Fronius Tauro
Direct version

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

02

03

04

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

Centralized, decentralized, 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.

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 string option 20 A ($I_{sc\ max.,\ string}$)	A	20	20	20	20
	Max. short circuit current string option 30 A ($I_{sc\ max.,\ string}$)	A	30	30	30	30
	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 ($U_{mpp\ min}$ - $U_{mpp\ max}$) [1]	V	400 - 870	580 [2] - 930	580 [2] - 930	580 [2] - 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 ($I_{sc\ pv}$) [3]	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
			380 VAC / 400 VAC	380 VAC / 400 VAC	380 VAC / 400 VAC	380 VAC / 400 VAC
	AC output current ($I_{ac\ nom}$)	A	75.8 / 72.5	75.8 / 72.5	151.5 / 144.9	151.5 / 144.9
	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 ($\cos \phi_{ac,r}$)		0 - 1 ind. / cap.			
General data	Dimensions (height x width x depth)	mm	755 × 1109 × 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 [4]			
	Ambient temperature range	°C	-40 to +65 °C [5]			
	Certificates and compliance with standards [6]		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 | IEC 63027:2023			
	Life cycle analysis		For Tauro ECO 100 in accordance with Austrian standards ÖNORM EN ISO 14040 and 14044 (verified by Fraunhofer IZM)			
Connection technology	AC: Cable cross section	mm²	35 - 240	35 - 240	70 - 240	70 - 240
	AC: AC conductor material		Al and Cu			
	AC: Connection terminals		Cable lug or V clamps			
	AC: Single Core Option (single core cable)		Cable gland: 5 x M40 (10 - 28 mm)			
	AC: Multi Core Option (multi core cable)		Cable gland: 1 x multi core connection Ø 16 - 61.4 mm + 1 x M32			
	AC: AC Daisy Chaining Option (single core cable)		Cable gland: 10 x M32 (10 - 25 mm)			
	DC: Cable cross section	mm²	4 - 6			
	DC: DC conductor material		Cu			
	DC: Connection terminals		DC-direct connection Stäubli Multi Contact MC4			
Efficiency	Max. efficiency	%	98.5	98.5	98.5	98.5
	European efficiency (ηEU)	%	98.3	98.2	98.2	98.2
	MPP-adaptation efficiency	%	> 99.9	> 99.9	> 99.9	> 99.9

[1] *The usable MPP voltage range is identical to the MPP voltage range at rated power* [2] *At 230 V actual mains voltage; design recommendation (Umpp min): 600V,* [3] *Isc pv = Isc max. ≥ Isc (STC) x 1.25 according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.,* [4] *Direct sunlight is possible,* [5] *Optional AC-disconnect mounted inside the inverter: from -30 to +65 °C* [6] *These are planned certificates. For the current certificates, please see www.fronius.com/tauro-cert*

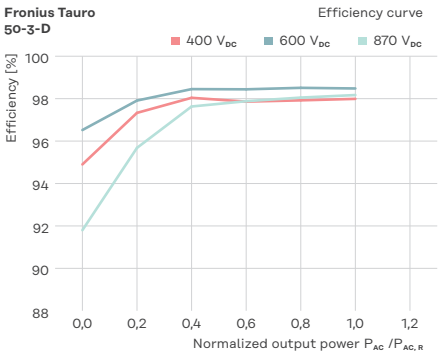
			Tauro	Tauro ECO		
			50-3-D	50-3-D	99-3-D	100-3-D
Protection devices	DC disconnector		integrated			
	Overload behaviour		Operating point shift, power limitation			
	RCMU		integrated			
	DC insulation measurement		integrated			
	Arc fault circuit interrupter (Fronius Arc Guard)		–	Optional (for 20 A option only)		
	DC/AC surge protection		Type 1 + 2 integrated [7], Type 2 optional			
	DC string fusing		integrated, 15 A or 20 A			
Interfaces	Wi-Fi		Fronius Solar.web, Modbus TCP Sunspec, Fronius Solar API (JSON)			
	Ethernet LAN RJ45 [9]		10/100 Mbit; max. 100 m Fronius Solar.web, Modbus TCP Sunspec, Fronius Solar API (JSON)			
	USB (type A socket)		1A @ 5V max.[8]			
	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 web server [8]		Integrated			

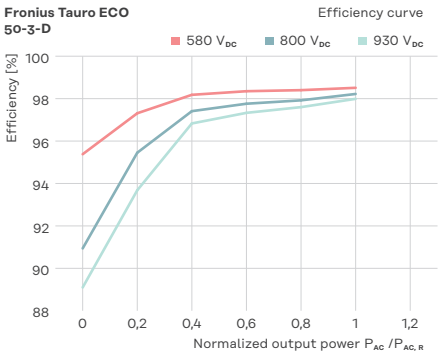
[7] *Typ 1 + 2: I_{imp} kA*
[8] *For power supply only*
[9] *An Ethernet Y connector is used to facilitate communication with multiple inverters. Each inverter communicates with the network/internet independently via its own integrated datalogger.*

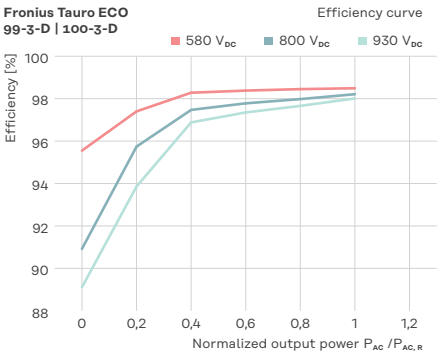
Measurably better

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

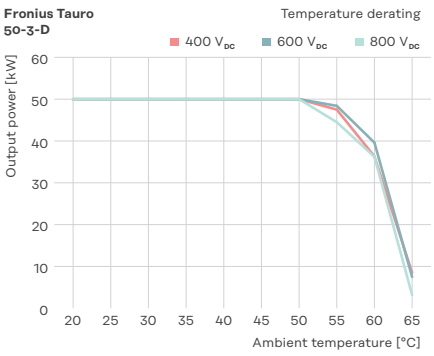
Efficiency

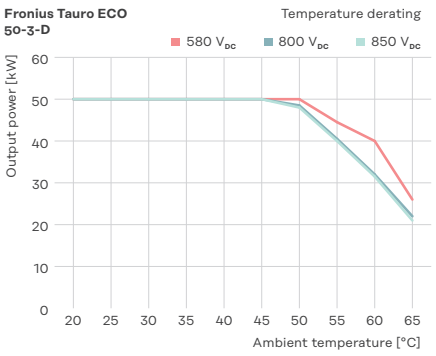


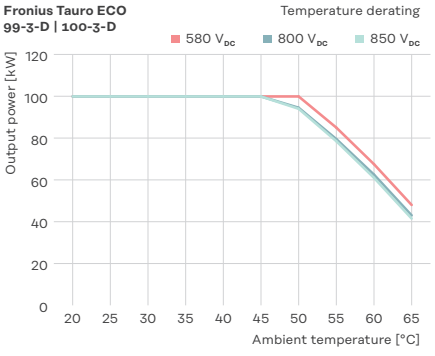




Power derating







For more information about the product, visit: www.fronius.com/tauro

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