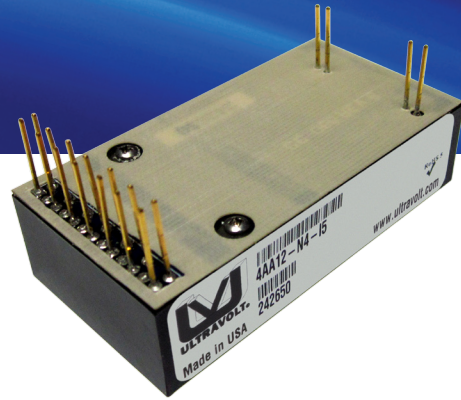


-I5 OPTION & -I10 OPTION

Enhanced Interface Options



The -I5 and -I10 enhanced interface options further standardize and simplify the process of interfacing control electronics, both analog and digital, to an UltraVolt high voltage power supply. The interface features fixed ranges of calibrated control voltages and buffered monitor signals, eliminating the need for external scaling resistors or op-amps to achieve standard control ranges. Therefore, output control is always 0 to +5VDC (-I5) or 0 to +10VDC (-I10) for 0 to full scale output of positive or negative models. Likewise, output monitors are always 0 to +5VDC (-I5) or 0 to +10VDC (-I10) for 0 to full scale output. The current monitor is nulled to eliminate currents related to HV regulation and monitoring circuits. In conjunction with features such as constant current programming and constant voltage/constant current (CV/CC) auto crossover critical applications can be supported without additional circuitry.

The -I5 Option and -I10 Option are available on AA Series, High Power C Series, and 10A Series modules. Either option fits within the standard package size of the modules. On the AA Series and 10A Series models a double row header replaces the single row of pins.

For additional information on interfacing with the -I5 Option and -I10 Option, please review the [-I5/-I10 Options Technical Note](#).

- Buffered, low output impedance and nulled current monitor
- Buffered, low output impedance voltage monitor
- Programming accuracy of $\pm 1\%$
- 0 to +5V or 0 to +10V remote programming for all polarities
- 0 to +5V or 0 to +10V remote programming for all modes
- +5V or +10V reference, $\pm 0.05\%$ PPM/ $^{\circ}\text{C}$
- Constant voltage / constant current (CVCC) auto-crossover
- Current and voltage mode indicators

Typical applications for the -I5 Option or -I10 Option include: bias supplies, detectors, piezos, amplifiers, photomultiplier tubes (PMT), laser, cap-charging, pulsed power, pulse generators, test equipment, high pot testers, automated test equipment (ATE), and electrostatic precipitators.

PARAMETER	CONDITIONS	MODELS		UNITS
OUTPUT		-I5	-I10 (24Vin ONLY)	
Current Monitor Scale Factor	0 to Full Scale	0 to +5 $\pm 1\%$	0 to +10 $\pm 1\%$	VDC
Voltage Monitor Scale Factor	0 to Full Scale	0 to +5 $\pm 1\%$	0 to +10 $\pm 1\%$	VDC
PROGRAMMING & CONTROLS		ALL TYPES		
Input Impedance	Nominal Input	10M Ω to GND	10M Ω to GND	-
Adjust Resistance	Typical Potentiometer Values	10K to 100K (Pot across Vref. & Signal GND, Wiper to Adjust)		Ω
Adjust Logic	0 to 100%	0 to +5.00	0 to +10.00	VDC
Reference Voltage	T= $+25^{\circ}\text{C}$	+ 5.00 $\pm 0.1\%$	+10.00 $\pm 0.1\%$	VDC
Enable/Disable (ON/OFF)		0 to +0.5 Disable, +2.4 to 32 Enable (Default Open Circuit= Disabled)		VDC
Current Mode Indicator		Open drain indicator, active (pulled low) when unit is in current regulation, 100mA max current sink		-
Voltage Mode Indicator		Open drain indicator, active (pulled low) when unit is in voltage regulation, 100mA max current sink		-

*All other specifications are in accordance with the specific model base datasheet. Specifications are subject to change without notice.

