FRONIUS TAURO

Direct variant.

System design flexibility

Max. performance up to 50° C

Direct sunlight

Optimizing costs

Active Double Wall Cooling

Power stage replacement

The three-phase Fronius Tauro in the 50 and 100 kW power classes promises maximum performance for decentral systems even under the harshest conditions.

With its smart hardware design, it offers not just BOS cost optimization but unprecedented flexibility in system design. Simple installation and the fastest service on the market ensure maximum yield.

TECHNICAL DATA FRONIUS TAURO

INPUT DATA	TAURO 50-3-D	TAURO ECO 50-3-D	TAURO ECO 99-3-D	TAURO ECO 100-3-D
Number of MPP trackers	3		1	
Max. input current ($I_{dc\ max}$)	134 A	87.5 A	175 A	
Max. input current module field (PV1 / PV2 / PV3)	36 / 36 / 72 A	75 / 75 / - A	75 / 75 / 75 A	
Max. short circuit current (PV1/ PV2/ PV3)	72 / 72 / 125	125 / 125 / -	125 / 125 / 125	
Max. short circuit current ($I_{scmax,\ inverter}$)	240	178	355	
DC input voltage range ($U_{dc\ min}$ - $U_{dc\ max}$)	200 - 1000 V		580 - 1000 V	
Feed-in start voltage ($U_{dc\ start}$)	200 V		650 V	
Usable MPP voltage range ($U_{mpp\ min}$ - $U_{mpp\ max}$)	400 - 870 V		580 - 930 V	
Number of DC connections (PV1 / PV2 / PV3)	4 / 3 / 7	7 / 7 / -	7 / 7 / 8	
Max. PV generator power ($P_{dc\ max}$)	75 kW_{peak}		150 kW_{peak}	

OUTPUT DATA	TAURO 50-3-D	TAURO ECO 50-3-D	TAURO ECO 99-3-D	TAURO ECO 100-3-D
AC nominal output ($P_{ac,r}$)	50,000 W		99,990 W	100,000 W
Max. output power / max. rated apparent power	50,000 VA		99,990 VA	100,000 VA
AC output current ($I_{ac\ max}$)	76 A		152 A	
Grid connection ($U_{ac,r}$)	3~ NPE 400/230 V ; 3~ NPE 380/220 V			
Frequency (frequency range f_{min} - f_{max})	50 Hz / 60 Hz (45 - 65 Hz)			
Power factor (cos $\phi_{ac,r}$)	0 - 1 ind. / cap.			

GENERAL DATA	TAURO 50-3-D	TAURO ECO 50-3-D	TAURO ECO 99-3-D	TAURO ECO 100-3-D
Dimensions (height x width x depth)	755 x 1109 x 346 mm (without wall mount)			
Weight	92 kg	74 kg	103 kg	
Degree of protection	IP 65			
Protection class	1			
Night-time consumption	< 16 W			
Cooling	Active cooling technology and double wall system			
Installation	Indoor and outdoor[1]			
Ambient temperature range	-40 - +65 °C [2]			
Certificates and compliance with standards[3]	AS/NZS 4777.2:2020, IEC62109-1/-2, VDE-AR-N 4105:2018, IEC62116, EN50549-1:2019 & EN50549-2:2019, VDE-AR-N 4110:2018, CEI 0-16:2019, CEI 0-21:2019			
Country of manufacture	Austria			

[1] Direct under the sun is possible

[2] Optional AC-disconnect mounted inside the inverter: from -30 to +65 °C

[3] These are planned certificates. For the current certificates, please see **www.fronius.com/tauro-cert**

TECHNICAL DATA FRONIUS TAURO

AC CONNECTION TECHNOLOGY	TAURO 50-3-D	TAURO ECO 50-3-D	TAURO ECO 99-3-D	TAURO ECO 100-3-D
Cable cross section	35 - 240 mm²		70 - 240 mm²	
AC conductor material	Al and Cu			
Connection terminals	Cable lug or V clamps			
Single core option (single core cable)	Cable gland: 5 x M40 (10 - 28 mm)			
Multi core option (multi core cable)	Cable gland: 1 x multi core connection ø 16 - 61.4 mm + 1 x M32			
AC Daisy Chaining option (single core cable)	Cable gland: 10 x M32 (10 - 25 mm)			

