



# 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 ( $I_{sc \max}$ , inverter)	240	178		355
DC input voltage range ( $U_{dc \min}$ - $U_{dc \max}$ )	200 - 1000 V		580 - 1000 V	
Feed-in start voltage ( $U_{dc \text{ start}}$ )	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 <sub>peak</sub>		150 kW <sub>peak</sub>

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 / 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 <sup>1</sup>		
Ambient temperature range		-40 - +65 °C <sup>2</sup>		
Certificates and compliance with standards <sup>3</sup>	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			

<sup>1</sup> Direct under the sun is possible

<sup>2</sup> Optional AC-disconnect mounted inside the inverter: from -30 to +65 °C

<sup>3</sup> These are planned certificates. For the current certificates, please see [www.fronius.com/tauro-cert](http://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 mm <sup>2</sup>		70 - 240 mm <sup>2</sup>	
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 mm <sup>2</sup>			
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 (η <sub>EU</sub> )	98.1 %		98.2 %	
MPP adaptation efficiency	> 99.9 %			

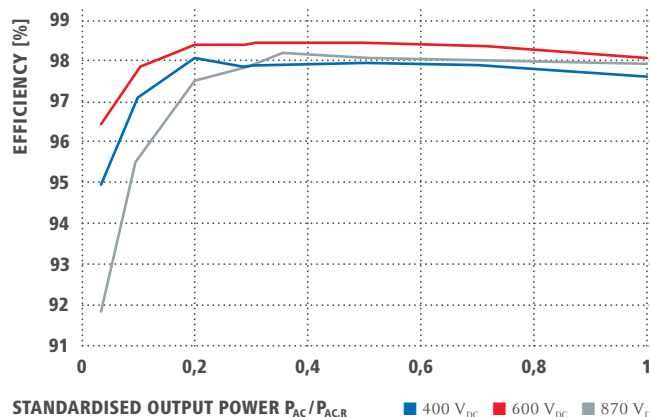
PROTECTION DEVICES	TAURO 50-3-D	TAURO ECO 50-3-D	TAURO ECO 99-3-D	TAURO ECO 100-3-D
DC disconnect	integrated			
Overload behaviour	Operating point shift, power limitation			
Reverse polarity protection	integrated			
RCMU	integrated			
DC insulation measurement	integrated			
DC/AC surge protection	Type 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 <sup>4</sup>	10/100Mbit; max. 100m Fronius Solar.web, Modbus TCP Sunspec, Fronius Solar API (JSON)			
USB (type A socket)	1A @5V max. <sup>3</sup>			
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 <sup>4</sup>	Integrated			

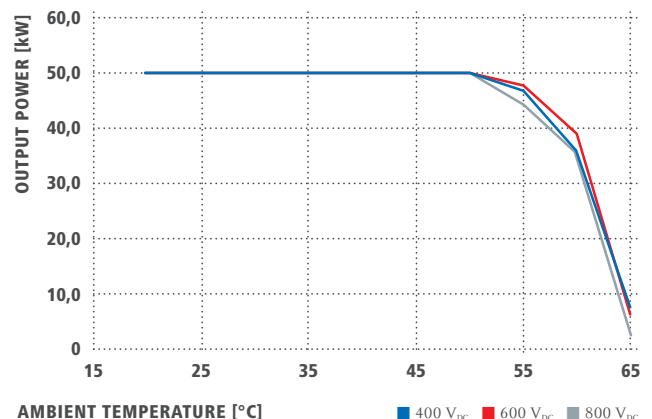
<sup>3</sup> for power supply only

<sup>4</sup> 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

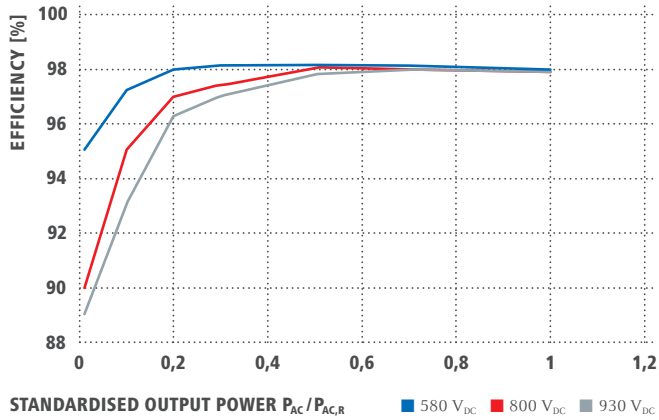
## FRONIUS TAURO 50-3-D EFFICIENCY CURVE



