

POWER

BATTERY AND SOLAR POWER SYSTEMS FOR STARLOG AND NEON IP DATALOGGERS



neon



To ensure self-contained operation in the field, power for data loggers and some instruments can be supplied by integral battery packs or by 12VDC external power. In case external power is used, we recommend that you also use an internal battery pack, alkaline or lithium, as a backup battery in the event of power failure.

Alkaline battery pack model 6910 is the standard 6 x D cell non-rechargeable internal battery pack for all Starlog dataloggers. The life expectancy of this pack depends on logging scan rate but is typically one year for Prologgers and Starloggers. The Neon remote terminals and modules can be powered from long life Lithium batteries. The battery component is a high quality SAFT LSH20 Lithium cell with high capacity and minimal internal discharge, while providing high inrush current required for some cell phone modules.

Sealed lead acid batteries are maintenance free batteries that come in different capacity ranges. These batteries play an integral part in ensuring reliable performance at unmanned data logging sites and are normally recharged via a solar powered recharge system or via an external source of 12VDC.

If solar recharge or external 12VDC are not available Unidata can offer 6909C-3 lithium battery non-rechargeable and 6909C-4 lithium battery rechargeable packs.

The solar powered system enables the long-term use of 12V sealed lead acid batteries in the field without the need for recharging from the mains. The entire system is designed to be maintenance free once installed.

Solar powered system consists of solar panel 6904 range, sealed lead acid battery 6907B range and 12V 10A solar controller model 6912.

This configuration may be used for externally powering all data loggers, Starflow and conductivity instruments.

In an installation with a prolonged period (more than 10 consecutive days) without sunlight we recommend using the 10W model 6904I-10 solar panel with two 14Ah sealed lead acid batteries 6907B-14 (28Ah). This system will also operate a cellular phone site for up to 5 "sunless" days.

Solar power & relay controller dual relay output Model 6912CR-12 regulates the charging of a 12 volt sealed lead acid battery via a solar panel and provides a supervised 12V modem power output. In addition to this, controller has two 2A relays with capacity to operate either solenoid or small pump. Any Unidata logger can interface with the controller allowing program control of the two relay outputs.

The weatherproof enclosure protects the datalogger from moisture, wind and sun, and would-be vandals. It is constructed of robust, glass-filled polycarbonate which has been UV stabilized for outdoor use model 6701 or powder coated steel model 6703. Both polycarbonate and steel enclosures come in various sizes.

Signal cables generally enter through glands or custom configured SQL connectors in the base of the enclosure. Tamperproof screws and a key are supplied.

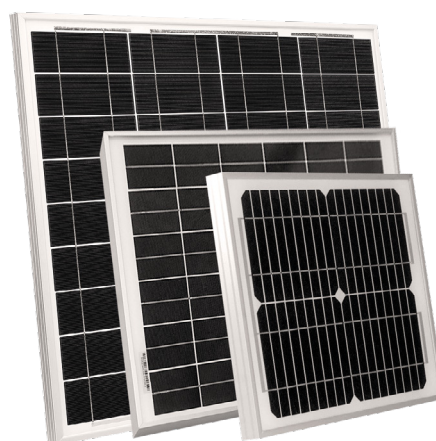
Models 6701M and 6703M offer stainless steel pole mounting hardware and fittings. Together with enclosure they provide a complete field installation set.

Radiation gill screen & mount model 6704 provides a good shield against the effects of precipitation, direct radiation and dust particles for a Ambient temperature and humidity sensors that are easily mounted within.



BATTERY SPECIFICATIONS

BATTERY 6910A	
TYPE:	Alkaline, 6 x D cell, non-rechargeable
CAPACITY:	9V 10 Ah
BATTERY 6907B-7	
TYPE:	Sealed Lead Acid Battery
CAPACITY:	12V 7.2Ah
BATTERY 6907B-14	
TYPE:	Sealed Lead Acid Battery
CAPACITY:	12V 14Ah
BATTERY 6907B-28	
TYPE:	Sealed Lead Acid Battery
CAPACITY:	12V 28Ah
BATTERY 6907B-50	
TYPE:	Sealed Lead Acid Battery
CAPACITY:	12V 50Ah
BATTERY 2901B	
TYPE:	Single SAFT Lithium LSH20 D size Cell
CAPACITY:	3.6V 15Ah
BATTERY 2902A	
TYPE:	Single SAFT Lithium LS 26500 C size Cell
CAPACITY:	3.6V 7.7Ah
BATTERY 2903A	
TYPE:	Single Panasonic Lithium NCR18650B size Cell
CAPACITY:	3.6V 3200mAh
BATTERY 6909C-3-P	
TYPE:	3 X Shrink Wrap LSH20 Lithium Battery Pack
CAPACITY:	10.8V 15Ah
BATTERY 6909C-4-P	
TYPE:	4 X Shrink Wrap NCR18650B Lithium Battery Pack
CAPACITY:	14.4V 3200mAh



