

# Grid-Tied Solar Inverters



## Description

The Eaton Grid-Tied Solar Inverter's offer market leading efficiency and voltage operating range which maximizes energy yield and return on investment for consumers.

Installation time and costs are greatly reduced through integrating the combiner box, AC/DC disconnects, and wire raceway. The design also simplifies service on the unit through a 2-piece modular configuration which allows the wiring box to remain connected and mounted if in the event you need to replace the power module..

- ETL listed (in compliance with UL1741 standards)
- CEC listed (California Energy Commission)

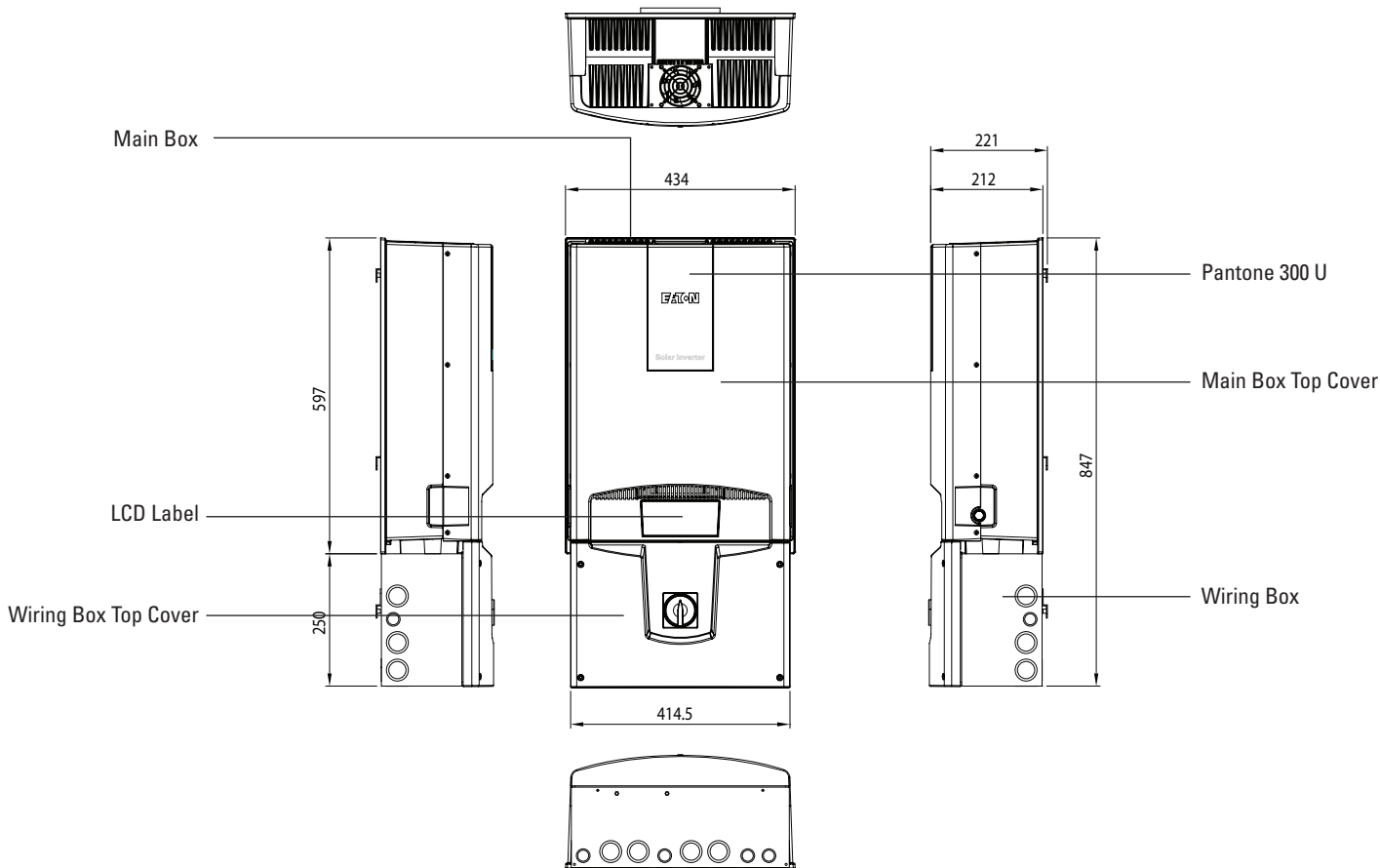
# EATON

*Powering Business Worldwide*

**Table 1.**

Model		PV240		PV250	PV260	PV270																																													
Nominal Power Output		3800W	4000W	5000W	6000W	7000W																																													
Dimension WxHxD (in.)		17.1 x 33.3 x 8.3		17.1 x 33.3 x 8.3 in	17.1 x 33.3 x 8.3 in V	17.1 x 33.3 x 8.3 in																																													
Gross Weight		86 lbs	86 lbs	90 lbs	10 lbs	101 lbs																																													
Input (DC side)	Internal Combiner / Multi-string	Max. number of strings	4		4	4																																													
		Terminal block	(+)x4, (-)x4, (G)x1		(+)x4, (-)x4, (G)x1	(+)x4, (-)x4, (G)x1	(+)x4, (-)x4, (G)x1																																												
		Admissible conductor size	14 ~ 6 AWG		14 ~ 6 AWG	14 ~ 6 AWG	14 ~ 6 AWG																																												
