



- VOLTAGE RANGES FROM 62.5V TO 6KV
- FIXED NEGATIVE OR POSITIVE POLARITY
- AVAILABLE OUTPUT POWER INCREMENTS OF 4, 20 AND 30 WATTS
- VOLTAGE/CURRENT REGULATION WITH AUTOMATIC CROSSOVER CONTROL
- VOLTAGE AND CURRENT MONITOR SIGNALS
- FULLY ARC AND SHORT CIRCUIT PROTECTED
- PRECISION +5V REFERENCE OUTPUT
- COMPREHENSIVE STANDARD COMPREHENSIVE

Wisman' s MU Series of Printed circuit board mountable , high voltage modules offer a form, fit and function replacement for presently available commercially made units, while providing additional features and benefits at competitive pricing . Utilizing proprietary power conversion technology ,these SMT based high voltage modules provide improved performance reliability and easier system integration at a low cost when compared to the competition.

TYPICAL APPLICATIONS

Radiation counter
PMT, MCP
Electron Beam / Ion beam
Mass spectrometry
Electrostatic chuck
High voltage testing

OPTIONS

C Option:Fast Rise Time Applications
T Option:Low Temperature Coefficient
A Option: Adapter Board
B Option:Terminal Block
M Option: Mu Metal Shield
S Option: RF Tight Shielded Can
E Option: Eared Mounting Plate
E2 Option: Eared Mounting Plate

SPECIFICATIONS

Input:
12vdc for 4w,24vdc for 10w,20w and 30w.
Nominal voltage range:
11vdc to 16vdc for4w and 23vdc to 30vdc for 10w,20w, 30w
Input current: (typical)

Disabled: 30mA
No load: 90mA
Full load:
4 watt units: 0.5A
10,20 watt units: 1A
30 watt units: 1.5A

Efficiency:

80-85%, typical.

Voltage Regulation:

Line: <0.01%
Load:<0.01%

Current Regulation:

Load:<0.01%
Line:<0.01%

Stability:

0.01% per 8 hours, 0.02%Per day after 30 min. warm up

Accuracy:

2% on all programming and monitoring , except I sense 10%

Temperature Coefficient :(typical)

Standard: 100ppm/° C
Optional: 25ppm/° C(T Option)

Environmental:

Temperature range
Operating: -40° C to 65° C case temperature
Storage:-55° C to 85° C non operational

Cooling :

Convection coded ,typical.30 watt units operating at full power Might require additional cooling to maintain case temperature Below 65° C .methods may include :forced air cooling ,use of Heat sink or metal case, etc. It is the user's responsibility to maintain the case temperature below 65° C. Damage to the power Supply due to inadequate cooling is considered misuse

Dimensions:

2.96" Lx1.49" Wx 1.12" H
(74.6mmx38.1mmx28.5mm)

MU SELECTION TABLE - 4W

Output V	Output Current	Model numbe	Low Freq Ripple Vp-p 1khz 1Mhz	High Freq Ripple Vp-p 1khz 1Mhz	Output Capacitance	Arc limiting Resistance	I Sense Scaling Full scale signal	High Voltage Driver Resistance
0 to 62.5V	64mA	MU0.062*4	0.030	0.028	8.8uF	1Ω	1.5V	0.5MΩ
0 to 125V	32mA	MU0.125*4	0.045	0.014	8.8uF	4.4Ω	2.75V	0.88MΩ
0 to 250V	16mA	MU0.25*4	0.034	0.017	2.2uF	20Ω	4.9V	1.50MΩ
0 to 500V	8mA	MU0.5*4	0.063	0.040	0.8uF	94Ω	10.1V	2.65MΩ
0 to 1KV	4mA	MU1*4	0.025	0.015	0.2uF	470Ω	10.75V	20MΩ
0 to 2KV	2mA	MU2*4	0.022	0.015	0.097uF	1KΩ	10.4V	30MΩ
0to 4KV	1mA	MU4*4	0.019	0.017	0.012uF	9.4KΩ	11.1V	100MΩ
0 to 6KV	0.67mA	MU6*4	0.016	0.015	0.007uF	20KΩ	9.9V	150MΩ

