

DR. VITHALRAO VIKHE PATIL FOUNDATION

Vadgaon Gupta (Vilad Ghat), P. O. - M.I.D.C.,
Ahmednagar - 414 111. (Maharashtra)



Ph. No. : (0241) 2778206, 2779895
Email : vikhef@rediffmail.com

Tel/Fax No. : (0241) 2778043
Website : pdvvpfa.org

Ref No. : DVVPFA/PS/COE/255/149

Date : 31/01/2018

Bosch Limited,
Regd. Off.
P.B No.3000, Citadel 3rd Floor,
Hosur Road, Adugodi,
Bangalore 560030

Purchase Order for Engineering, Procurement and Construction of 300 kWp Grid Tied Solar PV Power Plant.

Kind Attn: Mr. Chandan Singh (Regional Manager)

Subject: Supply of Solar PV Components for 300Kwp Roof Top Solar PV System

Ref: Binding Commercial offer submitted by Bosch limited (your offer letter, dated: 20th Jan 2018 & quotation, dated: 18th Jan 2018)

Dear Sir,

Referring to the offer please find the purchase order for Supply of Components for 300kWp RCC Roof Top Solar PV System as per the Annexure 1-5 enclosed.

Kindly provide the signed copy of the Purchase Order as a token of acceptance.

Delivery Address:

Dr. Vithalrao Vikhe Patil Foundation's College of Engineering,
Vadgaon Gupta, Vilad Ghat, Post: MIDC, Ahmednagar-414 111

Invoicing Address:

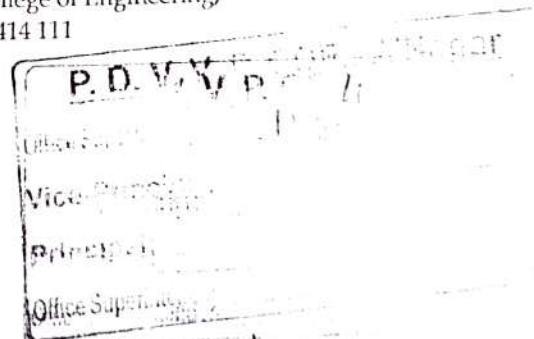
The Principal, Dr. Vithalrao Vikhe Patil Foundation's College of Engineering,
Vadgaon Gupta, Vilad Ghat, Post: MIDC, Ahmednagar-414 111

Your's faithfully,

Authorised Signatory and Seal
Secretary General

Dr. Vithalrao Vikhe Patil Foundation
Vadgaon Gupta (Vilad Ghat), Ahmednagar
Enclosures:-

- Annexure 1 : Breakup of Purchase Order
- Annexure 2 : Payment Terms
- Annexure 3 : Scope of Purchase Order
- Annexure 4 : Preliminary Bill of material
- Annexure 5 : Warranty Terms and Conditions



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11/2/18

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414 111

DR. VITHALRAO VIKHE PATIL FOUNDATION

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Ref. No. :
Purchase Order No. :

Date :

Annexure 1 : Breakup of Purchase Order**Supply Price for 300 KWpRoof Top Solar PV System Components**

ITEMS/ DESCRIPTION	CODE	AMOUNT	Subsidy Amount	After Subsidy	GST %	GST INR	Customer Payable
Solar Power Generating System- Solar PV Modules	85414011	7,036,179	2,179,574	4,856,605	5.0%	242,830	5,099,435
Solar Power Generating System- Solar Inverters	85044010	2,937,691	909,999	2,027,692	5.0%	101,385	2,129,077
Solar Power Generating System- Balance of System and Electrical Accessories	8502	2,581,950	799,802	1,782,148	5.0%	89,107	1,871,255
Solar Power Generating System- MS/HDG Structure and Accessories	73089090	742,971	230,148	512,823	18.0%	92,308	615,131
Solar Power Generating System- Other Accessories	39269099	614,038	190,209	423,830	28.0%	118,672	542,501
Installation, Testing and commissioning of Solar Power Generating System	998732	1,494,070	462,813	1,031,257	18.0%	185,626	1,216,884
Total Price		15,406,899	4,772,545	10,634,355		329,928	11,474,283

Customer Payable After Subsidy (Including Taxes) :- Rs. One Crore Fourteen Lakh Sixty Four Thousand Two Hundred & Eighty three only.

Other terms & conditions (Inclusive in above price)

1. One person for M/s. BOSCH for plant operation & maintenance for one year.
2. Performance Bank Gaurantee for 10% of generation at current tariff for period of one year
3. Structure Galvanization upto 100 micron, but we will be using galvium sheets which are per galvanized as discussed.
4. One Signage/Digital Display Board at one location displaying plant generation and details on real time basis.

Bank Details:-

Account Name	BOSCH LIMITED
Bank :	DEUTSCHE Bank
Bank Address :	No. 2-17, Raheja Towers, M G Road, Bangalore-560001
Current Account No.	2050300004
IFSC code for RTGS/NEFT	DEUT079/BGL


Secretary General
Dr. Vithalrao Vikhe Patil F.
Authorised Signatory and Seal

DR. VITHALRAO VIKHE PATIL FOUNDATIONVadgaon Gupta (Vilad Ghat), P. O. - M.I.D.C.,
Ahmednagar - 414 111. (Maharashtra)Ph. No. : (0241) 2778206, 2779895
Email : vikhef@rediffmail.comTel.Fax No. : (0241) 2778043
Website : pdvvpfa.org

Ref. No. :

Date :

Purchase Order No. :

Annexure 2 : Payment Terms

The General payment terms are proposed below

Sr.No.	Our Proposed Payment Terms	
1	Payment Terms	1. Amount Equivalent to 10% of the Order value as Project advance through Cheque/Demand Draft/RTGs infavour of Bosch Limited. 2. 90% LC (Letter Of Credit) from Nationalized Bank Terms of LC disbursement : a. Amount equivalent to 80% of the Order Value on pro-rate basis against material readiness and Proforma Invoice/Commercial invoice. b. Amount equivalent to 10% of the total Order Value against i. Commissioning of Solar PV System. ii. CEIG Certificate
2	Taxes and Duties	a) Solar PV Modules : 5% GST b) MMS : 18% GST c) BOS : Components of solar power generating system : 5% d) Other BOS components not falling under the ambit of solar power generating system: 28% e) Service: 18% is applicable on the service component Taxes are considering GST rates as per applicability with the current understanding and data available. We have taken up with MNRE for GST of 5% on Solar Power Generating System but clarity is yet to come. Based on clarification which emerges later, actual GST will be charges at the time billing The price offered is based on prevailing rates, taxes and duties. Any impact in price increase/decrease due to change in rates, taxes, duties, antidumping duties, change infresh law, statutory rule or order shall be borne by the Customer.
3	Time of Completion	Solar PV Components shall be delivered within 3 months from the Effective Date as defined above. We agree that within seven (7) working days from the Effective Date (Agreement signing date) the following actions (Prerequisites) shall be concluded in sequence failing which revised dates of commissioning of the Project will be mutually agreed to between the Parties : a) Release of advance amount of Rs. 1146428.50 Or 10% of consideration amount by the Customer. b) Issuance of ' Notice to Proceed' (NTP) by the Project Owner to Contractor. c) Access to unencumbered dispute free root/land is provided to Contractor by the Customer.

