### RHINO Installation Instructions for PSS24-050 Power Supply

# Automation Direct

#### READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE. KEEP FOR FUTURE REFERENCE.

#### 1. Safety instructions

- To ensure sufficient convection cooling, always maintain a safety distance of ≥ 20 mm [.79in] from all
  ventilated surfaces while the device is in operation.
- The device is not recommended to be placed on low thermal conductive surface, for example, plastics.
- Note that the enclosure of the device can become very hot depending on the ambient temperature and load
  of the power supply. Do not touch the device while it is in operation or immediately after power is turned OFF.
   Risk of burning.
- Do not touch the terminals while power is being supplied. Risk of electric shock.
- Prevent any foreign material, particles or conductors from entering the device through the openings during installation. It can cause electric shock, safety hazard, fire, and/or product failure.
- Warning: When connecting the device, secure GND connection before connecting L and N. When disconnecting the device, remove the L and N connections before removing the GND connection.

#### 2. Device description (Fig. 1)

- (1) Input & Output terminal block connector
- (2) DC voltage adjustment potentiometer
- (3) DC OK control LED (green)

#### 3. Installation of the Device (Fig. 2)

- A. Mounting holes for power supply assembly onto the mounting surface. Power supply shall be mounted on minimum 2 mounting holes using M3 x 0.5 screw minimum 5 mm (0.19in) length.
- B. This surface belongs to customer's system or panel where the power supply is mounted.
- C. Connector.

Use flexible (stranded wire) or solid wire 0.32-3.3 mm $^2$  (AWG 22-12). The torque at the connector shall not exceed 1.3 Nm (11.3 in-lb). The insulation stripping length should not exceed 0.28 in or 7 mm. AutomationDirect P/N BM-00120 lug or equivalent recommended for stranded wire. Refer to figure 3.

#### 4. Installation of Mounting Accessories (Fig. 4)

- Only use M3 screw ≤ 6 mm through the base mounting holes. This is to keep a safety distance between the screw and internal components.
- Recommended mounting tightening torque: 0.4 to 0.8 Nm (3.5 to 7 in-lb).

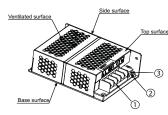
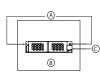


Figure 1 - Device Descriptions





Base Mounting (Vertical)



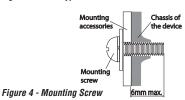
Side Mounting (Horizontal)

