



# Designed to perform.

## Product advantages

- 01 Robust and durable
- 02 Lower costs and efficient servicing
- 03 Intelligent control and an open system
- 04 Design flexibility
- 05 Repairable and sustainable

Maximum flexibility in terms of system design with minimal overall system operating costs: the robust Fronius Tauro inverter makes large-scale PV systems even more cost-effective. Whether under direct sunlight or in extreme heat, its double-walled housing and active cooling enable full power and maximum yields even under the harshest environmental conditions. At the same time, the sturdy project inverter from Austria is quick to install and maintain.

**Fronius Tauro. Designed to perform.**

# The solution for large-scale PV systems

## 01 Robust and durable

Designed to buck direct sunlight and high temperatures: its double-walled housing and active cooling give the Fronius Tauro a long service life and make it a robust commercial solar inverter that will always deliver top performance.

## 02 Lower costs and efficient servicing

For minimal overall system operating costs: Fronius Tauro is quick to install and efficient to maintain. When servicing is required, only the affected power stage set needs to be replaced rather than the entire project inverter. This makes for safe operation and fast, cost-efficient servicing.

## 03 Intelligent control and an open system

Like all Fronius products, Fronius Tauro can be conveniently monitored, controlled and maintained from a smartphone or PC. Fronius Solar.web lets you keep an eye on your system at all times. Its open system architecture means third-party components are easily integrated.

## 04 Design flexibility

Centralised, decentralised, vertical or horizontal: Fronius Tauro offers you maximum flexibility in the design and installation of large-scale PV systems. The flexible Tauro and the cost-effective Tauro ECO can be combined in any way you choose. Pre-integrated surge protection device and AC daisy chaining reduce the need for additional components and cables.

## 05 Repairable and sustainable

Fronius Tauro shows that sustainability at every stage of the product cycle pays dividends. The project inverter is designed for durability and was developed and produced in Austria with the fewest possible, replaceable components. This makes the Tauro particularly robust and failure-resistant, and means that only individual parts need to be replaced during on-site servicing, thereby saving time and conserving resources.

01



02



03



04



Fronius Tauro is available in two versions:

- **Fronius Tauro** | 50 kW | 3 MPP trackers
- **Fronius Tauro ECO** | 50, 99.99 and 100 kW | 1 MPP tracker

# Technical

## data

			Tauro			Tauro ECO									
			50-3-D			50-3-D			99-3-D			100-3-D			
Input data	Number of MPP trackers		3			1			1			1			
	Max. input current ( $I_{dc\ max}$ )	A	134			87.5			175			175			
	Max. input current 20 A string option ( $I_{dc\ max, string}$ )	A	14.5			14.5			14.5			14.5			
	Max. input current 30 A string option ( $I_{dc\ max, string}$ )	A	22			22			22			22			
	Max. short circuit current ( $I_{sc\ max, inverter}$ )	A	240			178			365			365			
	DC input voltage range ( $U_{dc\ min} - U_{dc\ max}$ )	V	200 - 1000			580 - 1000			580 - 1000			580 - 1000			
	Feed-in start voltage ( $U_{dc\ start}$ )	V	200			650			650			650			
	Usable MPP voltage range ( $U_{mpp\ min} - U_{mpp\ max}$ )	V	400 - 870			580 - 930			580 - 930			580 - 930			
	Max. PV generator power ( $P_{dc\ max}$ )	kWp	75			75			150			150			
			PV1	PV2	PV3	PV1	PV2	PV1	PV2	PV3	PV1	PV2	PV3		
	Max. input current module array ( $I_{dc\ max, pv}$ )	A	36	36	72	75	75	75	75	75	75	75	75		
	Max. module array short circuit current ( $I_{sc\ pv}$ ) <sup>1</sup>	A	72	72	125	125	125	125	125	125	125	125	125		
	Number of DC connections 20 A option		4	3	7	7	7	7	7	8	7	7	8		
Number of DC connections 30 A option		4	5	5	4	5	4	5	5	4	5	5			
Output data	AC nominal output ( $P_{ac,r}$ )	W	50.000			50.000			99.990			100.000			
	Max. output power	VA	50.000			50.000			99.990			100.000			
	AC output current ( $I_{ac\ nom}$ )	A	76			76			152			152			
	Grid connection ( $U_{ac,r}$ )	V	3~ NPE 400/230; 3~ NPE 380/220												
	Frequency (frequency range $f_{min} - f_{max}$ )	Hz	50 / 60 (45 - 65)												
	Power factor ( $\cos \varphi_{ac,r}$ )		0 - 1 ind. / cap.												
General data	Dimensions (height x width x depth)	mm	755 x 1109 x 346 (without wall mount)												
	Weight	kg	92			74			103			103			
	Degree of protection		IP 65			IP 65			IP 65			IP 65			
	Protection class		1			1			1			1			
	Night-time consumption	W	< 16			< 16			< 16			< 16			
	Cooling		Active Cooling Technologie and Double-Wall System												
	Installation		Indoor and outdoor <sup>2</sup>												
	Ambient temperature range	°C	-40 to +65 °C <sup>3</sup>												
	Certificates and compliance with standards <sup>4</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												
Connection technology	AC	Cable cross section	mm <sup>2</sup>	35 - 240			35 - 240			70 - 240			70 - 240		
		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	Cable cross section	mm <sup>2</sup>	4 - 6											
		DC conductor material		Cu											
Connection terminals			DC-direct connection Stäubli Multi Contact MC4												
Efficiency	Max. efficiency	%	98.5			98.5			98.5			98.5			
	European efficiency ( $\eta_{EU}$ )	%	98.3			98.2			98.2			98.2			
	MPP-adaptation efficiency	%	> 99.9			> 99.9			> 99.9			> 99.9			