MU SELECTION TABLE - 10W

Output V	Output Current	Modelnumbe	Low Freq Ripple Vp-p 1khz 1Mhz	High Freq Ripple Vp-p 1khz 1Mhz	Output Capacitance	Arc limiting Resistance	I Sense Scaling Full scale signal	High Voltage Driver Resistance
0 to 62.5V	160mA	MU0.062*10	0.060	0.088	8.8uF	1Ω	330mV	0.5MΩ
0 to 125V	80mA	MU0.125*10	0.067	0.044	8.8uF	4.4Ω	675mV	0.88MΩ
0 to 250V	40mA	MU0.25*10	0.035	0.019	2.2uF	20Ω	1.135V	1.50MΩ
0 to 500V	20mA	MU0.5*10	0.041	0.040	0.8uF	94Ω	2.25V	2.65MΩ
0 to 1KV	10mA	MU1*10	0.039	0.095	0.2uF	470Ω	4.35V	20MΩ
0 to 2KV	5mA	MU2*10	0.029	0.016	0.097uF	1KΩ	6.6V	30MΩ
0to 4KV	2.5mA	MU4*10	0.023	0.028	0.012uF	9.4KΩ	6.65V	100MΩ
0 to 6KV	1.67mA	MU6*10	0.017	0.018	0.007uF	20KΩ	6.74V	150MΩ

MU SELECTION TABLE - 20W

Output V	Output Current	Modelnumbe	Low Freq Ripple Vp-p 1khz 1Mhz	High Freq Ripple Vp-p 1khz 1Mhz	Output Capacitance	Arc limiting Resistance	I Sense Scaling Full scale signal	High Voltage Driver Resistance
0 to 62.5V	320mA	MU0.062*20	0.060	0.088	8.8uF	1Ω	330mV	0.5MΩ
0 to 125V	160mA	MU0.125*20	0.067	0.044	8.8uF	4.4Ω	675mV	0.88MΩ
0 to 250V	80mA	MU0.25*20	0.035	0.019	2.2uF	20Ω	1.135V	1.50MΩ
0 to 500V	40mA	MU0.5*20	0.041	0.040	0.8uF	94Ω	2.25V	2.65MΩ
0 to 1KV	20mA	MU1*20	0.039	0.095	0.2uF	470Ω	4.35V	20MΩ
0 to 2KV	10mA	MU2*20	0.029	0.016	0.097uF	1KΩ	6.6V	30MΩ
0to 4KV	1mA	MU4*20	0.023	0.028	0.012uF	9.4KΩ	6.65V	100MΩ
0 to 6KV	3.3mA	MU6*20	0.017	0.018	0.007uF	20KΩ	6.74V	150MΩ

MU SELECTION TABLE - 30W

Output V	Output Current	Model numbe	Low Freq Ripple Vp-p 1khz 1Mhz	High Freq Ripple Vp-p 1khz 1Mhz	Output Capacitance	Arc limiting Resistance	I Sense Scaling Full scale signal	High Voltage Driver Resistance
0 to 62.5V	480mA	MU0.062*30	0.075	0.112	8.8uF	1Ω	500mV	0.5MΩ
0 to 125V	240mA	MU0.125*30	0.075	0.056	8.8uF	4.4Ω	930mV	0.88MΩ
0 to 250V	120mA	MU0.25*30	0.055	0.031	2.2uF	20Ω	1.65V	1.50MΩ
0 to 500V	60mA	MU0.5*30	0.085	0.041	0.8uF	94Ω	3.4V	2.65MΩ
0 to 1KV	30mA	MU1*30	0.032	0.171	0.2uF	220Ω	6.5V	20MΩ
0 to 2KV	15mA	MU2*30	0.031	0.112	0.097uF	470Ω	9.85V	30MΩ
0to 4KV	7.5mA	MU4*30	0.028	0.071	0.012uF	4.4KΩ	9.85V	100MΩ
0 to 6KV	5mA	MU6*30	0.020	0.051	0.007uF	9.4KΩ	10V	150MΩ