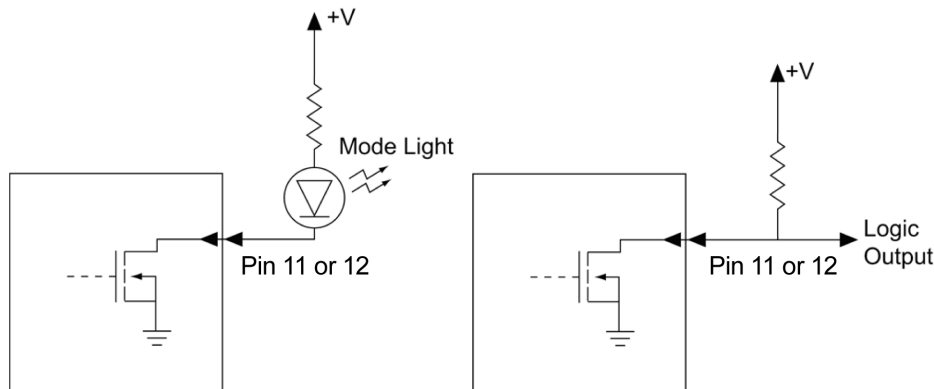


Figure 1: Typical Mode Indicator on the -I5 Option and -I10 Option



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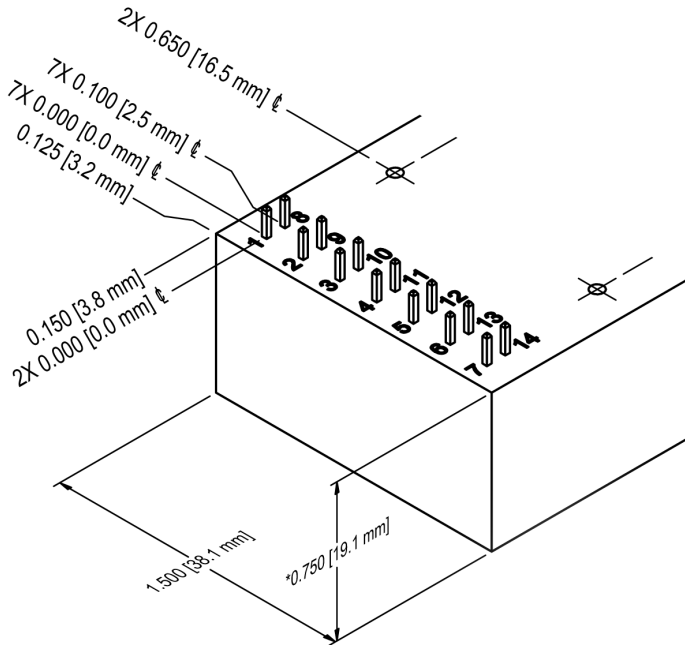
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-I5 OPTION & -I10 OPTION

Enhanced Interface Options

I5/I10 ON AA SERIES & 10A SERIES



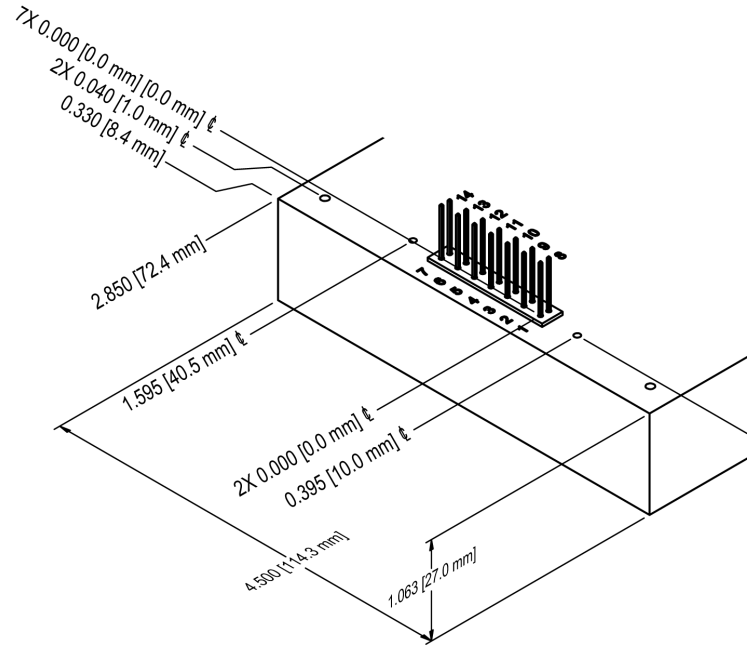
Downloadable drawings (complete with mounting & pin information) and 3D models are available online.



Non-RoHS compliant units are available. Please contact the factory for more information.

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I5/I10 ON HIGH POWER C SERIES



CONNECTIONS

PIN	FUNCTION
1	Power Ground
2	Input Power
3	Buffered Current Monitor
4	Enable (ON/OFF)
5	Signal Ground
6	Voltage Programming
7	Reference Voltage
8	Power Ground/HV Return
9	Input Power
10	N/C
11	Current Mode Indicator
12	Voltage Mode Indicator
13	Current Programming
14	Buffered Voltage Monitor
15 & 16	HV Ground Return
17 & 18	HV Output

ORDERING INFORMATION

5V Control & Monitors	-I5
10V Control & Monitors (24Vin only)	-I10

*The -I5 option and -I10 option are compatible with all standard module options.

Example: **1AA24-P20-I10**

Option (Enhanced Interface)



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