DC CONNECTION TECHNOLOGY	TAURO 50-3-D	TAURO ECO 50-3-D	TAURO ECO 99-3-D	TAURO ECO 100-3-D
Cable cross section	4 - 6 mm²			
AC conductor material	Cu			
Connection terminals	DC-direct connection Stäubli Multi Contact MC4			

EFFICIENCY	TAURO 50-3-D	TAURO ECO 50-3-D	TAURO ECO 99-3-D	TAURO ECO 100-3-D
Max. efficiency	98.6 %	98.5 %		
European efficiency (ηEU)	98.1 %	98.2 %		
MPP adaptation efficiency	> 99.9 %			

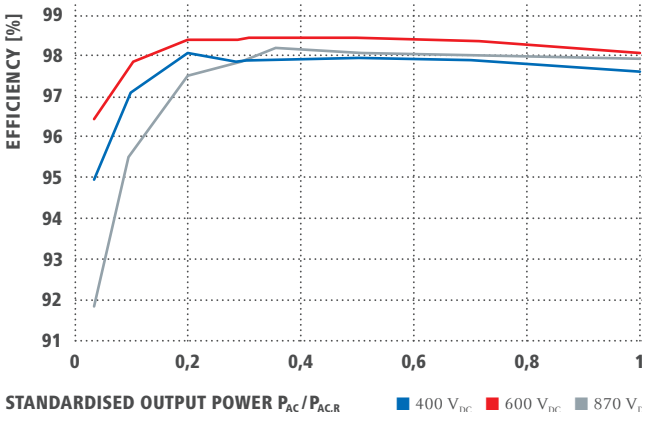
PROTECTION DEVICES	TAURO 50-3-D	TAURO ECO 50-3-D	TAURO ECO 99-3-D	TAURO ECO 100-3-D
DC disconnector	integrated			
Overload behaviour	Operating point shift, power limitation			
Reverse polarity protection	integrated			
RCMU	integrated			
DC insulation measurement	integrated			
DC/AC surge protection	Type 1 + 2 integrated, Type 2 optional			
DC string fusing	integrated, 15 A or 20 A			

INTERFACES	TAURO 50-3-D	TAURO ECO 50-3-D	TAURO ECO 99-3-D	TAURO ECO 100-3-D
Wi-Fi	Fronius Solar.web, Modbus TCP Sunspec, Fronius Solar API (JSON)			
Ethernet LAN RJ45 [4]	10/100Mbit; max. 100m Fronius Solar.web, Modbus TCP Sunspec, Fronius Solar API (JSON)			
USB (type A socket)	1A @5V max.[3]			
Wired Shutdown (WSD)	Emergency stop			
2x RS485	Modbus RTU SunSpec			
6 digital inputs / 6 digital I/Os	Programmable interface for ripple control receiver, energy management, load control			
Datalogger and Webserver [4]	Integrated			

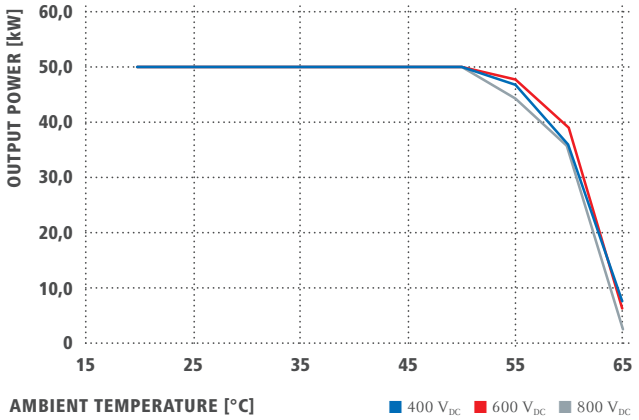
[3] for power supply only

[4] an Ethernet star-configuration is used for communication with multiple inverters. Each individual inverter communicates independently with the network/Internet via its integrated data logger

