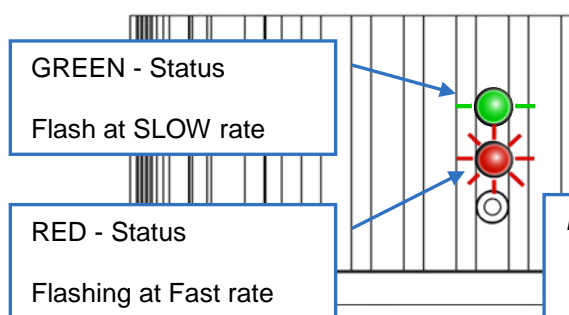
Check AC Isolator switch adjacent to the Inverter and/or the circuit breaker in the Switchboard. Turn OFF the DC and ensure AC power is restored and turned ON.

PV system monitoring – “Array Isolation”

The Eclipse Inverter continually monitors the total solar system installation including the PV panel and PV panel wiring.

If the Inverter sees that PV panel isolation resistance have gone outside of set limits then it will disconnect from the Grid and continue to monitor the conditions.

The **ALARM** output will be asserted.



Status	
Time Exporting	00:00
Inverter	AC ON
PV status	PV status
WiFi network	Local 0012456

Examples:
PV 2 Over Current
DC Input fault
Array Isolation fault

These may be brief, transitory occurrences. If you find they are occurring regularly, then contact your solar system supplier and have them monitor and review your mains conditions.



The Inverter will normally continue to monitor the conditions and automatically reconnect when it returns to normal.

This may not occur until the next day in some circumstances.



Fault does not clear

If such a fault indication continues to persist, including when the AC power is turned OFF/ON, then there may be an issue with your solar system installation or the Inverter itself. Contact your installation company for a service technician to inspect.

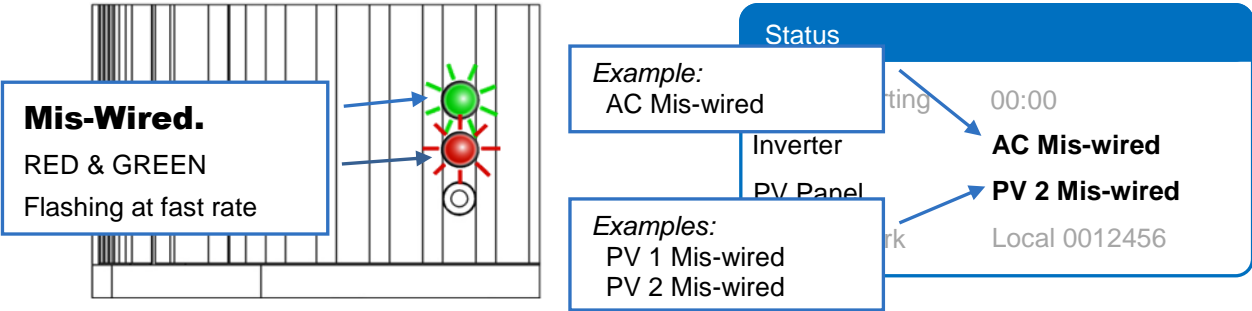
Alarms

AC - Wiring Fault

The Eclipse Inverter has determined that there is a fault in the AC or DC connections to the Inverter. Such faults will be reported when:

- The photovoltaic panels or DC connection to the Inverter are incorrectly wired
- The AC mains or Earthing is incorrectly wired.

***This is an installation wiring fault.
The Eclipse Inverter will not attempt to start under such a fault condition.***



DO NOT OPERATE THE INVERTER

An Array Isolation fault can not be reset or cleared by the user.

