GPIB Power Supply Module 10-910A

- Triple Output 100W Power Supply
- Low Noise High Efficiency Switch Mode PSU
- Power Trading Provides Flexible Outputs
- Universal Voltage Operation 100V AC to 250V AC Operation
- Relay and Logic Supplies are Sequenced at Power On/Off
- Supports Up to 20 System 10/20 Modules
- Front Panel LED Indicators

The 10-910A Triple Output Power Supply is a low noise, high efficiency switch mode type and is suitable for operating any System 10/20 configuration. Model 10-910A uses a highly regulated 5 Volt source to operate all logic, the remaining 5 and 12 Volt supplies are isolated from logic and are used only to operate relay coils, LED indicators show the status of all voltages.

Range Description

The 10-910A Power Supply module is suitable for driving either System 10 or System 20 switching modules. Two versions are available depending upon whether the switching modules plug into the front or the rear of the mainframe chassis (for further information on this please refer to the data sheet for the chassis being used):-

Front Mounting Version

Type **10-910A-001**.
Use this model with front access chassis types:

10-930A-001 (3U System 10)

10-934A-001 (6U System 10)

20-935A-001 (6U System 10/20)

20-936A-001 (3U System 10/20)

Rear Mounting Version

Type **10-910A-002**.
Use this model with rear access chassis types:

10-930A-002 (3U System 10)

10-934A-002 (6U System 10)

20-935A-002 (6U System 10/20)

20-936A-002 (3U System 10/20)

Power Up/Down Sequencing

All 10-910A Power Supplies have built-in supervised sequencing of logic and relay power supplies, both at power on and power off. This prevents possible momentary relay operation, particularly during an unexpected power fail.

At power on the logic supply is allowed to settle before soft-starting the relay supplies. Whenever a mains fail is detected the relay power supplies are immediately clamped to ground, thus guaranteeing that all relays are in their inactive state before the 5V logic supply causes control logic to fail. Without this feature relays could, either upon power down or up, operate randomly possibly connecting illegal switching routes causing unpredictable damage.

Typical Driving Capability (10-910A)

The 10-910A will typically drive in excess of 30 switching modules, i.e. this will run all but the largest switching systems. However this will vary depending upon module type and the maximum number of relays to be simultaneously operated. The table below gives an indication of module power consumption.

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Specification - 10-910A

Power Requirements	
Input Voltage	
240 Volt Version:	240V AC (±10%), 0.3A (max)
120 Volt Version:	120V AC (±10%), 0.6A (max)
Frequency:	45 - 65Hz
Power Consumption:	70W Max (exact value depends upon number and type of modules being used)
Fuse:	240V AC - 0.5A Anti Surge 120V AC - 1A Anti Surge

Output Voltage	
Logic Supply:	5V DC (4A max)
Primary Relay Supply:	5V DC (1A max)
Secondary Relay Supply:	12V DC (2.5A max)
Max Power Output:	50W power trading between outputs

Safety Specifications:	IEC348, IEC380, IEC435, BS5850, BS6301, VDE0804, VDE0806, UL478 & CSA22.2
Isolation:	4kV input to output
Temperature:	0-70°C, Derate by 2.5% per°C above 45°C
Humidity:	Up to 90% non-condensing
Altitude:	15000m
Cooling Requirement:	Natural
Electromagnetic Compatibility	Meets emission curves of VDE0871 Curve B, FCC Class B

Mechanical Characteristics

All modules conform to the 3U height (128mm) Eurocard standard and are 160mm deep. Panel width for all versions is 2.4 Inches.

Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to +55°C
Humidity:	Up to 95% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 95% non-condensing
Altitude:	15000m

Typical Module Power Consumption Table (10-910A)

Module	Description	Module State	Typical Power	Max No. per Chassis
10-921	IEEE-488.2/ RS232		1W	
10-155	Reed Relay Module	All relays off	0.6W	>30
		8 relays on	2.3W	>30
10-410	Digital I/O Module		1.3W	>30
10-530	8x8 Matrix	0 crosspoints on	0.8W	>30
		8 crosspoints on	2W	>30
10-740	RF Multiplexer	2 channels on	1.5W	>30
20-510	20x8 Matrix	0 crosspoints on	0.8W	>30
		8 crosspoints on	2W	>30
		20 crosspoints on	3W	25
20-310	High Volts Module	8 relays on	3W	25

Using External Power Supplies

In OEM applications it may be required to operate the switching system from an external DC power supply. However it is very important that the logic supply be kept completely separate from the voltage supply used to drive the relay coils, especially when using power or high voltage relays, in addition sequencing of these two supplies is important at power on and off. For further information please contact the factory.

Safety & CE Compliance

All modules are fully CE compliant and meet applicable EU directives: Low-voltage safety EN61010-1:2010, EMC Immunity EN61326-1:2013, Emissions EN55011:2009+A1:2010.

Ordering Information

Product Order Codes

100W System 10/20 PSU (100V AC to 250V AC)	
Front Access Version	10-910A-001
Rear Access Version	10-910A-002

Compatibility with Previous PSUs

The 10-910A is now the standard power supply for all System 10/20 units.

The previous PSU was type 10-910/L/H, which is now obsolete. The new versions offer universal voltage operation and improved efficiency with a standard panel width of 2.4 inches. They are electrically compatible with the older 10-910/L/H versions.

Product Customization

Pickering System 10 modules are designed and manufactured on our own flexible manufacturing lines, giving complete product control and enabling simple customization to meet very specific requirements.

Customization can include:

- Different performance specifications

All customized products are given a unique part number, fully documented and may be ordered at any time in the future. Please contact your local sales office to discuss.

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