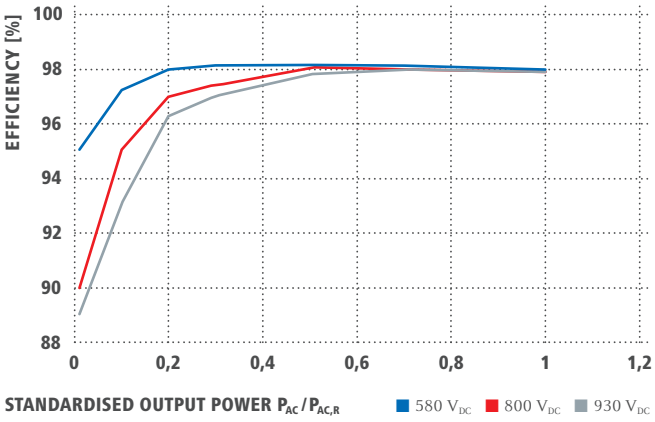
FRONIUS TAURO 50-3-D EFFICIENCY CURVE



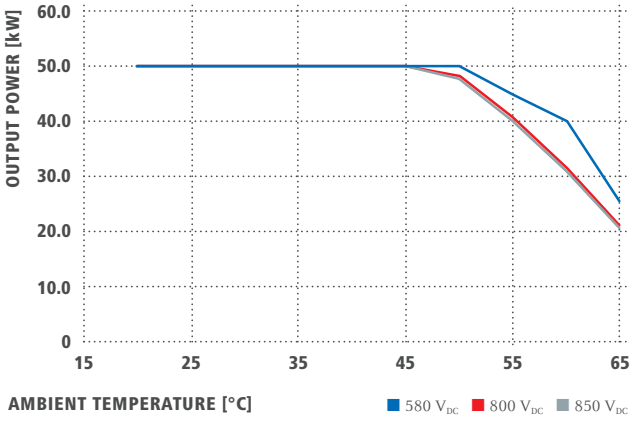
FRONIUS TAURO 50-3-D TEMPERATURE DERATING



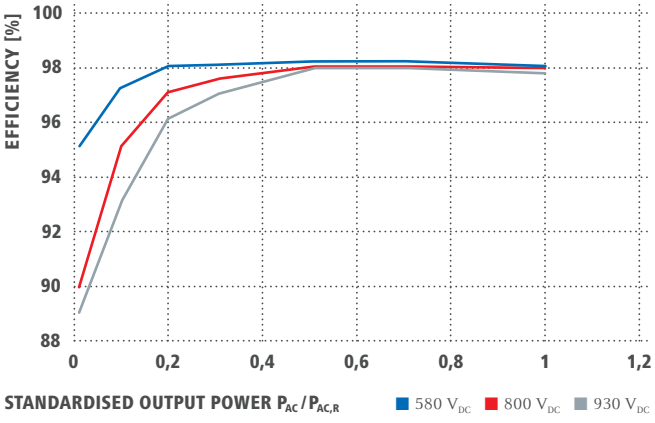
FRONIUS TAURO ECO 50-3-D EFFICIENCY CURVE



FRONIUS TAURO ECO 50-3-D TEMPERATURE DERATING



FRONIUS TAURO ECO 99-3-D EFFICIENCY CURVE



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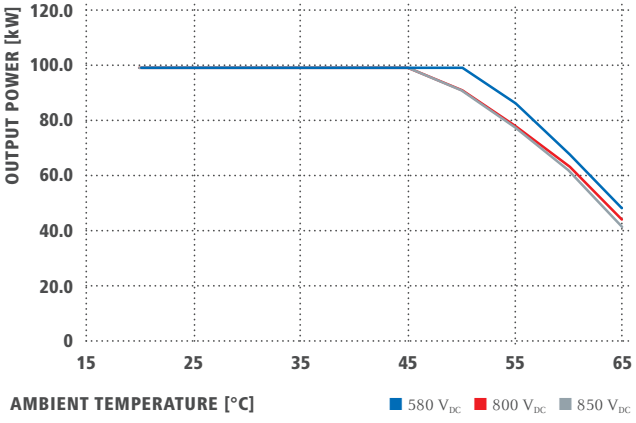
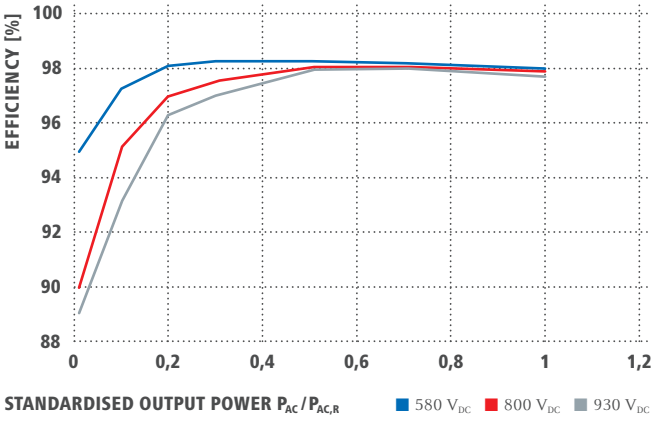


