



PVI-CENTRAL-300/300 TL

Magnetek's PVI-CENTRAL-300/300-TL grid-tied systems are designed for large solar applications such as apartment buildings and industrial facilities. Harvest more green with Aurora's Maximum Power Point Tracking (MPPT) algorithm that maximizes energy gleaned under varying light conditions to help reduce thermal energy losses from the inverter's Insulated Gate Bi-polar Transistors (IGBTs).

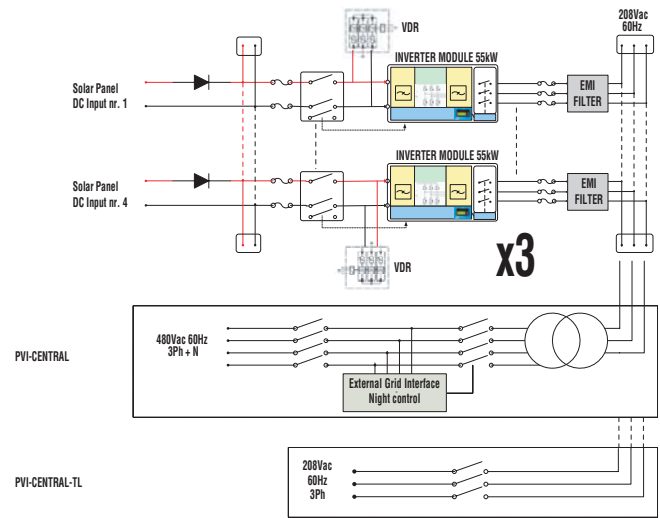
These commercial-grade inverters feature scalability in a common-enclosure package that is delivered pre-configured and pre-tested. In addition to reducing on-site installation wiring and testing, this industry-leading technology provides cost-effective solutions with smaller footprints and increased reliability. Applications flexibility is further enhanced by the availability of models with and without isolation transformers that are self contained within the inverter rack.

The development of the PVI-300/300-TL was in response to the rapidly-growing global demand for environmentally friendly power sources. These higher-wattage commercial-grade photovoltaic inverters demonstrate Magnetek's commitment to introduce industry-leading products addressing the renewable energy market in support of improving the global environment.

BENEFITS

- A broad range of communications options: dial up, ISDN, Ethernet, DSL, GSM, and the optional Aurora® Easy Communication System hardware/software
- Digital Signal Processor (DSP) based controls for self diagnostics and LCD real-time display of operating status
- High conversion efficiency (CEC efficiency 96%)
- Independent modules are configurable in master-slave mode or multi-master mode
- Residential area installation without the need for noise reduction: <54dBa acoustic noise, non-audible 18 kHz switching frequency
- Self-tuning MPPT power curve optimizing the energy harvest
- Simplified maintenance via unobstructed front access to modules and power boards for quick inverter installs
- Reduced sensitivity to a single fault; in case of a component fault, the system keeps operating with 50kW derating
- Five-year warranty extendable to 20 years
- Optional module grounding of (+) leg for application flexibility

BLOCK DIAGRAM 110kW – 330kW



CHARACTERISTICS	PVI-CENTRAL-300 w/transformer	PVI-CENTRAL-300-TL w/o transformer
Input Parameters		
Maximum recommended PV power (kWp), Total (master slave mode) Per Channel (multi-master mode)	345 57.50	345 57.50
Absolute maximum input voltage (Vdc)	600	600
MPPT input voltage range Vdc	330-600(400 nominal)	330-600(400 nominal)
Maximum input current (Adc), Master-slave mode Multi-master mode (per module)	960 160	960 160
Input Reflected Ripple voltage	< 3%	< 3%
Number of DC inputs available (multi-master configuration)	6	6
Input overvoltage protections	6 (1 of each input)	6 (1 of each input)
Output Parameters		
Nominal AC Output Power (kW)	312	312
Nominal AC Output Current (Arms)		
208Vac Version	840	840
480 Vac Version	360	N/A
AC Output Voltage range (Vrms)	3 x 208 +/-10% or 3x480 +/-10%	3 x 208 +/-10%
Nominal AC Frequency (Hz)	50 / 60	50 / 60
Power Factor	1 (@ Pac nominal)	1 (@ Pac nominal)
AC Current Harmonics (THD%)	< 3% (@ Pac nominal)	< 3% (@ Pac nominal)
Inverter Switching Frequency (kHz)	18	18
AC side overvoltage protection	Yes	Yes
Conversion Efficiency		
Peak Efficiency % (@ Vin nom)	96.3%	97.41%
CEC Efficiency % (@ Vin nom) 208	95.5%	97.12%
CEC Efficiency % (@ Vin nom) 480	96.0%	N/A
Environmental Parameters		
Environmental Protection Degree	NEMA 2/NEMA 3R	NEMA 2/NEMA 3R
Operating Temperature Range	-10°C...+50°C	-10°C...+50°C
Relative Humidity (non-condensing)	< 95%	< 95%
General Data		
Auxiliary Voltages Consumption (W)	<0.2% of PACnom	<0.2% of PACnom
Night time losses (W)	<40W	<40W
Local Communication	1x RS485 + 1x RS485 (dedicated to String combiner-Box)	1x RS485 + 1x RS485 (dedicated to String combiner-Box)
Remote Communication (optional)	Aurora Easy Control (Dial-Up, ISDN, Ethernet, DSL, GSM)	Aurora Easy Control (Dial-Up, ISDN, Ethernet, DSL, GSM)
User Interface	2-lines Display (on each inverter module)	2-lines Display (on each inverter module)
Mechanical Characteristics		
Dimensions (WxHxD) (mm) (*) Output Air conduit not included	1250 x 2100(*) x 810+1250x1050(*)x810/ 49.2"x82.6"x31.8"/49.2"x43.3"x31.8"	1250 x 2100(*) x 810/49.2"x82.6"x31.8"
Overall Weight (kg)	1700/3740	1100/2420
55kW module Weight (kg)	65/143	65/143
Required Ambient Air Cooling Flow	6000m ³ /h/10,800 CFM	6000m ³ /h/10,800 CFM
Approvals		
EMC	FCC Part 15	FCC Part 15
CE Compliance	Yes	Yes
Grid connection (pending)	DK5940 Ed. 2.2, VDEW, UL1741, RD1663/2000	DK5940 Ed. 2.2, VDEW, UL1741, RD1663/2000



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