Secretary General
 Authorised Signatory and Seal
 Vadgaon Gupta (Vilad Ghat), Ahmednagar

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Tel.Fax No. : (0241) 2778043

Website : pdvvpfa.org

Ref. No. :

Date :

Purchase Order No. :

Annexure 3 : Scope of Purchase Order

The broad scope of work under M/s. Bosch Limited includes the following:

- Supply of the Solar PV Modules and arrays with associated components comprising of DC cables, String Inverters, Mounting Structures, AC Cables, Communication Cables, Remote Monitoring, Weather Monitoring System, Earthing System and Lightning Arrestor at power plant with necessary packaging and transportation.
- Supply of the suitable fire protection equipment's as per the statutory requirements.
- Supply of danger board, sign-boards etc. as per the statutory needs.
- Water piping for Module cleaning from the nearest water availability point on roof.

Exclusion to the Purchase Order :

- Car Port Structure/Elevated Structure on the rooftop.
- Construction of Stair/Ladder to access roofs' terrace, Walkway and Handrails.
- Any modification in the Existing LT Panels for evacuating Solar Power Plant
- Spare Feeder supply for connecting solar power plant. Reverse Power Relay/Protection System to avoid reverse power flow to Diesel Genset.
- Fencing, control room, access roads and drainage.

The broad scope of work under our scope includes the following:

- Fees in form of DD/Bank Guarantees towards all the Statutory Approvals shall be paid by us.
- All the Statutory approvals are on our account.
- We shall provide unhindered roof access to install and operate solar roof top system with clear approach for 5 years
- We agree that there is no obstacle for the shadow free area to install solar
- We shall provide the approach road for material movement.
- Identification and procurement/lease of roof/land for setting up of power plant including tree cutting and any other existing infrastructure removal on roof.
- Identification of nearest LT-Panel for Power evacuation and connectivity approvals
- NOC from Gram Panchayat/statutory authority wherever required
- Approach roads for transport of goods from the nearest motorable road to Project Site.
- Construction Power and Water on each terrace for installation & Operational maintenance for 5 years.
- Provision of Water Source on Roof Terrace with 4 to 5 Bar Pressure including pressure pump for module cleaning system.
- Any Modification in the Existing Infrastructure like roof strengthening, step-up transformer, associated switchgears, cables, CT, PT's.
- Internet Connection and associated cost to be provided by Project Owner along with Static IP for remote monitoring of Solar PV System.
- Net Metering to be done by Bosch but payment not linked to Net-metering
- AC cabling above 100 mtrs is in customer scope.

0
Authorised Signatory and Seal
Secretary General
Dr. Vithalrao Vikhe Patil Foundation
Vadgaon Gupta (Vilad Ghat), Ahmednagar

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Ahmednagar - 414 111. (Maharashtra)**Ph. No. : (0241) 2778206, 2779895
Email : vikhef@rediffmail.comTel.Fax No. : (0241) 2778043
Website : pdvvpfa.org

RefPurchase Order No. :

Date :

Sr. No.	Item	Specification/Description	Qty	UOM	Make
1	01-SPV Module	325 Wp, 72 Cells, Poly Crystalline Module with 1000 mm length module cable certified as per UI or IEC 61215 Edition - II and IEC 61730 1, & 2.	92	Nos.	Adani/Renewsys
2	02-MMS	Module Mounting Structure as per SECI Standard	1 Set	kWp	Bosch
3	03-Inverters	String Inverter 50kVA, 400V AC, MPPT	06	Nos.	ABB
4	04-Data Logger	Web Based Monitoring System (Interconnection Connection with Static IP to be provided by Customer)	01	Nos.	Delta
5	04-Sensors	Cell Based Irradiation Sensors	01	Nos.	MC
6	05-LT Panel	LT Panel with Incomer (4P, 100A, MCB, OC, SC Release) and 1 Outgoing, 300A, 4P, MCB, OC, SC Release, SPD Type-II, MFM Meters, IP65 Enclosure.	1	Set	Reputed
7	07-Connectors	Straight Through +Ve and -Ve PV Connectors for Stringing	60	Sets	MC4/Amphenol
8	08-DC Cable	1CX4Sq.mm, Copper, EBXLPO, 1.5kV, Solar Cable for String Interconnection and connect upto Inverter Input	2500	Mtrs	Siechem/Apar
9	09-AC Cable	AC CABLE - 4Cx25Sq.mm, Cu, XLPE 1.1Kv	75	Mtrs	Siechem/Apar
10	10-LT Cable	3.5Cx240Sq.mm, Aluminum Armored, XLPE, 1.1kV as per IS 694 complete all as specified and directed. (LT Panel to Customer Main LT)	50	Mtrs	Siechem/Apar
11	13-BOS	Safety Items, Fire Extinguisher, Danger Boards, First Aid Kit, Safety Chart, Sign Boards	150	kWp	Bosch Approved
12		Communication Cable, 2 Pair, RS485 Shielded	200	Mtrs	Apar/Siechem/Polycab
13		Lightning Arrestor - ESE/Conventional Type	1	Nos.	JFI/JMV/SCI
14		Chemical Earthing with Chambers	06	Nos.	JFI/JMV/SCI
15		Installation Accessories like Lugs, Conduits, Glands, Insulators, Trays and Supports	300	kWp	Bosch Approved
16		Module Cleaning System with CPVC Pipes and Fittings	300	kWp	Bosch Approved
17	14-Installation & Commissioning	Installation, Testing, Commissioning and Hand over of complete Solar Power Plant	300	kWp	Bosch Approved

Note : The specification and make of the components and quantity shall change during Detailed Engineering as per the requirement

Authorised Signatory and Seal

Secretary GeneralDr. Vithalrao Vikhe Patil Foundation
Vadgaon Gupta (Vilad Ghat), Ahmednagar

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Purchase Order No. :

Annexure 5 : Warranty Conditions

Bosch Limited provides warranty for material and workmanship of various components supplied as a part of the solar PV power plant, whereas System warranty for workmanship of installation and performance of the system. The conditions of these warranties are elaborated in this document.

A) Product Warranty :

Warranty for PV Module :

- 5 years product warranty
- 25 years performance guarantee (90% up to 10 years, 80% up to 25 years)

Warranty for Solar Inverter :

- 10 years product warranty

B) Warranty for Balance of System items

- 5 year from the date of supply in accordance with the warranty conditions of the used inverters.
- Warranty for the structural safety and stability of the mounting system for a period of 5 year.

Until the end of the warranty period plus the operating period of the Project, Bosch shall have access right to all parts of the plant and to the reports on its work and output.

- Parts and components, which are repaired or replaced during such period, are warranted for the original warranty period only and will not carry any extended warranty. If the equipment is not repairable at site the same has to be sent at the workshop on freight prepaid basis after obtaining consent from Bosch in writing and Bosch shall make good the defect and return back to the Customer.
- For the components which are bought out by Bosch and supplied to the project, the warranty shall be applicable as per the original manufacturer's warranty only and shall be transferred to the final customer upon supply of the components.