17 PIN INTERFACE CONNECTOR

PIN	SIGNAL	PARAMETERS
1	Power Ground Return	+12vdc or +24vdc power return/ HV return
1A	Signature resistor	Unique identifying resistor connect to ground
2	+Power input	+12Vdc or +24Vdc power input
2A	NC	
3	I sense	See I sense text and tables
3A	I Mon	0 to 4.64vdc=0 to 100% rate output Zout <10kΩ
4	Enable input	Low(<0.7v I sink @ 1mA)+HV OFF High (open or > 2v)+HV ON
4A	V Mon	0 to 4.64vdc=0 to 100% rate output Zout <10kΩ
5	Signal ground	Signal ground
5A	I pgm	0 to 4.64vdc=0 to 100% rate output Zin >47kΩ Leave open for preset current limit @103%off rated output current
6	Remote Adjust	Positive polarity unit 0 to 4.64vdc=0 to 100% rate voltage Zin >1MΩ negative polarity unit 5 to 0.36vdc=0 to 100% rate voltage Zin >100KΩ Leave open if Pin 6 is used for programming
6A	V pgm	0 to 4.64vdc=0 to 100% rate voltage Zin >100kΩ Leave open if Pin 6 is used for programming
7	+5v reference output	+5vdc ±0.5%, 50ppm/° C.Zout =475Ω
8	HV ground return	HV ground return
9	E out Monitor	10:1 rate for models bellow 1kv 100:1 rate for models bellow 1kv above polarity of voltage monitor signal equals polarity of unit, accuracy is ±2%100ppm/° C calibrated with DVM with 10MΩ input impedance
10	HV output	HV output
11	HV output	HV output

STANDARD INTERFACE CONNECTOR

PIN	SIGNAL	PARAMETERS
1	Power Ground Return	+12vdc or +24vdc power return/ HV return
2	+ power input	+12vdc and +24vdc power input
3	I sense	See I sense text and tables for details
4	Enable input	Low(<0.7v I sink @ 1mA)+HV OFF High (open or > 2v)+HV ON
5	Signal ground	Signal ground
6	Remote adjust	Positive polarity unit 0 to 4.64vdc=0 to 100% rate voltage Zin >1MΩ negative polarity unit 5 to 0.36vdc=0 to 100% rate voltage Zin >100KΩ
7	+5v reference output	+5vdc ±0.5%, 50ppm/° C.Zout =475Ω
8	HV ground return	HV ground return
9	E out Monitor	10:1 rate for models bellow 1kv 100:1 rate for models bellow 1kv above polarity of voltage monitor signal equals polarity of unit, accuracy is ±2%100ppm/° C calibrated with DVM with 10MΩ input impedance
10	HV output	HV output
11	HV output	HV output

ORDERING INFORMATION

Voltage	0 to 62.5Vdc	0.062
	0 to 125Vdc	0.125
	0 to 250Vdc	0.25
	0 to 500Vdc	0.5
	0 to 1000Vdc	1
	0 to 2000Vdc	2
Polarity	0 to 4000Vdc	4
	0 to 6000Vdc	6
Power	Positive	P
	Negative	N
	Watts Output	4
	Watts Output	10
	Watts Output	20
	Watts Output	30