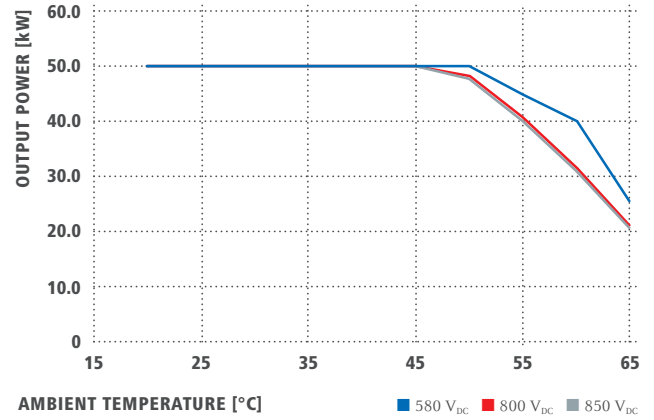
## FRONIUS TAURO 50-3-D TEMPERATURE DERATING



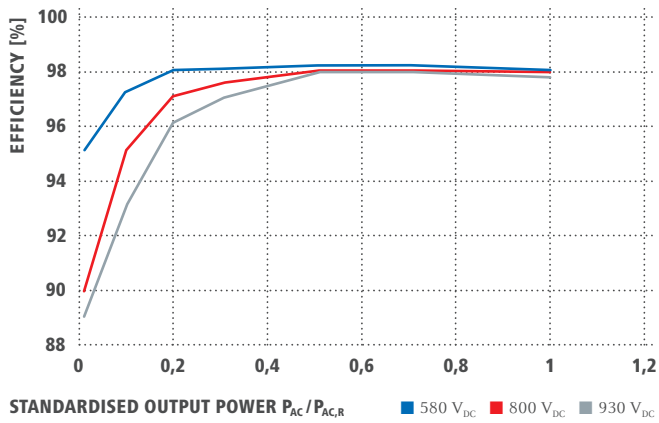
### FRONIUS TAURO ECO 50-3-D EFFICIENCY CURVE



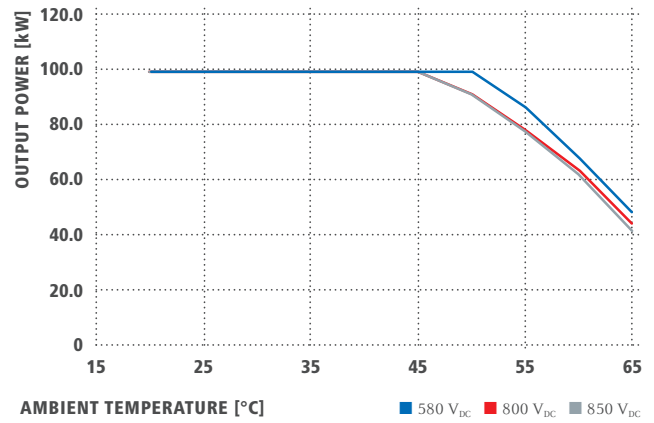
### FRONIUS TAURO ECO 50-3-D TEMPERATURE DERATING



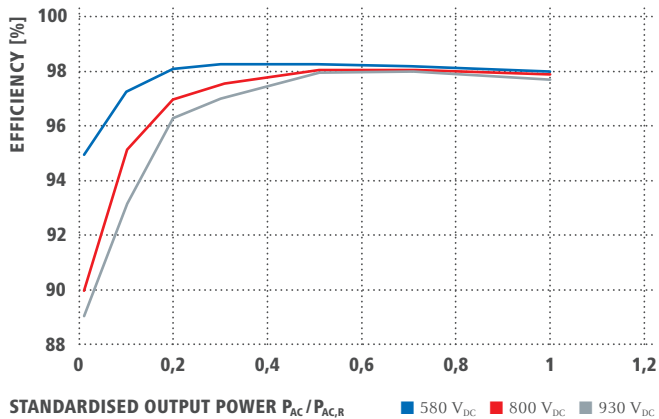
### FRONIUS TAURO ECO 99-3-D EFFICIENCY CURVE



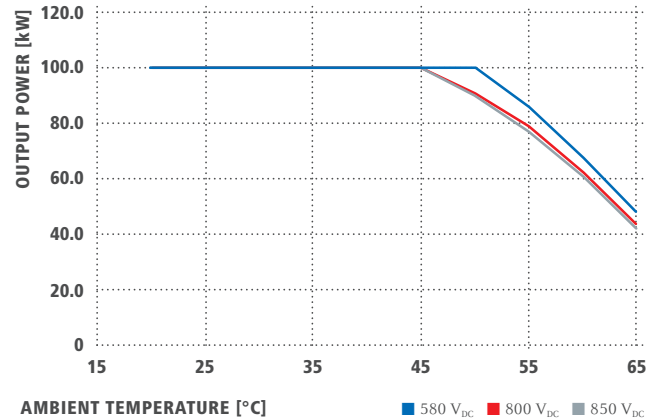
### FRONIUS TAURO ECO 99-3-D TEMPERATURE DERATING



### FRONIUS TAURO ECO 100-3-D EFFICIENCY CURVE



### FRONIUS TAURO ECO 100-3-D TEMPERATURE DERATING



# 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](http://www.fronius.com)

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