Specifications	
Solar Panel Input	
Input	: 3 A panel, open circuit voltage 16V to 25V
Charging Voltage	: Approximately 14V
Efficiency	: >90% at full load
Battery Charger Output	
Battery Type	: 12 V sealed lead-acid
Capacity	: 48 Ah maximum
Reserve time (fully charged battery)	: >24 hours (assuming a 24 Ah battery and 400 mA load on 12V supply including accessories)
Battery cut-off voltage	: 10,7 V ±2%
Temperature sensor type (supplied)	: Semitec 102AT NTC thermistor (1 kΩ, 1%)
Logic Supply Output (Base)	
12V Supply (base)	: 12V ±15%/3A
Logic Supply	: 5,1V ±2%/0,5A
Pre-charrge Voltage	: 5,1V via 10Ω 0,5 W resistor
Cabling	
Number of terminals	: 12
Wire gauge	: 2,0 mm² (maximum)*
For manageable cabling to the modules, a conductor size of up to 0,5 mm² with a maximum overall outside diameter of 2mm, is recommended.	
Indicators (LEDs)	
Power (green)	: ON = 5 V dc and 12 V dc supplies OK OFF = 5 V dc and/or 12 V dc supply faulty
Charge (green)	: ON = Incoming 24V supply OK OFF = Solar panel in use OR incoming 24V supply faulty
Diagnostics	
Power fail	: PFAIL signal on the base: : ON (LOW) for battery voltage <10,7 V dc
Shutdown protection	: OFF (HIGH) for battery voltage >10,7 V dc
5 V output	: 5,9 V < U < 6,7 V
Logic Outputs	: MAINS OK SENSOR OK POWER FAIL (“PFAIL”)
A/D - Battery check	: 8 bits, Full Scale reading at 15 V output
Electromagnetic Compatibility	
Impulse withstand test Between input terminals Between either input and earth	 : 4 kV 1,2 µs/50 µs test pulses : 1 kV 1,2 µs/50 µs test pulses
Noise withstand test	: 4 k V noise bursts between inputs (In accordance with IEC 801-4, class IV)
Environmental	
Operating Temperature	: -25°C to +60°C (-13°F to +140°F)
Storage Temperature	: -40°C to +70°C (-40°F to +158°F)
Mass	
Including packaging	: 600g (21.2 oz)
Excluding packaging	: 510g (18.0 oz)
Ordering Information	
Order Code	: M1101A

*** 1 Averaged over 30 seconds**

INSTALLATION GUIDE

MAXIFLEX 1000 SERIES

Power Supply – 24Vdc & Solar Inputs
12 V Logic & 12 V 3A Charger Outputs
Model No. : M1101A (SLC PSU)

General Description

The M1101A is a non-isolated Power Supply Unit (PSU) which provides all the power requirements for Maxiflex modules mounted on the Maxiflex 2 I/O Master Base (Model No. 1001A). It is powered by a +24V dc supply or solar panel.

The M1101A also includes a +12V dc battery charger and field supply as well as a +5V dc pre-charge voltage to allow insertion and removal of modules without powering down the system. It is designed to operate with the battery always connected.

All connections to the M1101A are made via two-part screw terminals located behind the door on the front of the M1101A. The terminals can be removed without disturbing the field wiring, but input power to the M1101A must be switched off first. The M1101A generates a “PFAIL” signal which is sent to the CPU like all other I/O data. The signal is low when the battery voltage falls below approximately 10,7V dc. Two LEDs on the front panel indicate healthy 5V dc and 12V dc supplies and power to the PSU (24V dc input only).

The +12V dc battery charger is provided for battery backup applications. The supplied thermistor is used to monitor the ambient temperature and control the battery charging rate to prevent over charging under adverse conditions.

The +12V dc field supply is not isolated from the battery but is protected against a short-circuit by an internal polyfuse which resets automatically only when the overload is removed.

Module Positioning

The M1101A may only be placed in the PSU slot of a M1001A 2 I/O Master Base. Refer to the Maxiflex Bases General Instruction 98-8952-930-00X for more detail on the base layout, module insertion and module removal.

Removed the power to the M1101A before inserting it in, or removing it from the Maxiflex base.