C) Workmanship Warranty :

Workmanship related warranties are as below:

1. Electric installation works such as interconnection of strings, connection of string combiner boxes, AC/DC Cables, power evacuation infrastructure shall carry warranty for 60 months.
2. Structural safety and stability of the mounting system shall be covered for a period of 60 months.

Authorised Signatory and Seal

Secretary General
Dr. Vithalrao Vikhe Patil Foundation
Vadgaon Gupta (Vilad Ghat), Ahmednagar

DR. VITHALRAO VIKHE PATIL FOUNDATION

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Tel.Fax No. : (0241) 2778043
Website : pdvvpfa.org



Ref. No. :

Date :

Purchase Order No. :

D) Conditions of Warranty

1. General Conditions :

1. Claims arising from or in connection with this warranty must be filed in writing within the applicable warranty period. No extension of warranty period shall be provided, regardless of legal basis.
2. Until the end of the warranty period, Bosch Limited shall have an access right to all parts of the plant, reports on its working and output.
3. The final customer shall be responsible to ascertain any warranty claims directly with the original manufacturer as per the limited warranty certificate from original manufacturer. However if Bosch Limited has been contracted for operation and maintenance services, then under the contract period, Bosch Limited shall liaise between the final customer and original equipment manufacturer for valid warranty claims.
4. The disputes pertaining to this project shall be subjected to Bangalore Jurisdiction only.

E) Disclaimers/Limitations of Liability :

1. These warranties are valid for normal use and only under normal operating conditions. The warranties assume that the performance of the system has not been reduced by actions or events outside the sphere of influence of Bosch Limited, in particular.
2. Modifications/damage as a consequence of force majeure (storms, hail, fire, power outage, lightning, flood, snow damage, avalanches, frost, earthquakes, tornadoes, volcanic eruptions, landslides, plagues of insects and other detrimental effects by animals, acts of war etc.) or damage caused by third parties due to vandalism or theft.
3. Unprofessional operation, improper removal and/or re-installation of modules, willful damage or negligence, normal wear and tear, improper installation and/ or maintenance by final customer or a third party, misuse or abuse of equipment, modifications or alterations made by customer or a third party without consent from Bosch.
4. Impairment due to external influences (e.g. : dirt, smoke, salt, chemicals and other impurities)
5. Warranty cannot be transferred to a third party without prior consent from Bosch Limited.
6. Notwithstanding anything contained in this Agreement or any of its annexures and schedules, the liability of Bosch for any loss suffered by the Customer and/or any breach of conditions of this Agreement and its annexures and/or the termination of this Agreement shall not exceed 2% of the total order value.

F) Warranty Claims :

7. In case of warranty claims, Bosch Limited shall remedy the defects, co-ordinate without original manufacturers for replacement of components with functional ones or repair the same component, as per the limited warranty conditions of the original manufacturer.
8. No other claim shall be derived from this warranty.
9. For components newly supplied for repaired, only remaining time of original time of original warranty shall be applicable.

Authorised Signatory and Seal

store COF.

CUSTOMER SCOPE



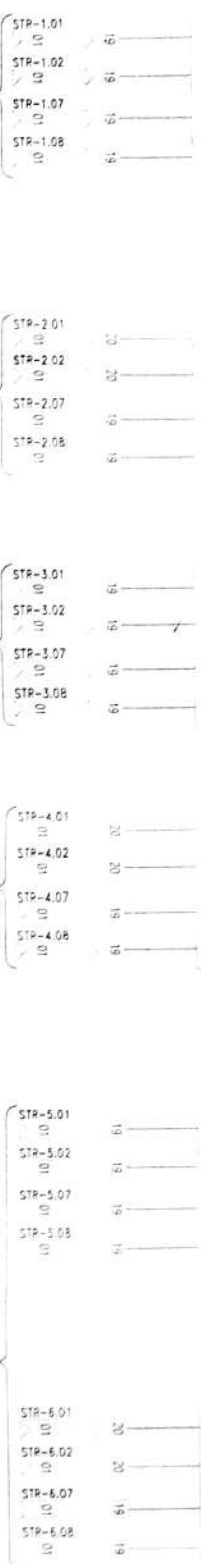
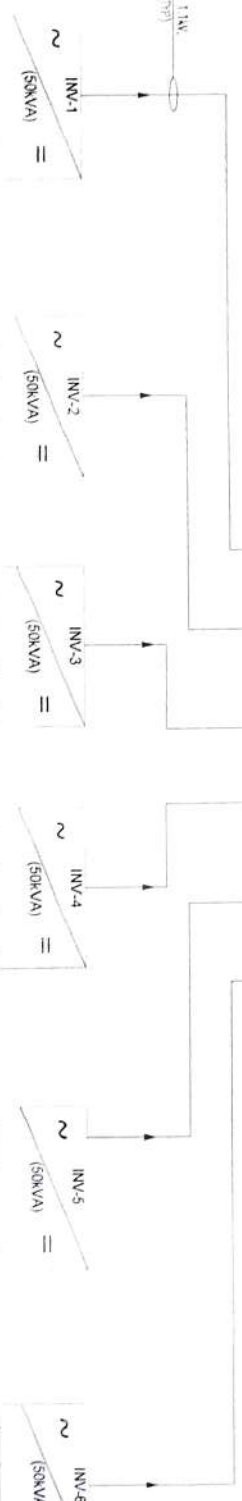
35x2405mm XLPE 11kV
LT Air Arm. Code: 100W(10W)

Solar LT Panel
for BLOCK-03

BOSCH
1000mm AC Cable

Shree Energy
Vishal Veda Patel
Manager of Engineering
Ahmednagar

11kV XLPE 11kV
LT Air Arm. Code: 100W



BLOCK-01, Inv-01	SHED-01, Inv-02	BLOCK-02, Inv-03	SHED-02, Inv-04	BLOCK-03, Inv-05	BLOCK-03, Inv-06
Capacity : 49.4kWp	Capacity : 50.375kWp	Capacity : 49.4kWp	Capacity : 50.375kWp	Capacity : 49.4kWp	Capacity : 51.35kWp
No of Modules : 152	No of Modules : 155	No of Modules : 152	No of Modules : 155	No of Modules : 152	No of Modules : 158
String Config : MPPT1 - 19X3 Str	String Config : MPPT1 - 20X3 Str	String Config : MPPT1 - 19X3 Str	String Config : MPPT1 - 20X3 Str	String Config : MPPT1 - 19X2 Str	String Config : MPPT1 - 20X3 Str
MPPT2 - 19X3 Str	MPPT2 - 19X3 Str	MPPT2 - 19X3 Str	MPPT2 - 19X3 Str	MPPT2 - 19X3 Str	MPPT2 - 20X3 Str
MPPT3 - 19X2 Str	MPPT3 - 19X2 Str	MPPT3 - 19X2 Str	MPPT3 - 19X2 Str	MPPT3 - 19X3 Str	MPPT3 - 19X2 Str

115
19x6-114
19x
Mechanical shed
136nos

20x3 = 60
19x4 = 76
126



To,
The Secretary General,
Dr Vithalrao Vikhe Patil Foundation,
Ahmednagar, MS - 414111

Sub: 300Kwp Solar Power Generating System.