	External Combiner / Single string	Bypass fuse terminal block	(+)x1, (-)x1, (G)x1		(+)x1, (-)x1, (G)x1	(+)x1, (-)x1, (G)x1	(+)x1, (-)x1, (G)x1																																												
Maximum admissible conductor size		4 AWG		4 AWG	4 AWG	4 AWG																																													
Output (AC side)		Terminal block	Terminal block labeled with 1, 2, 3 and G	Terminal block labeled with 1, 2, 3 and G	Terminal block labeled with 1, 2, 3 and G	Terminal block labeled with 1, 2, 3 and G																																													
		Admissible conductor size	10 ~ 6 AWG		10 ~ 6 AWG	10 ~ 6 AWG	10 ~ 6 AWG																																												
		<table border="1"> <tr> <td rowspan="3">GRID STANDARD</td> <td colspan="3"> </td> <td colspan="3"> </td> <td colspan="3"> </td> </tr> <tr> <td colspan="3">208V~/240V-3PH-Δ</td> <td colspan="3">240V-SPLIT-PHASE</td> <td colspan="3">277V-3PH-Y</td> </tr> <tr> <td>TERMINAL</td> <td>1</td><td>2</td><td>3</td><td>⊕</td> <td>1</td><td>2</td><td>3</td><td>⊕</td> <td>1</td><td>2</td><td>3</td><td>⊕</td> </tr> <tr> <td>WIRE</td> <td>L1</td><td>L2</td><td>—</td><td>L3</td> <td>L1</td><td>L2</td><td>N</td><td>G</td> <td>L1</td><td>N</td><td>—</td><td>G</td> </tr> </table>					GRID STANDARD										208V~/240V-3PH-Δ			240V-SPLIT-PHASE			277V-3PH-Y			TERMINAL	1	2	3	⊕	1	2	3	⊕	1	2	3	⊕	WIRE	L1	L2	—	L3	L1	L2	N	G	L1	N	—	G
GRID STANDARD																																																			
	208V~/240V-3PH-Δ			240V-SPLIT-PHASE				277V-3PH-Y																																											
	TERMINAL	1	2	3	⊕	1	2	3	⊕	1	2	3	⊕																																						
WIRE	L1	L2	—	L3	L1	L2	N	G	L1	N	—	G																																							

