

YASKAWA

YASKAWA SOLAR PUMP CONTROLLER WITH BUILT IN MPPT

0.1 KW – 650 KW

Loaded with Passion for Technology

DRIVE CENTER (INVERTER PLANT)
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Phone: 81-930-25-3844 Fax: 81-930-25-4369
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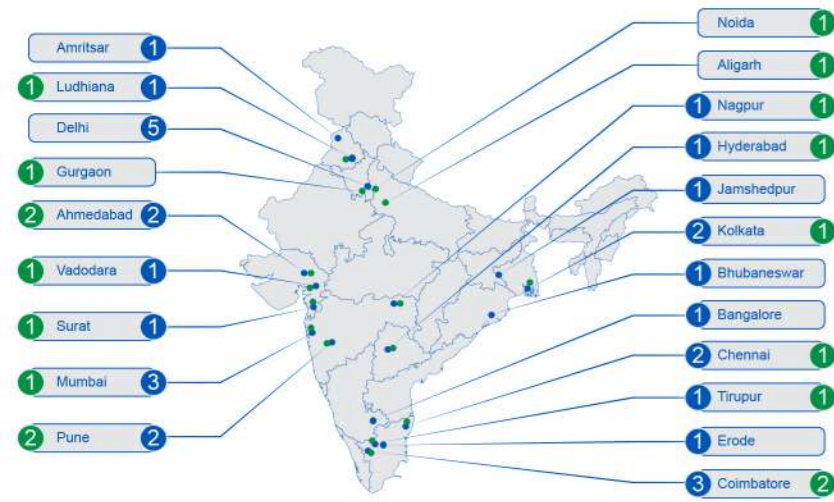
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- Authorized Business Partners
- Authorized Service Centers

200 V Class (Three-Phase/Single-Phase)

Value in brackets is for a single-phase drive.

Model	Three-Phase CIMR-VA2A		0001	0002	0004	0006	0008 ^{*10}	0010	0012	0018 ^{*10}	0020	0030	0040	0056	0069			
	Single-Phase ^{*2} CIMR-VABA		0001	0002	0003	0006	—	0010	0012	—	0018 ^{*11}	—	—	—	—	—		
Max. Applicable Motor Capacity ^{*3}	kW	Normal Duty	0.2	0.4	0.75	1.1	1.5	2.2	3.0	3.7	5.5	7.5	11.0	15.0	18.5			
		Heavy Duty	0.1	0.2	0.4	0.75	1.1	1.5	2.2	3.0	3.7	5.5	7.5	11.0	15.0			
Input	Rated Input Current ^{*4}	A	Three-phase Normal Duty	1.1	1.9	3.9	7.3	8.8	10.8	13.9	18.5	24.0	37.0	52.0	68.0	80.0		
			Three-phase Heavy Duty	0.7	1.5	2.9	5.8	7.0	7.5	11.0	15.6	18.9	24.0	37.0	52.0	68.0		
		Single-phase	Normal Duty	2.0	3.6	7.3	13.8	—	20.2	24.0	—	—	—	—	—	—		
			Heavy Duty	1.4	2.8	5.5	11.0	—	14.1	20.6	—	35.0	—	—	—	—		
Output	Rated Output Capacity ^{*5}	kVA	Normal Duty ^{*6}	0.5	0.7	1.3	2.3	3.0	3.7	4.6	6.7	7.5	11.4	15.2	21.3	26.3		
			Heavy Duty	0.3 ^{*7}	0.6 ^{*7}	1.1 ^{*7}	1.9 ^{*7}	2.6 ^{*8}	3.0 ^{*8}	4.2 ^{*8}	5.3 ^{*8}	6.7 ^{*8}	9.5 ^{*8}	12.6 ^{*8}	17.9 ^{*8}	22.9 ^{*8}		
Output	Rated Output Current	A	Normal Duty ^{*6}	1.2	1.9	3.5 (3.3)	6.0	8.0	9.6	12.0	17.5	19.6	30.0	40.0	56.0	69.0		
			Heavy Duty	0.8 ^{*7}	1.6 ^{*7}	3.0 ^{*7}	5.0 ^{*7}	6.9 ^{*8}	8.0 ^{*8}	11.0 ^{*8}	14.0 ^{*8}	17.5 ^{*8}	25.0 ^{*8}	33.0 ^{*8}	47.0 ^{*8}	60.0 ^{*8}		
Power	Overload Tolerance	Normal Duty Rating: 120% of rated output current for 60 s. Heavy Duty Rating: 150% of rated output current for 60 s. (Derating may be required for repetitive loads)																
		Carrier Frequency	2 kHz (user-set, 2 to 15 kHz possible)															
Power	Max. Output Voltage	Three-phase power supply: three-phase 200 to 240 V (relative to input voltage) Single-phase power supply: three-phase 200 to 240 V (relative to input voltage)																
		Max. Output Frequency	400 Hz (user-set)															
Power	Rated Voltage/Rated Frequency	Three-phase AC power supply: three-phase 200 to 240 V 50/60 Hz DC power supply: 270 to 340 V ^{*9} Single-phase AC power supply: single-phase 200 to 240 V 50/60 Hz																
		Allowable Voltage Fluctuation	-15 to +10%															
		Allowable Frequency Fluctuation	±5%															
Power	Power Supply ^{*11}	kVA	Three-phase	Normal Duty	0.5	0.9	1.8	3.3	4.0	4.9	6.4	8.5	11.0	17.0	24.0	31.0	37.0	
				Heavy Duty	0.3	0.7	1.3	2.7	3.2	3.4	5.0	7.1	8.6	11.0	17.0	24.0	31.0	
			Single-phase	Normal Duty	0.5	1.0	1.9	3.6	—	5.3	6.3	—	—	—	—	—	—	—
				Heavy Duty	0.4	0.7	1.5	2.9	—	3.7	5.4	—	9.2	—	—	—	—	