- Ref: 1: Purchase Order: DVVPFA/PS/COE/255 dated 31ST Jan 2018.
2: Invoice No: 180016955 dated 26th June 2018.
Invoice No: 180017651 dated 29th June 2018.

Sir,

Reference to purchase order, received the tax invoices for the
aforementioned work. We have paid advance as per the terms of the purchase
order. The tax invoices be adjusted accordingly and balance paid to the party, as
per terms of PO.

Request to kindly inform the concerned department accordingly.


Sunil Kalhapure

Dy Director (Tech)

Dr Vithalrao Vikhe Patil Foundation,
Ahmednagar



Handwritten note:
Hear
Engg college
for necessary action

11/08/2018

Handwritten note:
13/8/18

Bosch Limited

Plot No. 63, Bommasandra, Jigani Link Road Industrial Area,

Rajapur, Stage, Jigani Hobli,

Annekot Tal. Bangalore - 562106 India

Details of Consignee(Ship-to)Dr. Vithalrao Vikhe Patil Foundation
Vadgaon Gupta(Vilad Ghat)
P.O MIDC
Ahmednagar-414111
GSTIN: 27AAA1P2304C1Z5
State Code: 27#Maharashtra**Details of Receiver(Bill-to)**Dr. Vithalrao Vikhe Patil Foundation
Vadgaon Gupta(Vilad Ghat)
P.O MIDC
Ahmednagar-414111
GSTIN: 27AAA1P2304C1Z5
State Code: 27#Maharashtra**TAX INVOICE**

Tax Invoice Number	180016955
Date of Tax Invoice	26.06.2018
CIN	L85110KA1951PLC000761
PAN	AAACM9840P
GSTIN	29AAACM9840P1ZP
Contact person of Acc.	
Bosch Document Number	155500447

Supplier Code	17026951
Customer Code	AAATP2304C
Your PAN	DVVVFA/PS/COE/255/31.01.2018
P.O. No. & Date :	

Delivery Terms DAP-Delivered at place**Payment Terms**

P29B-10% Adv,80% Prorate,5% on install,5%on commission

Insurance**LR No****Carrier****Header Note**

300kWp Solar Power Generating System.

Freight**Vehicle No****No of Packages /Weight-**

00000/20,306.000KG

Sl. No	Material / Description	Quantity	Unit	Rate/Unit	Taxable Value/INR
01	F002.Y38.052-KC8	923.000	PC	7,623.16	7,036,176.68
			Subsidy	0.00	2,179,574.00
			Integrated GST	5.00%	242,830.00
	Description	Solar PV Module Poly-325Wp-72C			
	Customer Part No		HSN/SAC Code	85414011	
	Delivery Number	1183705805	PO No & Date	DVVVFA/PS/COE/255/31.01.2018	
			Total Taxable Value		4,856,602.68
			Tax Amount		242,830.00
			Total Value		5,099,432.68

Amount In Words

Tax Amount- INR:

Total Value- INR:

Two Lakh Forty Two Thousand Eight Hundred Thirty Rupees

Fifty Lakh Ninety Nine Thousand Four Hundred Thirty Two Rupees Sixty Eight Paise:

26/8/18 सेन्ट
3.45 PM. काशी

WHETHER TAX IS PAYABLE ON REVERSE CHARGE BASIS: NO

For Bosch Limited

Authorised Signatory

Cheques should be made payable to Bosch Limited. Duly crossed "Account Payee Only" Payment should be made within due date as applicable from the date of dispatch of materials

BANKERS: State Bank of India, Canara Bank, CITI Bank, Deutsche Bank AG

Registered Office: Hosur Road, Adugodi, Bangalore - 560030, India Phone: 080-22220088, 22992111, Telefax: 080-22272728

Bosch Limited

Plot no 267 Bommasandra-Jigani Link Road Industrial Area,
Rajapur Village, Jigani Hobli,
Annekol Tq, Bangalore - 562106 India

Duplicate for transporter



Page 1 of 1

Details of Consignee(Ship-to)

Dr. Vithalrao Vikhe Patil Foundation
Vadgaon Gupta(Vilad Ghat)
P.O MIDC
Ahmednagar-414111
GSTIN-27AAATP2304C1Z5
State Code:27#Maharashtra

Details of Receiver(Bill-to)

Dr. Vithalrao Vikhe Patil Foundation
Vadgaon Gupta(Vilad Ghat)
P.O MIDC
Ahmednagar-414111
GSTIN-27AAATP2304C1Z5
State Code:27#Maharashtra

TAX INVOICE

Tax Invoice Number 180017651
Date of Tax Invoice 29.06.2018
CIN L85110KA1951PLC000761
PAN AAACM9840P
GSTIN 29AAACM9840P1ZP
Contact person of Acc.
Bosch Document Number 155500461

Supplier Code
Customer Code 17026951
Your PAN AAATP2304C
P.O. No. & Date : DVVPFA/PS/COE/255/31.01.2018

Delivery Terms DAP-Delivered at place
Insurance LR No
Carrier
Header Note 300kW Solar Power Generating System.
Payment Terms P298-10% Adv,80% Prorate,5% on install,5%on commission
Freight Vehicle No
No of Packages /Weight- 00000/450.000KG

Sl No	Material / Description	Quantity	Unit	Rate/Unit	Taxable Value/INR
01	F002.Y39.780-KC8	6.000	PC	489,615.17	2,937,691.02
			Subsidy	0.00	909,999.00-
			Integrated GST	5.00%	101,385.00
	Description Solar String Inverter 50kW-ABB				
	Customer Part No		HSN/SAC Code	85044010	
	Delivery Number 1183708585		PO No & Date	DVVPFA/PS/COE/255/31.01.2018	

Amount In Words
Tax Amount-INR:
Total Value-INR:
One Lakh One Thousand Three Hundred Eighty Five Rupees
Twenty One Lakh Twenty Nine Thousand Seventy Seven Rupees Two Paise:

Total Taxable Value 2,027,692.02
Tax Amount 101,385.00
Total Value 2,129,077.02

WHETHER TAX IS PAYABLE ON REVERSE CHARGE BASIS: NO

For Bosch Limited



Authorised Signatory

*To be payable to Bosch Limited, Duly crossed "Account Payee Only" Payment should be made within due date as applicable from the date of dispatch of materials

Canara Bank,Citi Bank,Deutsche Bank AG

ad, Adugod, Bangalore - 560030, IndiaPhone:080-22220088,22992111,Telefax:080-22222728



osch Limited

Plot no 263, Bommasandra-Jigani Link Road Industrial Area,
Japura Village, Jigani Hobli,
Bekal Tq, Bangalore - 562106 India

TAX INVOICE

Details of Consignee(Ship-to)

Dr. Vithalrao Vikhe Patil Foundation
Adgaon Gupta(Vilad Ghat)
P.O MIDC
Ahmednagar-414111
GSTIN-27AAATP2304C1Z5
State Code:27#Maharashtra

Tax Invoice Number 180020888
Date of Tax Invoice 16.07.2018
CIN L85110KA1951PLC000761
PAN AAACM9840P
GSTIN 29AAACM9840P1ZP
Contact person of Acc.
Bosch Document Number 155500484

Details of Receiver(Bill-to)

Dr. Vithalrao Vikhe Patil Foundation
Adgaon Gupta(Vilad Ghat)
P.O MIDC
Ahmednagar-414111
GSTIN-27AAATP2304C1Z5
State Code:27#Maharashtra

Supplier Code 17026951
Customer Code AAATP2304C
Your PAN DVVPFA/PS/COE/255/31.01.2018
P.O. No. & Date :

Delivery Terms

DAP-Delivered at place

Payment Terms

P298-10% Adv,80% Prorate,5% on install,5%on commission

Insurance

IR No
Carrier No.
Header No.