STANDARD ORDERING EXAMPLE

MU 1 N 20
 Model Voltage Polarity Power

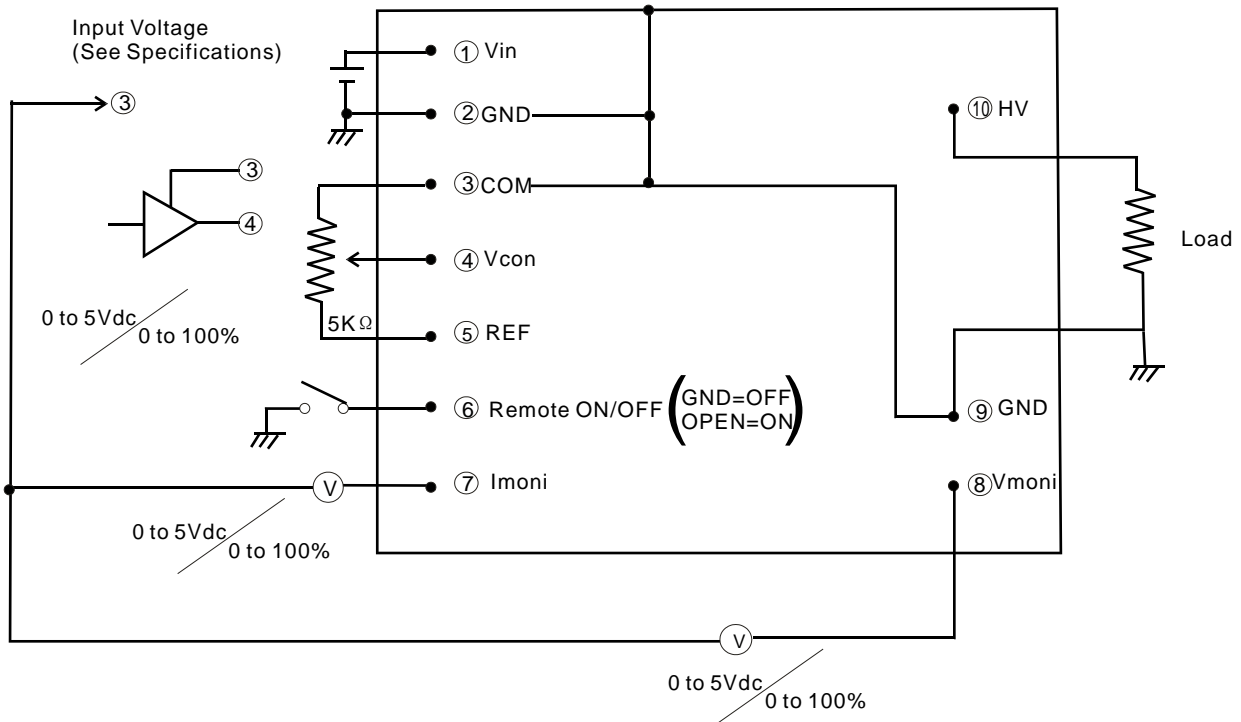
OPTION ORDERING INFORMATION

OPTION	OPTION CODE
Legacy	L
Fast Rise Time	C
Low Temperature Coefficient	T
Adapter Board	A
Terminal Block	B
MU Metal Shield	M
RF Tight Shielded Can	S
Eared Mounting Plating	E
Eared Mounting Plate/Adapter Board	E2