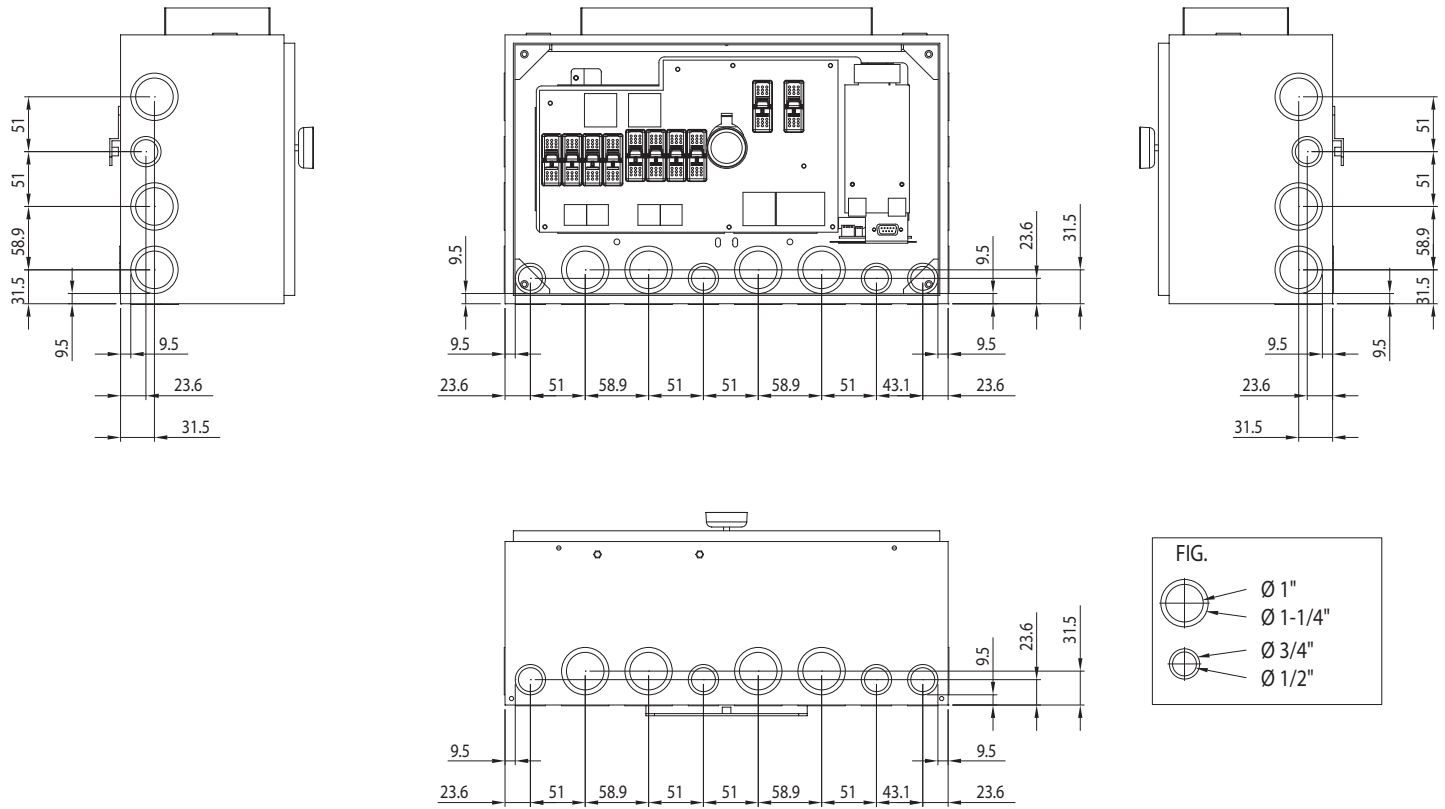
**Product Diagram**



**Table 2.**

Model	PV240	PV250	PV260	PV270
<b>Input (DC)</b>				
Nominal DC voltage	360 V	360 V	360 V	360 V
Max. DC voltage	600 V	600 V	600 V	600 V
System start-up voltage	150 V	150 V	150 V	150 V
Shutdown voltage	Typical 80V	Typical 80V	Typical 80V	Typical 80V
MPPT voltage range	105 - 500 V	105 - 500 V	105 - 500 V	105 - 500 V
Full rating voltage range	225 - 500 V	200 - 500 V	200 - 500 V	200 - 500 V
Max. DC current	19A	26A	32A	37A
Number of DC input terminals	4	4	4	4
<b>Output (AC)</b>				
Nominal AC power @ 240Vac & 277Vac	3800W	4000W	5000W	6000W
Nominal AC power @ 208Vac	3800W	3800W	4600W	6000W
Max. AC power @ 240Vac & 277Vac	3800W	4000W	5000W	7000W
Max. AC power @ 208Vac	3800W	3800W	4600W	7000W
Nominal AC voltage	208V / 240V / 277V	208V / 240V / 277V	208V / 240V / 277V	208V / 240V / 277V
Nominal frequency	60Hz	60Hz	60Hz	60Hz
Disconnection time of excess operational frequency range	≤0.16 sec	≤0.16 sec	≤0.16 sec	≤0.16 sec
Nominal AC current @ 208Vac	18.3 A	18.3 A	22.1 A	28.9 A
Nominal AC current @ 240Vac	15.8 A	16.7 A	20.8 A	29.2 A
Nominal AC current @ 277Vac	13.7 A	14.4 A	18.1 A	25.3 A
Max. AC current @ 208Vac	18.3 A	18.5 A	22.5 A	35.0 A
Max. AC current @ 240Vac	15.8 A	18.5 A	22.5 A	33.2 A
Max. AC current @ 277Vac	13.7 A	16.4 A	20.5 A	28.7 A
Power Factor	> 0.99	> 0.99	> 0.99	> 0.99
<b>Efficiency</b>				
Peak efficiency	97.5%	97.5%	97.5%	97.5%
CEC efficiency	97%	97%	97%	97%
<b>General Data</b>				
Topology	Transformerless	Transformerless	Transformerless	Transformerless