400 V Class (Three-phase)

Model	CIMR-VA4A													
		0001	0002	0004	0005	0007	0009	0011	0018	0023	0031	0038		
Max. Applicable Motor Capacity ^{*1}	kW	Normal Duty	0.4	0.75	1.5	2.2	3.0	3.7	5.5	7.5	11.0	15.0	18.5	
		Heavy Duty	0.2	0.4	0.75	1.5	2.2	3.0	3.7	5.5	7.5	11.0	15.0	
Input	Rated Input Current ^{*2}	A	Normal Duty	1.2	2.1	4.3	5.9	8.1	9.4	14.0	20.0	24.0	38.0	44.0
			Heavy Duty	1.2	1.8	3.2	4.4	6.0	8.2	10.4	15.0	20.0	29.0	39.0
Output	Rated Output Capacity ^{*3}	kVA	Normal Duty ^{*4}	0.9	1.6	3.1	4.1	5.3	6.7	8.5	13.3	17.5	23.6	29.0
			Heavy Duty ^{*5}	0.9	1.4	2.6	3.7	4.2	5.5	7.0	11.3	13.7	18.3	23.6
Output	Rated Output Current	A	Normal Duty ^{*4}	1.2	2.1	4.1	5.4	6.9	8.8	11.1	17.5	23.0	31.0	38.0
			Heavy Duty ^{*5}	1.2	1.8	3.4	4.8	5.5	7.2	9.2	14.8	18.0	24.0	31.0
Power	Overload Tolerance	Normal Duty Rating: 120% of rated output current for 60 s. Heavy Duty Rating: 150% of rated output current for 60 s. (Derating may be required for repetitive loads)												
		Carrier Frequency	2 kHz (user-set, 2 to 15 kHz possible)											
Power	Max. Output Voltage	Three-phase 380 to 480 V (relative to input voltage)												
		Max. Output Frequency	400 Hz (user-set)											
Power	Rated Voltage/Rated Frequency	Three-phase AC power supply 380 to 480 V 50/60 Hz DC power supply: 510 to 680 V ^{*6}												
		Allowable Voltage Fluctuation	-15 to +10%											
		Allowable Frequency Fluctuation	±5%											
Power	Power Supply ^{*7}	kVA	Normal Duty	1.1	1.9	3.9	5.4	7.4	8.6	13.0	18.0	22.0	35.0	40.0
			Heavy Duty	1.1	1.6	2.9	4.0	5.5	7.5	9.5	14.0	18.0	27.0	36.0

YASKAWA

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YASKAWA SOLAR PUMP CONTROLLER

SOURCING THE SUN

Solar Pumping System:



- Uses the world class compact GA700 Solar drive
- Suitable for BLDC & PM Motors
- Suitable for surface mount and submersible pumps with 3-phase induction motors
- Wide range capacity from 0.1 KW to 650 KW
- All day Run-Stop-Restart mode management
- Diagnostics and self-protection features
- Protection against dry run of pump
- Simple and faster installation and Commissioning

Technical Specifications:

Electrical Specification	
Pump Inverter type	V/F control with Derived MPPT Technology
Dual Supply (GRID/Solar)	Change over Available
Input DC Voltage (Voc)	400 VDC for 200 Volts class and 800VDC for 400 Volts Class
Input DC Volts (Vmp)	280 VDC to 310 VDC / 560 VDC to 620 VDC
Input DC Current and Power	As per motor capacity
Min Frequency (Parameter)	0Hz (selectable setting range 0 to 120Hz)
Max Frequency (Parameter)	120Hz (selectable setting range 0 to 120Hz)
Shock	10 to less than 20Hz (9.8 m/s ²) max.
Output AC Voltage	3 Phase 190-240 V (-15%, +10%) / 380-480 V (-15%, +10%)
Output AC Current	As per chart above
Motor Frequency	0 – 60Hz
Motor control technology	V/f control
MPPT Voltage	230 to 360 VDC for 200volts class 460 to 620 VDC for 400volts class
Over Load capacity	120% for ND
Under Voltage	125VDC for 200volts class / 250 for 400 volts class
Protection	Dry Run, Short Circuit, Open Phase in Input and Output side, High Voltage, Low Voltage And Overload, Earthling and reverse polarity.
Ambient Temperature	-10°C to + 50°C
Relative Humidity	Max. 95% relative humidity

Testing & Regulatory Specifications	
Testing standards Efficiency Test	IEC61508 / CE/UL/cUL/RoHS
Remote monitoring	Possible

Solar Drive



Remote Monitoring

An Integrated, real time remote monitoring solution – used to collect, monitor, control, and analyze various operational parameters from VFD driven solar pumps which are installed in remote locations. All parameters and events are stored in the server database.