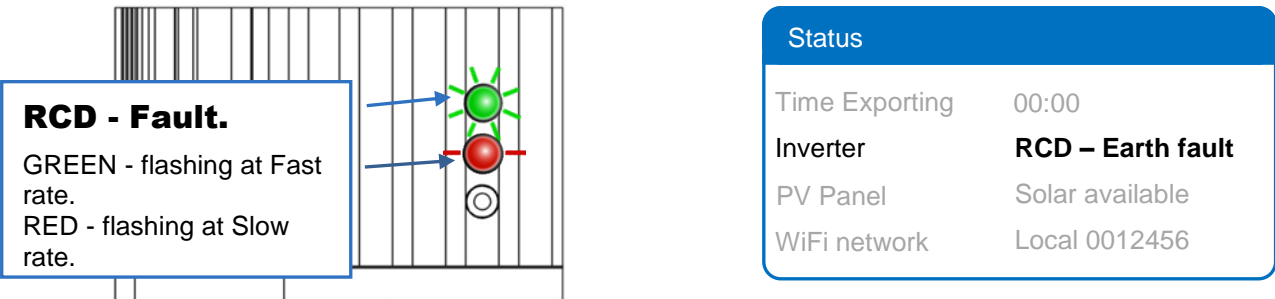
Contact your Installation company or a qualified electrical service person to check the PV panels and wiring.

RCD - “Earth Leakage”

The Eclipse Inverter has inbuilt earth leakage detection circuits to detect potentially serious earth faults and to shut down and isolate the Inverter operation. Such faults may occur in:

- The photovoltaic panels or their wiring
- The AC and earth wiring to the Inverter.

A possible earth leakage fault in these circuits is potentially serious. As a safety feature, the Eclipse Inverter will not attempt to start under such a fault condition.



The **ALARM** output will be asserted



DO NOT OPERATE THE INVERTER

An earth leakage fault can not be reset or cleared by the user.

Contact your Installation company or a qualified electrical service person to check the PV panels and wiring.

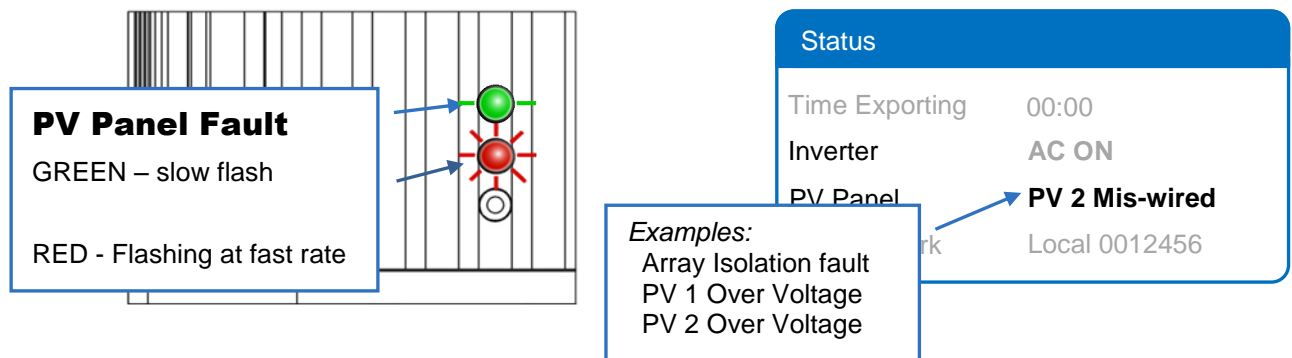
PV Panel Wiring or Isolation Fault

The Eclipse Inverter has determined that there is a fault in the DC connections to the Inverter. Such faults will be reported when:

- The photovoltaic panels or DC connection to the Inverter are incorrectly wired
- The photovoltaic panels or wiring system have excess leakage to earth.

This is an installation wiring fault.

The Eclipse Inverter will not attempt to start under such a fault condition.



The **ALARM** output will be asserted



DO NOT OPERATE THE INVERTER

A PV Panel earth leakage fault can not be reset or cleared by the user.

Contact your Installation company or a qualified electrical service person to check the PV panels and wiring.

WARRANTY

All MIL-Solar inverters must only be installed by a qualified electrician in accordance with the requirements of AS3000 and those particularly pertaining to AS 4777.1 "Grid connection of energy systems via inverters - Installation requirements" and be registered with your relevant state government electrical authority.

