VI-200 and VI-J00 Family DC-DC Converters and Configurable Power Supplies

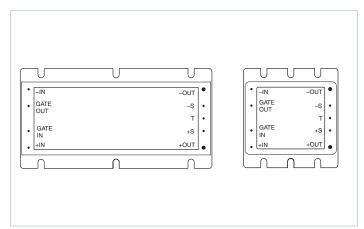


Figure 2.1 — VI-/MI-200, VI-/MI-J00

-*IN*, +*IN*: DC voltage inputs. See Tables 2.1 and 2.2 for nominal input voltages and ranges for the VI-/MI-200 and VI-/MI-J00 Family converter modules (data sheets contain Low Line, 75% Max. Power and Transient ratings).

VI-200, VI-J00 Input Voltage Ranges					
Designator	Low	Nominal	High		
0	10V	12V	20V		
V	10V	12/24V	36V		
1	21V	24V	32V		
W	18V	24V	36V		
2	21V	36V	56V		
3	42V	48V	60V		
Ν	36V	48V	76V		
4	55V	72V	100V		
Т	66V	110V	160V		
5	100V	150V	200V		
6	200V	300V	400V		
7	100V	150/300V	375V		

Table 2.1 — VI-200, VI-J00 input voltage ranges

MI-200, MI-J00 Input Voltage Ranges						
Designator	Low	Nominal	High			
2	18V	28V	50V			
5	100V	155V	210V			
6	125V	270V	400V			
7	100V	165V	310V			

Table 2.2 — MI-200, MI-J00 input voltage ranges

GATE OUT: The pulsed signal at the GATE OUT pin of a regulating Driver module is used to synchronously drive the GATE IN pin of a companion Booster module to effect power sharing between the Driver and the Booster. Daisy-chaining additional Boosters (connecting GATE OUT of one unit to GATE IN of a succeeding unit) leads to a virtually unlimited power expansion capability.

GATE IN: The GATE IN pin on a Driver module may be used as a logic Enable / Disable input. When GATE IN is pulled low (<0.65V at 6mA, referenced to –VIN), the module is turned off; when GATE IN is floating (open collector), the module is turned on. The open circuit voltage of the GATE IN pin is less than 10V.

–OUT, +OUT: DC output pins. See the Table 2.3 and 2.4 below for output voltages and power levels of VI-/MI-200 and VI-/MI-J00 Family converter modules.

VI-200, VI-J00 Standard Output Voltages					
Designator	Output	Designator	Output		
Z	2V	2	15V		
Y	3.3V	Ν	18.5V		
0	5V	3	24V		
Х	5.2	L	28V		
W	5.5V	J	36V		
V	5.8V	К	40V		
Т	6.5V	4	48V		
R	7.5V	Н	52V		
М	10V	F	72V		
1	12V	D	85V		
Р	13.8V	В	95V		

Table 2.3 — VI-200, VI-J00 output voltage designators

Output	Power Level		Power Level	
Voltage	VI-200	VI-J00	High	MI-J00
<5V _{DC}	10 – 40A	5 – 20A	10 – 30A	5 – 10A
≥5V _{DC}	50 – 200W	25 – 100W	50 – 100W	10 – 50W

Table 2.4 — Output voltage vs. power level

Special output voltages from 1 – 95V; consult factory.

T (*TRIM*): Provides fixed or variable adjustment of the module output.

Trimming Down: Allows output voltage of the module to be trimmed down, with a decrease in efficiency. Ripple as a percent of output voltage goes up and input range widens since input voltage dropout (loss of regulation) moves down.

Trimming Up: Reverses the above effects.

-S, +S (-SENSE, +SENSE): Provides for locating the point of optimal voltage regulation external to the converter. Output OVP in VI-/MI-200 will trip if remote sense compensates output voltage measured at output pins above 110% of nominal. Discrete wire used for sense must be tightly twisted pair. Do not exceed 0.25V drop in negative return; if the voltage drop exceeds 0.25V in the negative return path, the current limit set point will increase. Connect +SENSE to +OUT and -SENSE to -OUT at the module if remote sensing is not desired (Figure 7.4).