Dimensions (W / H / D) inches	17.1 / 33.3 / 8.3	17.1 / 33.3 / 8.3	17.1 / 33.3 / 8.3	17.1 / 33.3 / 8.3
Weight (lbs)	86	90	101	101
Power consumption: standby / night	< 7W / < 0.2W	< 7W / < 0.2W	< 7W / < 0.2W	< 7W / < 0.2W
DC insulation resistance	> 4MΩ	> 4MΩ	> 4MΩ	> 4MΩ
Enclosure	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R
Heat dissipation	Force air cooling, variable fan speed according to temperature on heat sink			
Operating temperature range	-25 – +50°C	-25 – +50°C	-25 – +50°C	-25 – +50°C
Humidity	0 to 95%, non-condensing	0 to 95%, non-condensing	0 to 95%, non-condensing	0 to 95%, non-condensing
Communication	RS232 / Super-485	RS232 / Super-485	RS232 / Super-485	RS232 / Super-485
Ground fault protection	Internal GFCI and Isolation detection function, in accordance with UL 1741			
Disconnect	Integrated AC & DC Switch	Integrated AC & DC Switch	Integrated AC & DC Switch	Integrated AC & DC Switch
Certifications	ETL (in compliance with UL1741), CSA, CEC			
DC Surge protection	4kV	4kV	4kV	4kV
AC Surge protection	6kV	6kV	6kV	6kV

**Knockouts on the Wiring Box**



**Table 3.**

Description	Diameter of Knockout	Quantity
Knockouts on the underside and backside	Combo 1-1/4 in. & 1 in.	4
	Combo 3/4 in. & 1/2 in.	4
Knockouts on the left hand side and right hand side	Combo 1-1/4 in. & 1 in.	3
	Combo 3/4 in. & 1/2 in.	1

**Eaton Corporation**  
 Electrical Group  
 1000 Cherrington Parkway  
 Moon Township, PA 15108  
 United States  
 855-ETN-SOLR (855-386-7657)  
 Eaton.com

© 2011 Eaton Corporation  
 All Rights Reserved  
 Printed in USA  
 Publication No. TD00406001E  
 July 2011