All MIL-Solar inverters must be installed in accordance with the published Installation details and operated and maintained in accordance with the instructions detailed in this manual.

Warranty Terms - overview

All MIL-Solar inverters carry a standard 5 year factory warranty.

An option to extend this period to 10 years is available – for pricing and application, please contact your Installation Company or visit www.MilSystemSolar.solar

All inverters must be registered within 30 days of installation with the accompanying electrical installation certificate information. Factory warranty does not apply to unregistered inverters.

Any warranty claims are determined against the installation address, the installation procedure and compliance with our installation registration process and minimum guidelines.

The MIL-Solar warranty covers repair or replacement of parts or full replacement of the inverter during the warranty period. MIL-Solar, will at its sole discretion elect to carry out repairs at the installed site or remove the inverter for repair off site or exchange the installed inverter for the same or similar model.

In the case of a full exchange the remainder of the warranty entitlement will be transferred to the replacement device.

Specific exclusions for liability under the terms and conditions of this Warranty include:

- Damage arising in part, or in full, from mishandling during transport or installation.
- Failure to correctly install or commission the inverter or related wiring.
- Failure to correctly maintain the inverter.
- Unauthorised attempts to modify or repair the inverter.
- Siting of the inverter contrary to the installation guidelines such as in direct rain or inadequate ventilation.
- Failure to comply with any local regulations.
- Force majeure, including but not limited to, acts of god, lightning strike, PV input overvoltage, fire and flood.
- Cosmetic shortcomings which do not affect the inverter operation.
- Any claims for consequential losses such as related to direct or indirect damage or compensation for any loss of profits

All MIL-Solar inverters are designed and certified for specific countries in order to meet that country's specific legal, certification and safety requirements. Unless the inverter has the correct country safety and electrical certification, it must not be installed. Any inverter installed in a country or region that is not specifically nominated on the inverter certification carries no warranty, and such use of the inverter will be at the customer's sole risk and liability.

Full details of the Warranty terms and conditions and MIL-Solar general terms and conditions of trade can be found at: www.MilSystemSolar.solar

Documentation

Unless otherwise specifically agreed to in writing, MIL-Solar makes no warranty as to the accuracy, sufficiency, or suitability of any technical or other information provided in this manual.

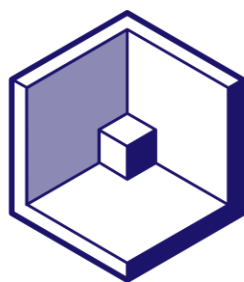
MIL-Solar assumes no responsibility or liability for losses, damages, costs or expenses, whatsoever whether special, direct, indirect, consequential or incidental, which might arise out of the use of this information.

ADDENDUM

Available Installation guides

Specific installation details and 'how to' instructions are covered in the following dedicated Installation guides. These are available for download from the web site or by contacting MIL- Systems directly.

Bulletin No.	Title	Topic
Eclipse Models	Eclipse specification sheet	Ratings and specifications for Eclipse Inverter models
Status LEDs	LED state matrix	Summary of status LED indications
150719	Eclipse Inverters - Alarm Output connection	How to connect to the alarm output as required for AS4777-2015 compliance
150720	Eclipse Inverters - DRED DRM 0 connection	How to connect to the DRED DRM 0 as defined in AS4777-2015 Note: Optional connection as prescribed by authorising utility for the specific installation.
150719	Eclipse Inverters - Export Limited Power Meter connection	How to setup the Inverter for Export Limited operation: <ul style="list-style-type: none">• wiring the power meter• configuring the Inverter
140701	Eclipse Inverters - Over The Air programming guide	Updating User display software over the WiFi connection.
Wieland 96.031.4554.3	Mounting Instructions for Wieland 3-pole Connector	Describes the mounting of the three pole gesis RST connector used for the a.c. connection.
Phoenix Sunclix 105205	SUNCLIX photovoltaic connector for installation in photovoltaic systems	Describes termination of the SUNCLIX PV input connectors.



MIL-Solar
Eclipse RPC Inverters

Designed, Manufactured and Supported in Australia.

Generating jobs for Australians.