Freight

Vehicle No

No of Packages /Weight-

00000/0.000KG

300kW Solar Power Generating System.

Sl No	Material / Description	Quantity	Unit	Rate/Unit	Taxable Value/INR
01	F002.Y41.596	1.000	PC	2,581,950.00	2,581,950.00
	Description BOS and Electrical Accessories		Subsidy	0.00	799,802.00
	Customer Part No		Integrated GST	5.00%	89,107.00
	Delivery Number 1183725256		HSN/SAC Code 8502		
			PO No & Date DVVPFA/PS/COE/255/31.01.2018		
02	F002.Y41.597	1.000	PC	742,971.00	742,971.00
	Description MS/HDG Structure and Accessories		Subsidy	0.00	230,148.00
	Customer Part No		Integrated GST	18.00%	92,308.00
	Delivery Number 1183725256		HSN/SAC Code 73089090		
			PO No & Date DVVPFA/PS/COE/255/31.01.2018		
03	F002.Y41.598	1.000	PC	614,038.00	614,038.00
	Description Other Installation Accessories		Subsidy	0.00	190,209.00
	Customer Part No		Integrated GST	28.00%	118,672.00
	Delivery Number 1183725256		HSN/SAC Code 39269099		
			PO No & Date DVVPFA/PS/COE/255/31.01.2018		

Total Taxable Value 2,718,800.00
Tax Amount 300,087.00
Total Value 3,018,887.00

Amount In Words
Tax Amount-INR:
Total Value-INR:

Three Lakh Eighty Seven Rupees
Thirty Lakh Eighteen Thousand Eight Hundred Eighty Seven Rupees:

COEA

Inward No: 6450

Date: 15/08/18

WHETHER TAX IS PAYABLE ON REVERSE CHARGE BASIS: NO

For Bosch Limited

Authorised Signatory

Cheques should be made payable to Bosch Limited. Duly crossed "Account Payee Only" Payment should be made within due date as applicable from the date of dispatch of materials

BANKERS: State Bank of India, Canara Bank, Citi Bank, Deutsche Bank AG

Registered Office: Hosur Road, Adugodi, Bangalore - 560030, India Phone: 080-22220088, 22992111, Telefax: 080-22272728

Bosch Limited

Plot no 263, Bommasandra-Jigani Link Road Industrial Area,
Rejapuzha Village, Jigani Hobli,
Annekol Tq, Bangalore - 562106 India

Original for recipient.



Page 1 of 1

Details of Receiver(Bill-to)

Dr Vithalrao Vikhe Patil Foundation
Vadgaon Gupta (Vilad Ghat)
P.O MIDC
Ahmednagar 414111
GSTIN-27AAATP2304C1Z5
State Code: 27 Maharashtra
Country of Destination India

TAX INVOICE

Tax Invoice Number 180020935
Date of Tax Invoice 12.07.2018
CIN L85110KA1951PLC000761
PAN AAACM9840P
GSTIN 29AAACM9840P1ZP
Contact person of Acc.
Bosch Document Number 144914124

Supplier Code 17026951
Customer Code AAATP2304C
Your PAN DVVPFA/PS/COE/255/31.01.2018
P.O. No. & Date :

Delivery Terms

DAP-Delivered at place

Payment Terms

P29810% Adv, 80% Prorate, 5% on install, 5% on commission-

Project NO
Kind Attention
Original Invoice
Header Note

300KWp Solar Power Generating System.

Invoice Date

00.00.0000

SI No	Material / Description	Quantity	Unit	Rate/Unit	Taxable Value/INR
01	F002.Y41.001	1.000	PC	1,494,070.00	1,494,070.00
			Subsidy	0.00	462,813.00-
			Integrated GST	18.00%	185,626.00

Service Description Installation & Commissioning

Customer Part No

HSN/SAC Code 998732

Amount In Words
Tax Amount-INR:
Total Value-INR:

One Lakh Eighty Five Thousand Six Hundred Twenty Six Rupees
Twelve Lakh Sixteen Thousand Eight Hundred Eighty Three Rupees:

Total Taxable Value 1,031,257.00
Tax Amount 185,626.00
Total Value 1,216,883.00

cores & A/c for ...
[Signature]

COEA
Inward No: 653
Date: 16/8/18

WHETHER TAX IS PAYABLE ON REVERSE CHARGE BASIS: NO



Cheques should be made payable to Bosch Limited., Duly crossed "Account Payee Only" Payment should be made within due date as applicable from the date of dispatch of materials
BANKERS: State Bank of India, Canara Bank, Citi Bank, Deutsche Bank AG

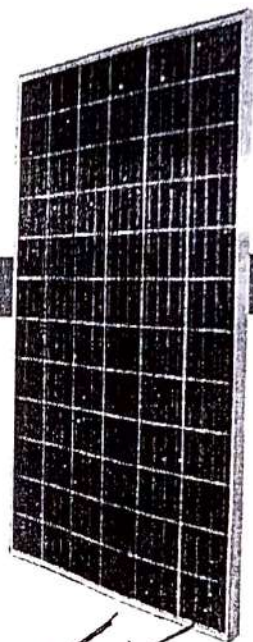
Registered Office : Hosur Road, Adugodi, Bangalore - 560030, India Phone: 080-22220088, 22992111, Telefax: 080-22272728

RenewSys™

let there be light

DESERV™

3M6- 300/305/310/315/320/325



DESERV 3M6 72 cells PV Modules Series are offered with power ratings ranging from 300 Wp to 325 Wp. The high performance Multi Crystalline Silicon Modules are designed for on-grid as well as off-grid applications.

KEY FEATURES



Made in India



Positive power tolerance



Highly reliable Anti-reflective coated glass



Windspeed - 2400 Pa

Snowload - 5400 Pa



IP67 Junction box



1000 V V_{dc}



PID resistant

25
YEARS

Limited power output warranty

10
YEARS

Product warranty



IEC Certified - 61215, 61730, TS 62804, 61853

IEC 61701 (Salt mist corrosion resistant- Seventy 6)

IEC 62716 (Ammonia corrosion resistant)

UL Certified 1703

IEC 60068 2-68 (Sand Abrasion)

Listed in Dewa

Technicals Approved.
Desy
(27/4/18)

22/04/2017

**Performance under standard test conditions
(1000W/m² AM 1.5, 25°C)**

	DESERV 3M6-300	DESERV 3M6-305	DESERV 3M6-310	DESERV 3M6-315	DESERV 3M6-320	DESERV 3M6-325
Rated power (P _{max}), Wp	300	305	310	315	320	325
Max power voltage (V _{mp}), V	36.52	36.75	36.85	36.92	37.20	37.41
Max power current (I _{mp}), A	8.22	8.30	8.41	8.52	8.61	8.69
Open circuit voltage (V _{oc}), V	41.12	41.34	41.55	41.75	42.15	42.31
Short circuit current (I _{sc}), A	88.30	88.62	88.75	88.91	89.05	89.18
Module efficiency (%)	15.48	15.74	16.00	16.26	16.51	16.77