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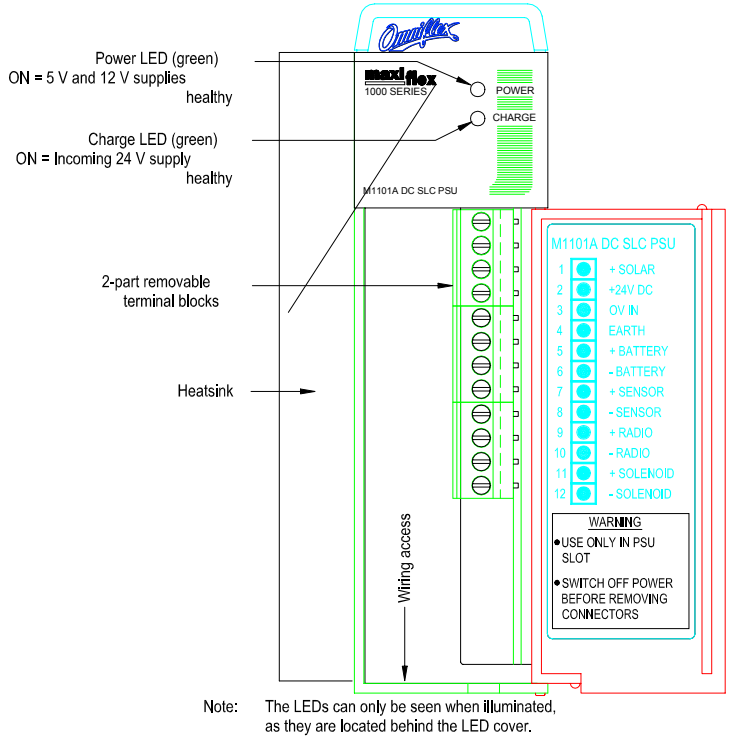
Electrical Installation

The following electrical connections are required to the unit:

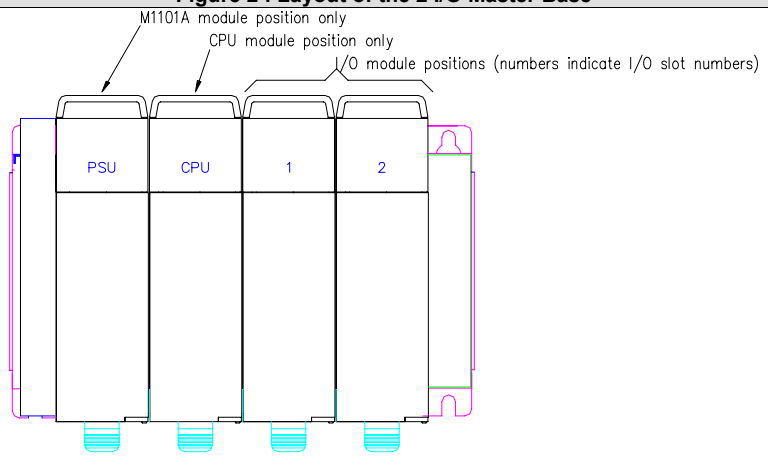
1. Power Supply or Solar Panel
2. Earth
3. Battery
4. Temperature Sensor and
5. Field accessories (if installed)

Figure 1 : Layout of the M1101A



Note: The LEDs can only be seen when illuminated, as they are located behind the LED cover.

Figure 2 : Layout of the 2 I/O Master Base

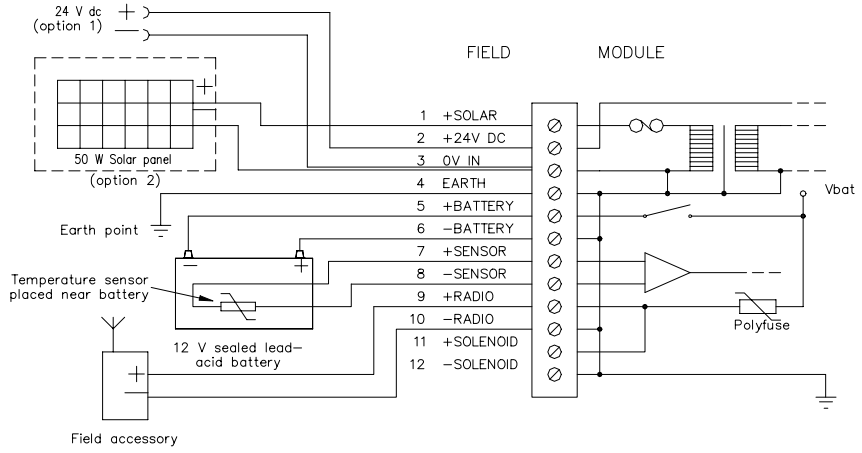


Hint: Strap the temperature sensor to the battery lead for rigid positioning with the head of the temperature sensor near the battery terminals.

Field accessories must satisfy the following conditions:

- Peak current drawn from field and battery terminals must be less than 3,5A
- Average current drawn from the field and battery terminals must be less than 1,2A. *1

Figure 3 : Electrical Connections



Specifications	
DC Supply Input	
Input	: 19V to 38V
Consumption	: 40W