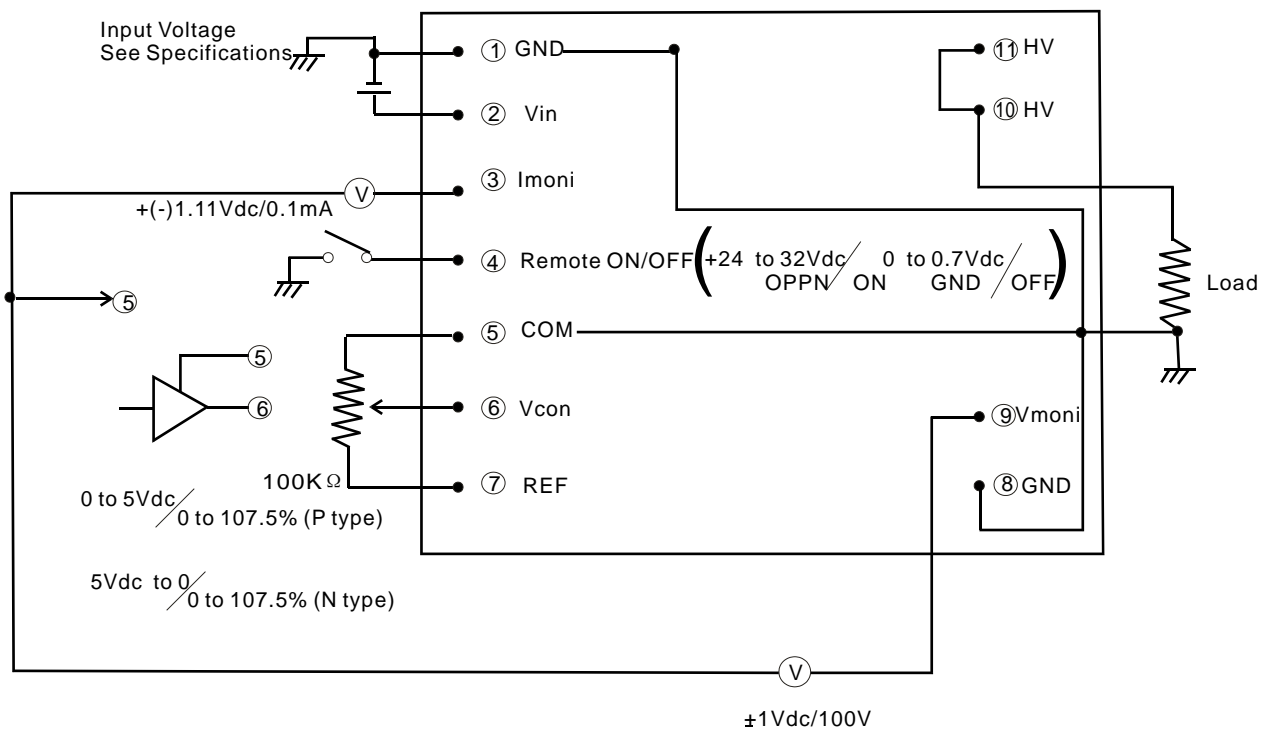
OPTION ORDERING EXAMPLE

MU 4 P 30 / L / E
 Model Voltage Polarity Power Option Option

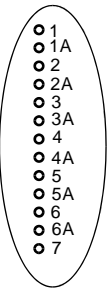
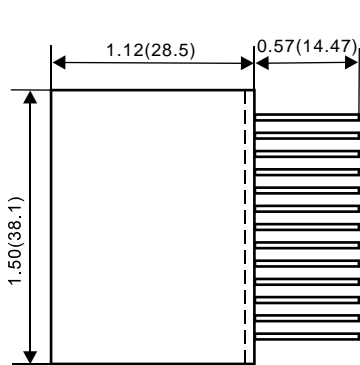
11 PIN Standard interface connection diagram



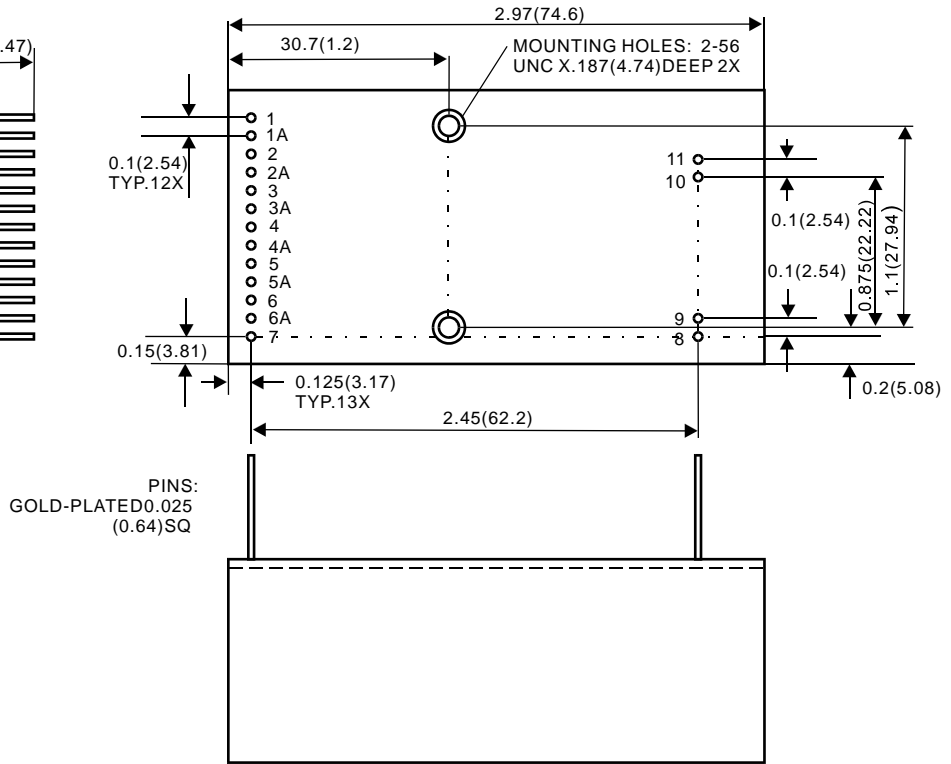
17 PIN interface connection diagram



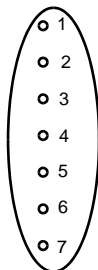
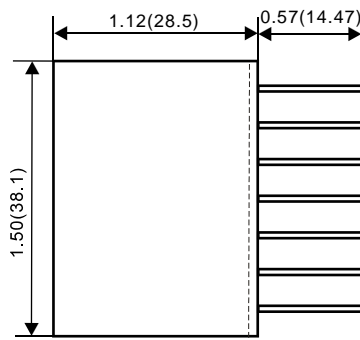
17 PIN interface



PINOUT DETAIL



11 PIN Standard interface



PINOUT DETAIL