<sup>1</sup>  $I_{sc\ pv} = I_{sc\ max} \geq I_{sc\ (STC)} \times 1.25$  according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

<sup>2</sup> Direct sunlight is possible

<sup>3</sup> Optional AC-disconnect mounted inside the inverter: from -30 to +65 °C

<sup>4</sup> These are planned certificates. For the current certificates, please see [www.fronius.com/tauro-cert](http://www.fronius.com/tauro-cert)

Protection devices		Tauro	Tauro ECO		
		50-3-D	50-3-D	99-3-D	100-3-D
DC disconnecter		integrated			
Overload behaviour		Operating point shift, power limitation			
RCMU		integrated			
DC insulation measurement		integrated			
Arc fault circuit interrupter (Fronius Arc Guard)		–	Optional (for 20 A option only)		
DC/AC surge protection		Type 1 + 2 integrated <sup>5</sup> , Type 2 optional			
string fuse		integrated, 20 A or 30 A			

Interfaces	Wi-Fi	Fronius Solar.web, Modbus TCP Sunspec, Fronius Solar API (JSON)
	Ethernet LAN RJ45 <sup>7</sup>	10/100 Mbit; max. 100 m Fronius Solar.web, Modbus TCP Sunspec, Fronius Solar API (JSON)
	USB (type A socket)	1A @ 5V max. <sup>6</sup>
	Wired Shutdown (WSD)	Emergency stop
	2 x 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>7</sup>	Integrated

<sup>5</sup> Typ 1 + 2:  $I_{imp} 5kA$

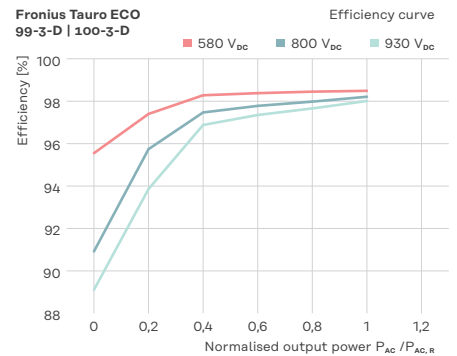
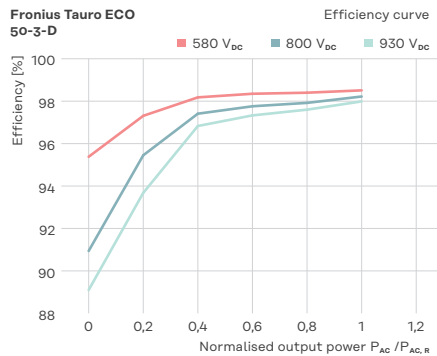
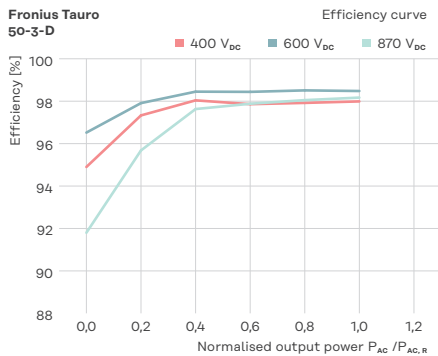
<sup>6</sup> For power supply only

<sup>7</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

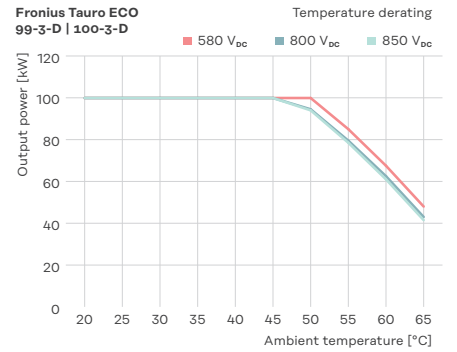
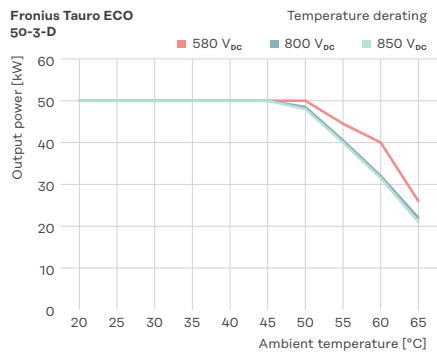
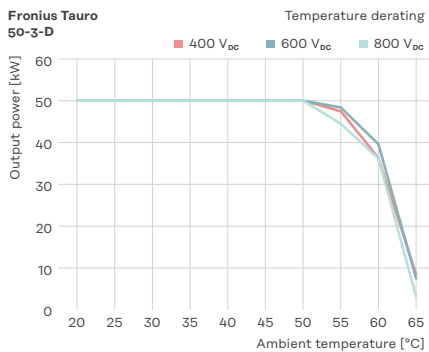
## Measurably better

The performance speaks for itself: Fronius Tauro delivers impressive performance, with constant efficiency and maximum output at temperatures up to 50 °C.

### Efficiency



### Power derating



For more information about the product, visit: [www.fronius.com/tauro](http://www.fronius.com/tauro)

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