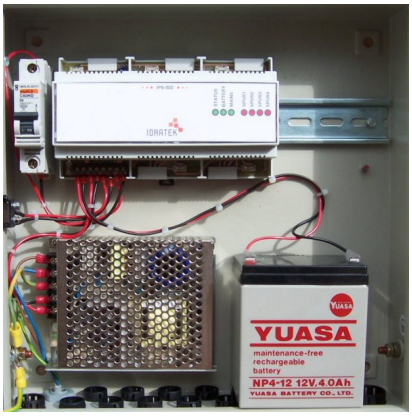
IPS-002
Intelligent Power Supply

w: www.idratek.com

The unit incorporates an IPD-001 module to provide the intelligent power distribution. This also provides the monitoring and control functions and is enclosed in a key secured, tamper protected case, alongside a high quality switch mode power supply, DC shut-off switch for powering, and maintenance free 4Ah battery for back-up during mains failure.

The IPS-002 not only provides continued network function in the event of mains power failure, but is also instrumental in the management and monitoring of power delivery to the individual spurs and provides some isolation capabilities in the event of bus faults. A brief listing of the features is summarised below.



Spur Characteristics
- As per IPD-001

General Features
- As per IPD-001

Functional
- As per IPD-001

Electrical
- Universal input voltage range 88 – 264Vac
- Input frequency range 47 – 63Hz
- Max input current (at 230Vac) 1.2A
- Max inrush current (at 230Vac) 40A
- Supplied with 2m of 6A mains flex for connection to either BS1363 plug fitted with 3A/5A fuse, or suitably protected 5A circuit
- Supplied with 4Ah Sealed Lead Acid Gel battery. The battery is disconnected for storage/shipment and care must be taken when attaching the battery to avoid shorting the terminals.

Environmental
- Operating temperature 0°C to +40°C
- Operating humidity 20% to 90% (non-condensing)

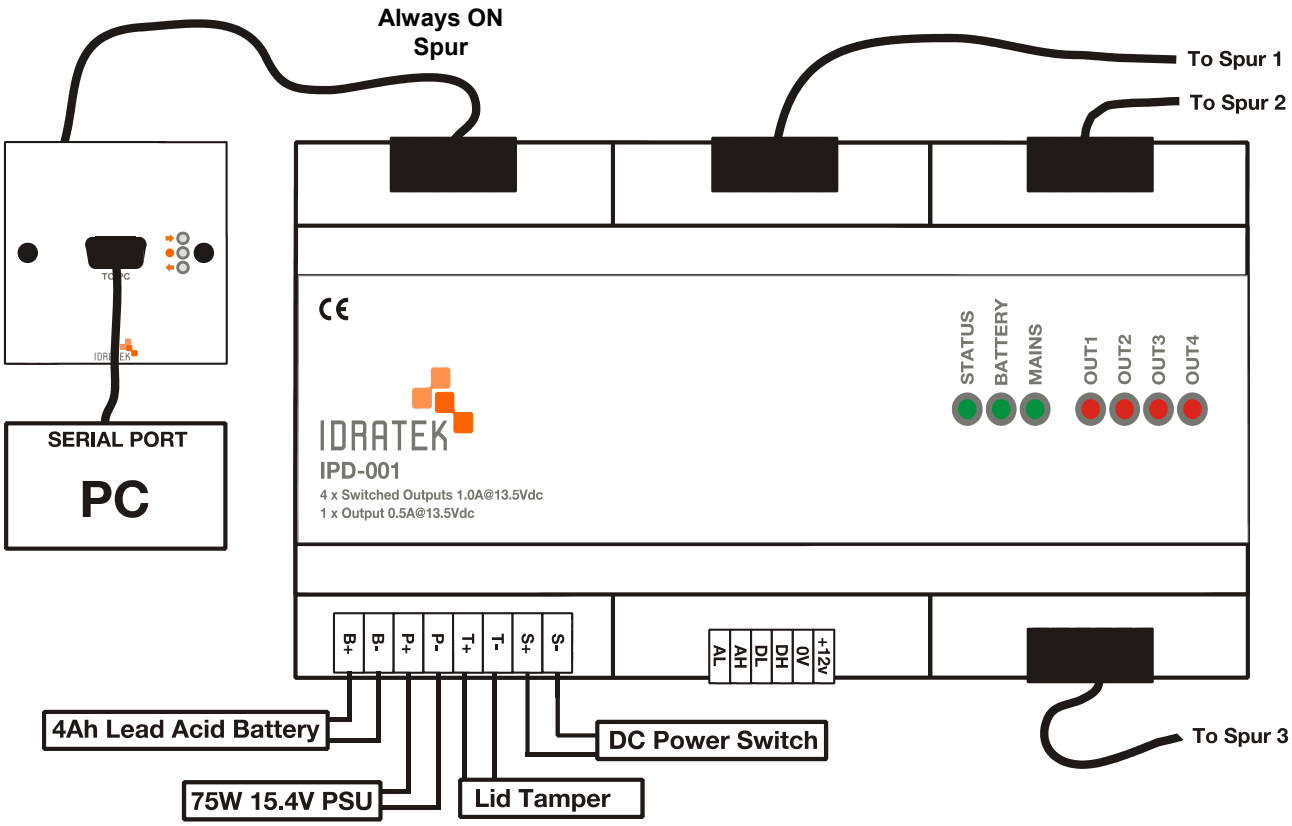
Mechanical
- High quality steel enclosure with clear polycarbonate window powder coated in textured RAL7032
- Enclosure provides IP65 protection to EN60529/10.91
- Dimensions 300mm x 300mm x 80mm (WxHxD)
- Four 8mm fixing holes on 260mm square pitched centres
- Generous provision for cable entry via 14 x PG11(19mm) holes
- Access only by opening lid (180° opening), via special key
- Weight with battery 5.7kg (approx.)

