

PS3042 DATA SHEET

HIGH VOLTAGE POWER SUPPLIES



SENS - TECH

DESCRIPTION

The PS3042P & PS3042N 4W power supplies provide a closely regulated and virtually ripple free high voltage output.

FEATURES & APPLICATIONS

- Recommended for photomultiplier & electron multipliers
- good stability, low HF ripple and low LF noise
- output voltage / current monitors and optional status LED
- constant current mode (externally programmable)
- positive and negative output types



SPECIFICATION

INPUT VOLTAGE / CURRENT +22V to 28V / <300mA at full output & load	OUTPUT POLARITY fixed (see ordering information)
OUTPUT VOLTAGE see output ratings table (other voltages to special order)	NOISE (0.1HZ TO 10HZ) 6mV peak to peak
LINE REGULATION <20ppm / 1V of input voltage change	LOAD REGULATION <20ppm for zero to maximum rated load at maximum rated voltage
SHORT TERM DRIFT <15ppm during any 15 min period (after 1 hour warm up)	LONG TERM DRIFT <50ppm during 8 hours (after 1 hour warm up)
OUTPUT VOLTAGE CONTROL 0 to +10V = 0 to 100% of rated output voltage ($\pm 2\%$), input Z = 1M Ω	OUTPUT CURRENT CONTROL (see pin 9) 0V to reference voltage = 0 to 105% of rated output current ($\pm 2\%$)



SPECIFICATION CONTINUED...

Reference

FIXED REFERENCE

+10.5V @ 3mA ± 50 ppm / °C

VARIABLE REFERENCE

10 turn potentiometer

Monitors

VOLTAGE MONITOR

1000:1 voltage ($\pm 2\%$)

output Z = 3k Ω

(5V or 10V monitor to special order)

CURRENT MONITOR

0 to +10V = 0 to 100% of output

current ($\pm 2\%$), output Z = 10k Ω

STATUS LED (OPTION)

green = voltage mode, current < limit

red = current mode, voltage < limit

orange = overload

Protection

CURRENT (CONSTANT CURRENT MODE, PIN 9)

output current is limited to <115%

this may be set to a lower value, input Z = 1M Ω

FLASHOVER

protected against intermittent flashover to ground

INPUT

protected against input reversal

Temperature

OPERATING

0 to +50°C

STORAGE

-5 to +70°C

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SPECIFICATION CONTINUED...

Connections (input)

PIN OPTION (P) 9 off 1mm pins, 0.1" pitch	CONNECTOR OPTION (C) Molex 4 & 5 way, 0.1" pitch
LEAD OPTION (L) 8 off 24AWG leads 0.5m long	USE MOLEX HOUSINGS: 22-01-2045 & 22-01-2055

Package size

DIMENSIONS (P & C) 95.3mm x 45.8mm x 15mm	DIMENSIONS (L) 80.9mm x 45.8mm x 24mm
WEIGHT 100G	

OUTPUT RATINGS

OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE (HF) (peak to peak at maximum output and load)	TEMPERATURE COEFFICIENT (<50ppm to special order)
<100V to 3kV	0 to 1.3mA	<15mV	100ppm/ °C

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ORDERING INFORMATION

INPUT VOLTAGE	OUTPUT VOLTAGE	PART NUMBER
24V	+3kV	PS3042/24P100C
24V	+3kV	PS3042/24N100C
as above with PCB pins option		PS3042/24x100P
as above with input leads option		PS3042/24x100L

Part number formation example:

PS3042/24P100L, is broken down (bold/underline):

Power, Supply, maximum output voltage is 3000V, wattage is 4W, generation 2nd, nominal input volt-age is 24V, output polarity is Positive, temperature-coefficient is 100ppm/°C, control & input are Leads.

CONNECTIONS

PIN NO.	LEAD COLOUR (0.5M)	ASSIGNMENT
1	red	power input (+24V)
2	black	power return
3	grey	signal ground
4	brown	fixed reference output
5	blue	voltage control input
6	green	variable reference output
7	pink	voltage monitor output
8	white	current monitor output
9	n/c (option)	current control input (internal 1MΩ pull-up to pin4)
output		un-terminated coaxial cable, 0.5m long (RG174)