Operating Conditions

Ambient temperature, °C	40 to +85
Maximum system voltage, V _{dc}	1000
Hail impact velocity, m/sec	23
Maximum surface load capacity, Pascals	5400

Cell Temperature Coefficients

Open circuit voltage	-0.30 % / °C
Short circuit current	+0.05 % / °C
Nominal power	-0.40 % / °C

Physical Parameters

No. of cells	72
Module dimensions (mm)	1957 x 990
Module thickness (mm)	40
Approximate weight (kg)	21.5

Mechanical Characteristics

Cable	NO. 12 AWG, 4mm ² (1 m standard, 1 m available on request)
Pv connectors	MC4/MC4 (Compatible)/TYCO
Frame	Anodized Aluminum Alloy
Junction box	IP67 Junction Box With 4 Rail
Glass	3.2mm Thick Low Iron Tempered (3mm available on request)

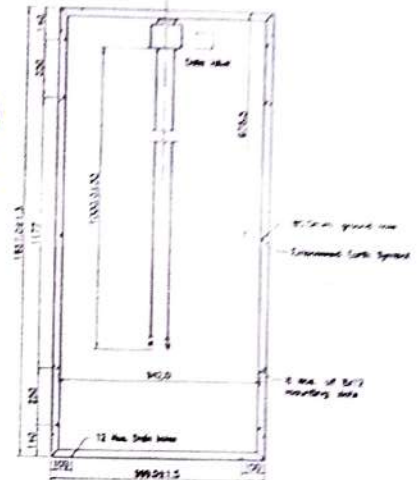
Registered Office

98, Jolly Maker Chambers No.2, 225 Nariman Point, Mumbai - 400 021, Maharashtra, India
Tel.: + 91 22 30040500

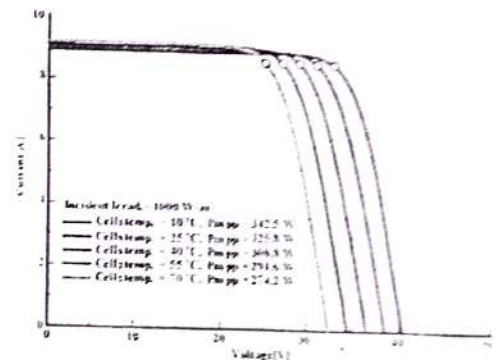
Factory

Plot No.6, Survey # 114/P, Srinagar Village, Maheshwaram Mandal, Dist Rangareddy, Hyderabad - 501 359, Telangana, India.
Tel.: + 91 40 67303000 Fax: + 91 40 67303003

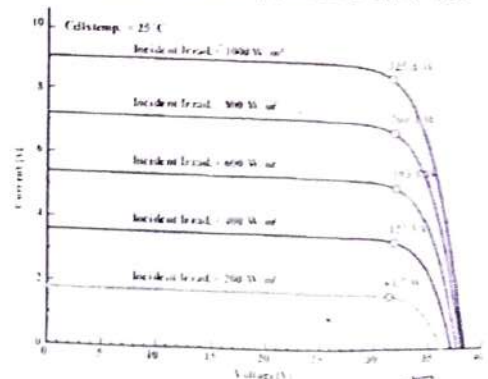
72 Cells PV Solar Module Dimensions



PV modules: RenewSys, DESERV 3M6-325



PV modules: RenewSys, DESERV 3M6-325



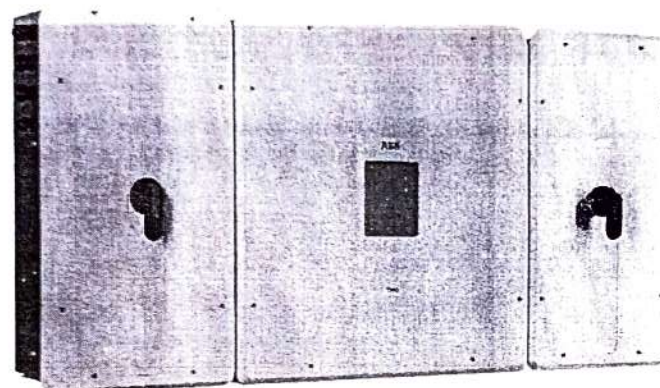
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Handwritten signature and date: 27/04/2018

SOLAR INVERTERS

ABB string inverters

TRIO-TM-50.0-400 / TRIO-TM-60.0-480
50 to 60 kW



01

01 TRIO-TM-50.0/60.0
outdoor string inverter

This new addition to the TRIO family, with 3 independent MPPT and power ratings of up to 60 kW (480 V version), has been designed with the objective to maximize the ROI in large systems with all the advantages of a decentralized configuration for both rooftop and ground-mounted installations.

Modular design

The TRIO-TM-50.0/60.0 has a modular design to guarantee maximum flexibility, thanks to the different versions available.

The separate and configurable AC and DC compartments increase the ease of installation and maintenance with their ability to remain separately wired from the inverter module inside the system. The TRIO comes with the most complete wiring box configurations available including up to 15 DC inputs with fast connectors, string protection fuses, AC and DC switches and type II AC and DC surge arresters.

Design flexibility

The double stage conversion topology offers the advantage of a wide input voltage range for maximum flexibility of system design.

The TRIO-TM comes with a forced air cooling system, used also in the previous TRIO products, designed for a simple and fast maintenance, allowing a maximum flexibility of plant design. The inverter comes with mounting supports for both horizontal and vertical installations, which allow for the best use of space available beneath the solar panels.

Embedded multi communication interfaces (WLAN,

The TRIO-TM-50.0/60.0 is ABB's latest three-phase string solution for cost efficient large decentralized photovoltaic systems for both commercial and utility applications.

Ethernet, RS485) combined with a Sunspec compliant Modbus protocol (RTU/TCP) allow the inverter to be easily integrated with any third party monitoring and control systems.

Improved commissioning and maintenance

Thanks to the build-in Web User Interface (WUI) the installer can commission the inverter wirelessly and change advanced parameters by using any standard WLAN enabled device (smartphone, tablet or PC). Integrated logging capability allows remote monitoring of the plant without the need of any additional external loggers.

Remote firmware update of the inverter system and components via Aurora Vision*.