Figure 2 - Mounting





Figure 3 - Wire Type



## **Technical Data For PSS24-050**

Fingures	Input (AC)	
1.1.A.M.x. @ 119A.C. 0.7 A.M.x. @ 230AC	Input voltage range	85-264VAC (DC input range 100-375 VDC)
Intensh current   Intension D. (1 ( 25°C) typ.   100	Frequency	47-63Hz (0 Hz @ DC input)
Leskage purent	Nominal current	1.1A Max. @ 115VAC, 0.7A Max. @ 230VAC
Recommendate clinical breaker (Characteristic B)	Inrush current limitation. I2t (+25 °C) typ.	< 30A @ 115VAC, 60A @ 230VAC
Dulpyd (IC)	Leakage current	< 1 mA
Nominal ordynt Woltage / Adjustment range	Recommended circuit breaker (Characteristic B)	16A
SW    Output current   2.1A	Output (DC)	
Compact   Comment   Comm	Nominal output Voltage / Adjustment range	24VDC / 22-28VDC
ASSON_NEW   Comment values	Output power	50W
Start-up lime	Output current	2.1A
Hold-sp lime	PARD (ripple and noise) (20MHz)	<150mVpp (@nominal values)
Rise time	Start-up time	<2500ms@100% load (25°C [77°F]) and typical line input
Sefficiency	Hold-up time	> 15ms @ 115VAC, >80ms @ 230VAC with 50W load (25°C [77°F])
Line regulation	Rise time	< 30ms @ 100% load (25°C [77°F])
Load regulation	Efficiency	> 86% (typical)
Aluminium (Al1100)	Line regulation	< 0.5% typical (@ 85-264VAC input, 100% load)
Aluminium (Al1100)   Dimensions (L x W x H)	Load regulation	< 1% typical (@ 85-264VAC input, 0-100% load)
Dimensions (L x W x H)   128 mm x 97 mm x 38 mm (5.04 in x 3.82 in x 1.50 in)	General Data	2000
Weight   D.255 kg (0.56 lb)	Case cover	Aluminium (Al1100)
MTBF	Dimensions (L x W x H)	128 mm x 97 mm x 38 mm (5.04 in x 3.82 in x 1.50 in)
Noise	Weight	0.255 kg (0.56 lb)
Cooling         Convection           Input/Output terminal         Terminal block 5 Pin rated 300V/20A           Wire size / torque         0.32-3.3 mm² (AWG 22-12) / 1.3 Nm (11.3 in-lb)           Input/Output wire         AWG22-12           Shock test         30g half sine, 3 time per direction, 6 directions, per IEC60068-2-27           Vibration         10 to 150Hz, 5g, 20 min. each axis per IEC60068-2-6           Safety / Environmental         FCC Title 47, Class B/EN55022; CISPR22, Class B           Immunity         EN 61000-4-2,1995; EN61000-4-3,1998; EN61000-4-4,1995; IEC61000-4-5,1995; EN61000-4-6,1996; EN61000-4-8 or IEC61000-4-12 or IEEE C62-41; EN61000-3-2,1994           Voltage dips         Conform to EN61000-4-11           Galvanic isolation         Input to Output: 3KVAC, Input to Ground: 0.5KVAC           Approvals         UR/CUR recognized to UL60950-1 and CSA C222 No. 60950-1; CB test certificate and report to IEC60950-1, CE (EMC and Low Voltage directive)           FOR Extracting temperature         -10 °C to +70 °C* (14°F to 158°F)           Storage temperature         -25 °C to +48 °C (-13°F to 188°F)	MTBF	> 700,000 hrs.
Input/Output terminal   Terminal block 5 Pin rated 300V/20A	Noise	Sound pressure level (SPL) < 40 dBA
Wire size / torque         0.32-3.3 mm² (AWG 22-12) / 1.3 Nm (11.3 in-lb)           Input/Output wire         AWG22-12           Shock test         30g half sine, 3 time per direction, 6 directions, per IEC60068-2-27           Vibration         10 to 150Hz, 5g, 20 min. each axis per IEC60068-2-6           Safety / Environmental         FCC Title 47, Class B/EN55022;CISPR22, Class B           EMC / Emissions         FCC Title 47, Class B/EN55022;CISPR22, Class B           Immunity         EN 61000-4-2,1995; EN61000-4-3,1996; EN61000-4-6,1996; EN61000-4-8 or IEC61000-4-12 or IEEE 662.41; EN61000-3-2,1994           Voltage dips         Conform to EN61000-4-11           Galvanic isolation         Input to Output : 3KVAC, Input to Ground : 1,5KVAC, Output to Ground : 0,5KVAC           Approvals         UR/cUR recognized to UL60950-1 and CSA C22.2 No. 60950-1; CB test certificate and report to IEC60950-1, CE (EMC and Low Voltage directive)           ROHS Compliant         Yes           Operating temperature         -10 °C to +70 °C" (14°F to 158°F)           Storage temperature         -25 °C to +85 °C (-13°F to 185°F)	Cooling	Convection