FRONIUS TAURO ECO 100-3-D EFFICIENCY CURVE



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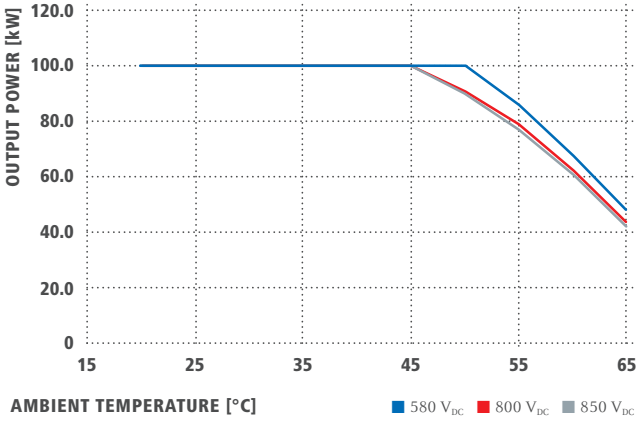

THREE BUSINESS UNITS, ONE GOAL: TO SET THE STANDARD THROUGH TECHNOLOGICAL ADVANCEMENT.

What began in 1945 as a one-man operation now sets technological standards in the fields of welding technology, photovoltaics and battery charging. Today, the company has around 5,660 employees worldwide and 1,321 patents for product development show the innovative spirit within the company. Sustainable development means for us to implement environmentally relevant and social aspects equally with economic factors. Our goal has remained constant throughout: to be the innovation leader.

PERFECT WELDING

Our mission is Perfect Welding; a task we have approached with passion and skill for decades in order that our customers can join materials with the perfect weld seam. With our outstanding technologies and services and together with our customer‘s applications, not only do we solve their specific welding technology problems, but we also make a substantial contribution to increasing their productivity.

SOLAR ENERGY

Our mission is to achieve 24 hours of sun. Day after day we are hard at work turning this vision of a future in which 100% of the world‘s energy needs are covered by renewable sources into a reality. We are therefore concentrating on solutions to intelligently, efficiently and economically generate, store, distribute and consume solar energy.

PERFECT CHARGING

As know-how leaders in the world of battery charging, we deliver exceptional solutions to create the maximum benefit for our customers. For the intralogistics sector, we are committed to energy flow optimisation for electric forklift trucks and are constantly striving for the next innovation. Our powerful charging systems for vehicle workshops guarantee safe and reliable processes.

Further information about all Fronius products and our global sales partners and representatives can be found at **www.fronius.com**

Fronius India Private Limited
Plot no BG-71/2/B,
Pimpri Industrial Area,
MIDC- Bhosari,
Pune- 411026, India
pv-sales-india@fronius.com
www.fronius.in

Fronius Australia Pty Ltd.
90-92 Lambeck Drive
Tullamarine VIC 3043
Australia
pv-sales-australia@fronius.com
www.fronius.com.au

Fronius UK Limited
Maidstone Road, Kingston
Milton Keynes, MK10 0BD
United Kingdom
pv-sales-uk@fronius.com
www.fronius.co.uk

Fronius International GmbH
Froniusplatz 1
4600 Wels
Austria
pv-sales@fronius.com
www.fronius.com

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