Highlights

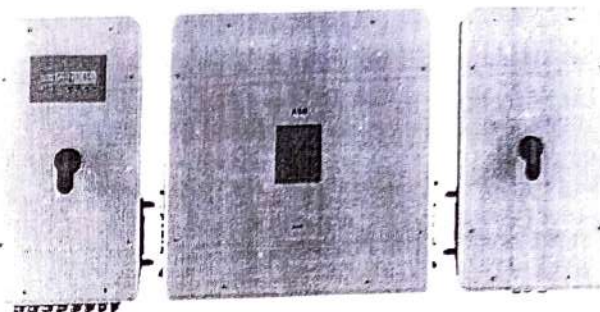
- 3 Independent MPPT
- Transformerless inverter
- Double stage topology for a wide input range
- Large set of specific grid codes available which can be selected directly in the field
- Separate AC and DC compartments are available in different configurations
- Both vertical and horizontal installation
- 2 available sizes, 50 and 60 kW with 400 and 480 Vac of output voltage, respectively
- Wireless access to embedded user interfaces
- Ethernet daisy chain enabled
- Modbus TPC/RTU Sunspec compliant
- Remote monitoring and firmware update via Aurora Vision* (logger free)

ABB string inverters

TRIO-TM-50.0-400

TRIO-TM-60.0-480

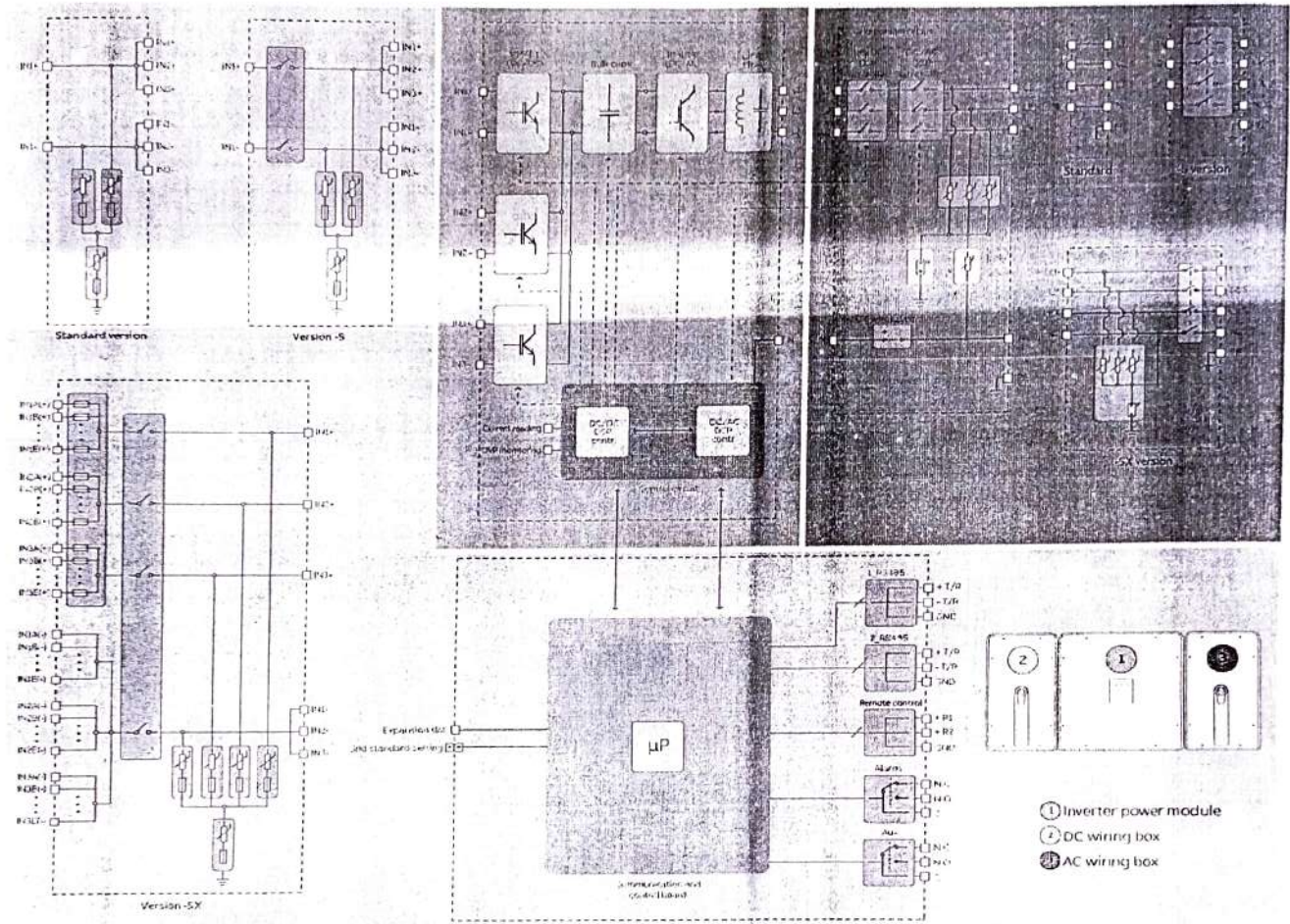
50 to 60 kW



Technical data and types

	TRIO-TM-50.0-400	TRIO-TM-60.0-480
Type code		
Input side		
Absolute maximum DC input voltage ($V_{max abs}$)	1000 V	
Start-up DC input voltage (V_{start})	420...700 V (Default 420 V)	420...700 V (Default 500 V)
Operating DC input voltage range ($V_{dcmin}...V_{dcmax}$)	0,7x V_{start} ...950 V (min 300 V)	0,7x V_{start} ...950 V (min 350 V)
Rated DC input voltage (V_{dc})	610 Vdc	720 Vdc
Rated DC input power (P_{dc})	52000 W	61800 W
Number of independent MPPT	3	
Maximum DC input power for each MPPT ($P_{mpptmax}$)	17500 W	21000 W
MPPT input DC voltage range ($V_{mpptmin}...V_{mpptmax}$) at P_{act}	480-800 Vdc	570-800 Vdc
Maximum DC input current (I_{dcmax}) for each MPPT	36 A	
Maximum input short circuit current for each MPPT	55 A (165 A in case of parallel MPPT)	
Number of DC input pairs for each MPPT	5	
DC connection type	Screw terminal block (Standard and -S version) or PV quick fit connector ²⁾ (-SX and SX2 version)	
Input protection		
Reverse polarity protection	Yes, from limited current source	
Input over voltage protection for each MPPT - varistor	Yes, 1 for each MPPT	
Input over voltage protection for each MPPT - plug In modular surge arrester	Type 2 (option) with monitoring	
Photovoltaic array isolation control	According to local standard	
DC switch rating for each MPPT (version with DC switch)	60 A / 1000 V for each MPPT (180 A in case of parallel MPPT)	
Fuse rating (version with fuses)	15 A / 1000 V	
Output side		
AC grid connection type	Three-phase (3W+PE or 4W+PE)	
Rated AC power (P_{ac} @ $\cos\phi=1$)	50000 W	60000 W
Maximum AC output power (P_{acmax} @ $\cos\phi=1$)	50000 W	60000 W
Maximum apparent power (S_{max})	50000 VA	60000 VA
Rated AC grid voltage (V_{ac})	400 V	480 V
AC voltage range	320...480 V ¹⁾	384...571 V ¹⁾
Maximum AC output current (I_{acmax})	77 A	
Contributory fault current	92 A	
Rated output frequency (f)	50 Hz / 60 Hz	
Output frequency range ($f_{min}...f_{max}$)	47...53 Hz / 57...63 Hz ²⁾	
Nominal power factor and adjustable range	> 0.995, 0...1 inductive/capacitive with maximum S_{max}	
Total current harmonic distortion	<3%	
Maximum AC cable	95 mm ² copper only (150 mm ² copper/aluminum with TRIO-AC-WIRING-KIT)	
AC connection type	Screw terminal block, cable gland PG42	
Output protection		
Anti-islanding protection	According to local standard	
Maximum external AC overcurrent protection	100 A	
Output overvoltage protection - varistor	Yes	
Output overvoltage protection - plug In modular surge arrester	Type 2 (option) with monitoring	
Operating performance		
Maximum efficiency (η_{max})	98.3%	98.5%
Weighted efficiency (EURO)	98.0% / -	98.0% / -
Communication		
Embedded communication interfaces	2x RS485, 2x Ethernet (RJ45), WLAN (IEEE802.11 b/g/n @ 2,4 GHz)	
Communication protocols	Modbus RTU / TCP (Sunspec compliant); Aurora Protocol	
Remote monitoring services	Standard level access to Aurora Vision monitoring portal	
Advanced features	Integrated Web User Interface; Display (option); Embedded logging and direct transferring of data to Cloud	
Environmental		
Ambient temperature range	-25...+60°C (-13...140 °F) with derating above 45 °C (113 °F)	-25...+60°C (-13...140 °F) with derating above 45 °C (113 °F)
Relative humidity	4%...100% condensing	
Sound pressure level, typical	75 dB(A) @1 m	
Maximum operating altitude	2000m / 6561ft	
Physical		
Environmental protection rating	IP65 (IP54 for cooling section)	
Cooling	Forced air	
Dimension (H x W x D)	725 mm x 1491 mm x 315 mm / 28.5" x 58.7" x 12.4"	
Weight	95 kg / 209 lbs overall, 66 kg / 145 lbs electronic compartment, 15 kg / 33 lbs AC wiring box (full optional), 14kg / 31 lbs DC wiring box (full optional)	
Mounting system	Wall bracket, horizontal support	