SOLAR PANEL SPECIFICATIONS

PANEL 6904I-10	
SPECS:	12VDC 10W, 5m single pair instrumentation cable. Hardware for 50mm dia. pole mounting included.
SIZE:	357mm x 303mm x 35mm
WEIGHT:	2kg
PANEL 6904I-20	
SPECS:	12VDC 20W, 5m single pair instrumentation cable. Hardware for 50mm dia. pole mounting included.
SIZE:	300mm x 540mm x 35mm
WEIGHT:	2.5kg
PANEL 6904I-50	
SPECS:	12VDC 50W, 5m single pair instrumentation cable. Hardware for 50mm dia. pole mounting included.
SIZE:	637mm x 540mm x 35mm
WEIGHT:	4.5kg
Fittings for different pole diameters are available on request	

ENCLOSURE MOUNTING SPECIFICATIONS

MOUNTING 6701M-S	
MATERIAL:	Stainless Steel
APPLICATION:	SS hardware to suite 50mm pole and 6701B Enclosure
SIZE:	280mm x 190mm x 130mm
MOUNTING 6701M-M	
MATERIAL:	Stainless Steel
APPLICATION:	SS hardware to suite 50mm pole and 6701B Enclosure
SIZE:	380mm x 280mm x 130mm
MOUNTING 6703M-S	
MATERIAL:	Stainless Steel
APPLICATION:	SS hardware to suite 50mm pole and 6703B Enclosure
SIZE:	300mm x 300mm x 210mm
WEIGHT:	7kg
MOUNTING 6703M-L	
MATERIAL:	Stainless Steel
APPLICATION:	SS hardware to suite 50mm pole and 6701D and 6703C Enclosures
SIZE:	380mm x 380mm x 210mm
WEIGHT:	9.8kg



ENCLOSURE SPECIFICATIONS

ENCLOSURE 6701B	
MATERIAL:	Grey Hi-impact polycarbonate material
IP RATING:	IP66/67
SIZE:	280mm x 190mm x 130mm
ENCLOSURE 6701D	
MATERIAL:	Grey Hi-impact polycarbonate material
IP RATING:	IP66/67
SIZE:	380mm x 280mm x 130mm 2kg
ENCLOSURE 6703B	
MATERIAL:	Grey powder coated steel
IP RATING:	IP66
SIZE:	300mm x 300mm x 210mm
WEIGHT:	7kg
ENCLOSURE 6703C	
MATERIAL:	Grey powder coated steel
IP RATING:	IP66
SIZE:	380mm x 380mm x 210mm
WEIGHT:	9.8kg
ENCLOSURE 6703D	
MATERIAL:	Grey powder coated steel
IP RATING:	IP66
SIZE:	500mm x 700mm x 250mm
WEIGHT:	29.7kg
ENCLOSURE 6704A	
MATERIAL:	Radiation Gill Screen UV stabilised Luran & Pole Mounting 60mm U & saddle clamps.
SIZE:	125mm diameter x 380mm tall
ENCLOSURE 6704B	
MATERIAL:	Radiation Gill Screen UV stabilised Luran & Pole Mounting 60mm U & saddle clamps.
SIZE:	125mm diameter x 190mm tall



6912D-12 SPECIFICATIONS

PHYSICAL SPECIFICATIONS	
SIZE:	152mm x 55mm x 34mm (LxWxH)
WEIGHT:	230 grams
OPERATING TEMPERATURE:	-40°C to 85°C
ELECTRICAL SPECIFICATIONS	
INPUTS:	12V solar panel, 2 x 12V SLA battery (parallel connection)
OUTPUTS:	12V regulated, Load current 10A



6912CR-12 SPECIFICATIONS

PHYSICAL SPECIFICATIONS	
MATERIAL:	UV stabilised polycarbonate, IP67
SIZE:	125mm x 85mm x 75mm (LxWxH)
WEIGHT:	250 grams
OPERATING TEMPERATURE:	-40°C to 85°C
ELECTRICAL SPECIFICATIONS	
INPUTS:	12V solar panel, 2 x 12V SLA battery (parallel connection). Charging is thermally limited. Two relay control (open collector or TTL – user can set).
OUTPUTS:	Modem power 12V regulated, 500mA limit, shutdown on low battery detect. Two relays normally open contacts. 12V is supplied to contacts upon closure.
TERMINALS:	Pluggable terminals for two relay outputs, logger control signals, solar panel, battery and test.

