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## NL905 - Compact Case and Power Unit

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The NL905 Compact Case and Power Unit is an enclosed case which will accept up to 4 single width NeuroLog System modules. This case is designed as a more compact counterpart to the full width NL900D (which can hold up to 13 modules) and as a result it can be conveniently transported and placed on the laboratory bench. The base is fitted with rubberised feet and the front pair may be extended so as to raise the front of the unit.

The NL905 case has an integral module retention system, consisting of a simple, slide action lever on the power supply panel. Thus fittings such as retained screws, D-Locks, etc., on individual module front panels are unnecessary; this simplifies the modules mechanical design, reduces their cost and greatly improves the ease with which rapid changes in module arrangements can be made.

The NL905 power supply produces three voltages (+15V, +5V and -15V), stabilised against line and load variations. The voltage outputs are rated at 1A and all three supplies have internal "fold-over" current limiting. In addition, the supplies are protected with rear panel fuses. Each supply has less than 50mV line ripple at maximum load.

A feature of the intergral NeuroLog System power supply is a built-in monitoring circuit which indicates (by extinguishing the power supply indicator on the front panel) excessive loading of one or more of the three supply outputs. While it is expected that a power supply failure will never occur using genuine NeuroLog modules, the fault indication is invaluable when testing custom circuits built in the NL50 Blank Module.

The NeuroLog System Case is the heart of the NeuroLog system, being the rack to house the modules as well as providing the power for them to function. It also has an interconnection system unique to the NeuroLog System that allows adjacent modules, in most cases, to pass signals between each other without the need for external cables.

For anti-theft security, the rear panel of the NL905 includes a "Micro Slot" compatible opening (below the CE logo) which allows you to attach a security device of the type used to protect notebook computers. In addition, the module retention bar can be fixed in place by inserting a screw (M3 x 10mm, not supplied) in a hole at the top of the left-hand front panel (above the NeuroLog System logo). When in place, this screw locks the bar and prevents removal of modules from the rack.

### **Unpacking Your NL905**

Your NeuroLog System was delivered in a carton which was carefully designed to protect the NL905 case against damage in shipment. It would be advisable to keep your carton in case you need to relocate or return your NeuroLog System some time in the future.

### **Before You Start**

Before starting to use your NeuroLog System, we would urge you to thoroughly read the sections of the users manual which are relevant to your particular modules, as well as the general section entitled "**NeuroLog System Basics**". This will introduce you to the operation of the module retention system, internal communication methods and other important aspects of the equipment.



**Mains Connection**

The power lead should be connected to a suitable plug. The power lead is colour coded in line with international standards and must be connected as follows:

Insulation Colour	Function
Green/Yellow	Earth
Brown	Live / Line / Hot
Blue	Neutral

The Earth connection **MUST** be made.

Before the power unit is plugged into the mains, check that the voltage selector on the back of the case is set for the correct mains voltage. The appropriate voltage should be opposite the arrow. If incorrectly set, use a coin of appropriate size to rotate the centre of the voltage selector to align the arrow head with the correct voltage setting.



Supply range	Fuse Value and speed
100-120 V ac	T 1A L
200- 240 V ac	T 500mA L

Changing the mains voltage will also require you to change the two fuses in the mains inlet. They must be "5 x 20 mm" in size and the value and speed shown here.

**Grounding**

The Earth or Ground connection in the mains lead is continuous with the ground points on all module connectors and with the case. No provision is made for opening the connection between the case ground system and the mains earth lead.

**Power Unit Protection**

The power unit supplies three stabilised voltages, +5V, +15V and -15V each of which is completely protected against excessive load with its own internal 'current fold-over' circuit which can sustain an indefinitely long short circuit. Each of the supplies is also protected by fuses, fitted to the rear panel, which protect the power transformer against a gradually applied overload. A suddenly applied overload may not blow a fuse before the fold-over protection circuit acts.



Fuse Ref:	Fuse Value and speed
F3 & F4	T 2A L

The indicator light on the case front panel is illuminated when all three power supplies in the power unit are operating with correct output voltages. If the indicator does not light when the mains power is switched on (POWER switch on the front panel), either one of the supplies is faulty or an overload condition exists.

A module malfunction or faulty circuits constructed on the NL50 Blank Modules may be the source of the excessive power unit load. Identify and remove the overload; if the indicator is still unlit, check the fuses.



**Support Feet**

To raise the front of the unit when it is mounted on a bench-top, the front feet can be lowered. This is done by lifting the front of the case up and pulling down the leg.

We reserve the right to alter specifications and price without prior notification.