Module Connections

The IPS-002 unit incorporates the IPD-001 module as shown overleaf. It provides 4 switched IDRANet spurs as well as one always-on IDRANet spur for connection to a PC interface such as a PCA/PCD/PCU. The IPS-002 is shipped pre-wired to the switch mode power supply, battery leads, tamper switch and DC side on-off isolator. These connections should not be altered. The tamper switch connection must not be wired into existing equipment such as security system tamper loops.

IDRANet Connectivity

The always on spur is reserved for modules which must remain powered at all times – primarily the PC/IDRANet interface module (PCA/PCD/PCU) but in some cases special function modules such as security alarm bell relay module. Each IDRANet spur can be connected as required bearing in mind the maximum current limit of 1A per spur (in practice a small margin is desirable to avoid nuisance current trips).



Powering Up IDRANet and IPD Commissioning

Ensure that a PC interface unit is connected between the IPD and the PC and that the Cortex software is launched (but in a static state) on the PC.

The IPD module in a new IPS is typically pre-commissioned with a NID value of 0500. Please ensure that a Cortex IPS object to match the hardware is pre-installed in your Cortex database and is manually assigned with this NID value via the object properties menu. Also in the same menu enable the Network Enabled property. The unit is also typically pre-programmed with an initialisation Reflex which will cause the IDRANet spurs 1-4 to energise in a timed sequence with an 8 second gap between each spur. This Reflex can later be altered by the user should they require a different default initialisation behaviour. The PCA/PCD spur however is ALWAYS energised immediately upon operation of the DC switch.

The IPD can now be powered up by operating the DC switch (set to 1). This will cause both the PC interface module and the IPD module to initialise (flashing status LED and possible changes to battery indicator LED).

If the PC interface unit (e.g. PCA or PCU-001) was not pre-commissioned then Cortex will detect this unit first and prompt the user to commission it, otherwise this step will be skipped.

If the IPD is supplied pre-commissioned but you did not pre-install a suitable database object as instructed above, then Cortex will detect a 'new' power supply unit and ask to create a representative object for it in the database. A pre-commissioned IPD unit will also at this point start switching on the 4 spurs in a sequence punctuated by 8 second gaps (pre-programmed initialisation Reflex).

If the IPD was supplied not pre-commissioned then Cortex will still create a representative object for it and will then also proceed to program it with an available ID. It will however not program it with an initialisation sequence Reflex. So the state of the spurs will remain OFF until Cortex is asked to run the network. The user can however program an initialisation Reflex of their choice at any time.

If you wish to power down the IPS unit at any time, toggle the DC switch to 0, disconnect both battery leads and then the AC supply can be removed.