Input/Output wire   AWG22-12     Shock test   30g half sine, 3 time per direction, 6 directions, per IEC60068-2-27     Vibration   10 to 150Hz, 5g, 20 min. each axis per IEC60068-2-6     Safety / Environmental     EMC / Emissions   FCC Title 47, Class B/EN55022; CISPR22, Class B     Immunity   EN 61000-4-2,1995; EN61000-4-3,1998; EN61000-4-4,1995; IEC61000-4-5,1995; EN61000-4-8 or IEC61000-4-12 or IEEE C62.41; EN51000-3-2,1994     Voltage dips   Conform to EN61000-4-11     Galvanic isolation   Input to Output: SKVAC, Input to Ground : 0.5KVAC     UR/cUR recognized to UL60950-1 and CSA C22.2 No. 60950-1;     CB test certificate and report to IEC60950-1, CE (EMC and Low Voltage directive)     CB test certificate and report to IEC60950-1, CE (EMC and Low Voltage directive)     Ves   Operating temperature   -10 °C to +70 °C" (14°F to 158°F)     Storage temperature   -25 °C to +85 °C (-13°F to 185°F)	Input/Output terminal	Terminal block 5 Pin rated 300V/20A
Shock test   30g half sine, 3 time per direction, 6 directions, per IEC60068-2-27	Wire size / torque	0.32-3.3 mm <sup>2</sup> (AWG 22-12) / 1.3 Nm (11.3 in-lb)
Vibration         10 to 150Hz, 5g, 20 min. each axis per IEC60068-2-6           Satety / Environmental         FCC Title 47, Class B/EN55022; CISPR22, Class B           EMC / Emissions         FCC Title 47, Class B/EN55022; CISPR22, Class B           Immunity         EN 61000-4-2,1995; EN61000-4-3,1998; EN61000-4-4,1995; EC61000-4-5,1995; EN61000-4-5,1996; EN61000-4-8 or IEC61000-4-12 or IEEE C62 41; EN61000-3-2,1994           Voltage dips         Conform to EN61000-4-11           Galvanic isolation         Input to Output : 3KVAC, Input to Ground : 1.5KVAC, Output to Ground : 0.5KVAC           Approvals         UR/cUR recognized to UL60950-1 and CSA C22.2 No. 60950-1; CB test certificate and report to IEC60950-1, CE (EMC and Low Voltage directive)           ROHS Compliant         Yes           Operating temperature         -10 °C to +70 °C" (14°F to 158°F)           Storage temperature         -25 °C to +85 °C (-13°F to 185°F)	Input/Output wire	AWG22-12
Safety / Environmental           EMC / Emissions         FCC Title 47, Class B/EN55022; CISPR22, Class B           Immunity         EN 61000-4-2,1995; EN61000-4-3,1996; EN61000-4-4,1995; EN61000-4-6,1996; EN61000-4-8 or IEC61000-4-12 or IEEE C62.41; EN61000-3-2,1994           Voltage dips         Conform to EN61000-4-11           Galvanic isolation         Input to Output : 3KVAC, Input to Ground : 0.5KVAC           Approvals         UR/cUR recognized to UL60950-1 and CSA C22.2 No. 60950-1; CB test certificate and report to IEC60950-1, CE (EMC and Low Voltage directive)           COMPSIANT OF C	Shock test	
EMC / Emissions   FCC Title 47, Class B/EN55022;CISPR22, Class B	Vibration	10 to 150Hz, 5g, 20 min. each axis per IEC60068-2-6
EN 61000-4-2,1995; EN61000-4-3,1998; EN61000-4-3,1995; EN61000-4-5,1995; EN61000-4-6,1996; EN61000-4-8 or   EC 61000-4-12 or   IEEE C62 41; EN51000-3-2,1994	Safety / Environmental	
Initiality   IEC61000-4-12 or IEEE C62.41; EN61000-3-2,1994	EMC / Emissions	FCC Title 47, Class B/EN55022;CISPR22, Class B
Input to Output : 3KVAC, Input to Ground : 1.5KVAC, Output to Ground : 0.5KVAC	Immunity	EN 61000-4-2,1995; EN61000-4-3,1998; EN61000-4-4,1995; IEC61000-4-5,1995; EN61000-4-6,1996; EN61000-4-8 or IEC61000-4-12 or IEEE C62.41; EN61000-3-2,1994
Input to Output : 3KVAC, Input to Ground : 1.5KVAC, Output to Ground : 0.5KVAC	Voltage dips	Conform to EN61000-4-11
Approvals  UR/cUR recognized to UL60950-1 and CSA C22.2 No. 60950-1; CB test certificate and report to IEC60950-1, CE (EMC and Low Voltage directive)  (E VOI 15 E198298  ROHS Compliant Operating temperature  1-10 °C to +70 °C" (14°F to 158°F)  Storage temperature  2-25 °C to +85 °C (-13°F to 185°F)	Galvanic isolation	
RoHS Compliant         Yes           Operating temperature         -10 °C to +70 °C* (14°F to 158°F)           Storage temperature         -25 °C to +85 °C (-13°F to 185°F)	Approvals	UB/cUB recognized to UI 60950-1 and CSA C22.2 No. 60950-1
RoHS Compliant         Yes           Operating temperature         -10 °C to +70 °C* (14°F to 158°F)           Storage temperature         -25 °C to +85 °C (-13°F to 185°F)		(E ROHS C TUS
Operating temperature         -10 °C to +70 °C* (14°F to 158°F)           Storage temperature         -25 °C to +85 °C (-13°F to 185°F)	RoHS Compliant	
Storage temperature -25 °C to +85 °C (-13°F to 185°F)	Operating temperature	-10 °C to +70 °C* (14°F to 158°F)
	Storage temperature	
	Humidity at +25 °C, no condensation	

<sup>\*</sup> Operating to 70 °C (158° F) possible with a linear derating to half power from 50 °C to 70 °C (122° F to 158° F)