ABB TRIO-TM-50.0-400 / TRIO-TM-60.0-480 string inverter block diagram



Technical data and types

Type code	TRIO-TM-50.0-400	TRIO-TM-60.0-480
Safety	Transformerless	
Isolation level	CE	
Marking	IEC/EN 62109-1, IEC/EN 62109-2, EN 61000-6-2, EN 61000-6-3, EN 61000-3-11, EN 61000-3-12	
Safety and EMC standard	CEI 0-21, CEI 0-16, DIN VVDE V 0126-1-1, VDE-AR-N 4105, G59/3, EN 50438 (not for all national appendices), RD 1699, RD 413, RD 661, P.O. 12 3, AS 4777, BDEW, NRS-097-2-1, MEA, PEA, IEC 61727, IEC 60068, IEC 61683, VFR-2014, IEC 62116	
Grid standard (check your sales channel for availability)		
Available product variants		
Inverter power module	TRIO-TM-50.0-400-POWER MODULE	TRIO-TM-60.0-480-POWER MODULE
DC wiring box options ⁴⁾		
Input connections with terminal blocks	DCWB-TRIO-TM-50.0-400	DCWB-TRIO-TM-60.0-480
Input connections with terminal blocks + DC switch	DCWB-S-TRIO-TM-50.0-400	DCWB-S-TRIO-TM-60.0-480
15 quick input connections + fuses (single pole) + DC switch ⁵⁾	DCWB-SX-TRIO-TM-50.0-400	DCWB-SX-TRIO-TM-60.0-480
15 quick input connections + fuses (both poles) + DC switch ⁵⁾	DCWB-SX2-TRIO-TM-50.0-400	DCWB-SX2-TRIO-TM-60.0-480
AC wiring box options		
AC output connections with terminal blocks	ACWB-TRIO-TM-50.0-TL-OUTD	ACWB-TRIO-TM-60.0-TL-OUTD
AC output connections with terminal blocks + AC switch ⁵⁾	ACWB-SX-TRIO-TM-50.0-TL-OUTD	ACWB-SX-TRIO-TM-60.0-TL-OUTD
Optional available		
TRIO-GROUNDING-KIT	Available	Available
TRIO-AC-WIRING-KIT	Available	Available

⁴⁾ The AC voltage range may vary depending on specific country grid standards.
⁵⁾ The Frequency range may vary depending on specific country grid standards.
 Please refer to the document "String inverters - Product manual appendix" available at www.abb.com/solarinverters for information on the quick-fit connector brand and model used in the inverter.

⁶⁾ DCWB with display is available as optional, with dedicated wiring box version.
⁷⁾ Type 2 surge arresters available as optional, with dedicated wiring box version.
 Remark: Features not specifically listed in the present data sheet are not included in the product.

(Subject to Ahmednagar Jurisdiction only)
Dr. Vithalrao Vikhe Patil Foundation
 (Vadgaon Gupta), Vilad Ghat, P.O.- M.I.D.C., Ahmednagar-414 111
 Ph. No. (0241) 2778042/2779895 Fax. 2779782

PURCHASE ORDER

To, M/s. International Electricals S. No. 61/2A+1A, Plot No. 2, Near Venu Weight Bridge, Nagar-Manmad road, Ahmednagar-414111. 0241-2344454, 2353954	Ref:- DVVPFA/ PS/COE-Hostel A&B/2021-22/ 122/30
	Date :- 10 / 01 / 2022
	Delivery Period :- Immediate
Our Enquiry No.:- DVVPFA/ PS/COE/2021-22	Date :- 20 / 12 / 2021
P.C.M. :-	Date:-
Your Quotation No. :- 651	Date:- 28 / 12 / 2021

Dear Sir,
 Please arrange to supply the following material as per terms & conditions mentioned overleaf.

Sr. No.	Description of Material	Quantity	Unit	Rate		Per
				Rs.	Ps.	
1	Supply of:	100	Set	174.00		Set
2	20W LED Tube Light Set	90	Nos.	36.40		No.
3	36 W Tube Light Bar	55	Nos.	25.00		No.
4	36W PL Tube Side Holder- 4 pin	35	Nos.	170.00		No.
5	Fan Dimer (socket type)	150	Nos.	24.60		No.
6	6 A, 5 Pin Socket (Anchor Penta)	60	Nos.	39.75		No.
7	2 Switch + 2 Socket PVC Gang Box	07	Pkt.	55.00		Pkt.
8	Screw 35/8 SWG	70	Pkt.	8.00		No.
9	Rawal Plug (grip)	40	Nos.	20.00		No.
10	Fan Clamps Pin With Nut	05	Nos.	55.00		No.
11	Drill Bit 5mm Concrete Plain	05	Bundle	560.00		Bundle
	1.5 sqmm PVC Al. 2 Core Service Wire 90 Mtr.					

Note :- Please send above Material & bill directly to **The Principal,**
Dr. Vithalrao Vikhe Patil Foundation's College of Engineering, Vilad Ghat, Ahmednagar.

- The above quoted prices are F.O.R.- Ex- shop, Ahmednagar
- Taxes :- 18% GST extra
- Delivery :-
- Payment :- Against delivery.
- Discount :-
- Warranty :-
- Please sign. The enclosed acceptance No. ---against this order & return the same to us immediately

Purchase Officer

H.O.D.

Accountant

for C.A. (Fdn.)

Principal

Dy. Director Technical

Director Technical

Secretary General

O/c. Purchase /Store/ Elect. dept. /Account/Account Foundation/Meeting Section