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

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.
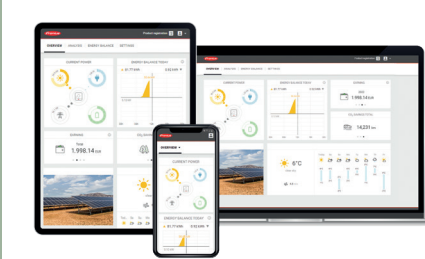
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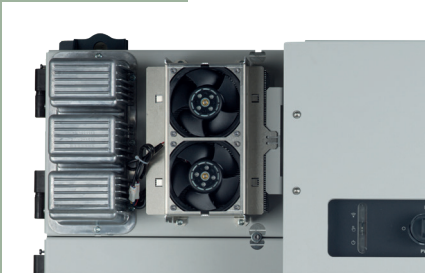
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04

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

Input data

		Tauro	Tauro ECO		
		50-3-D	50-3-D	99-3-D	100-3-D
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

		Tauro 50-3-D	Tauro ECO 50-3-D	Tauro ECO 99-3-D	Tauro ECO 100-3-D
AC rated 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
Rated 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~ (N)PE 400/230; 3~ (N)PE 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

		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)	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

			Tauro 50-3-D	Tauro ECO 50-3-D	Tauro ECO 99-3-D	Tauro ECO 100-3-D
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

		Tauro 50-3-D	Tauro ECO 50-3-D	Tauro ECO 99-3-D	Tauro ECO 100-3-D
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			
	RCMU	integrated			
	DC insulation measurement	integrated			
	Arc fault circuit interrupter (Fronius Arc Guard)	Optional (for 20 A option only)	Optional (for 20 A option only)	Optional (for 20 A option only)	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			

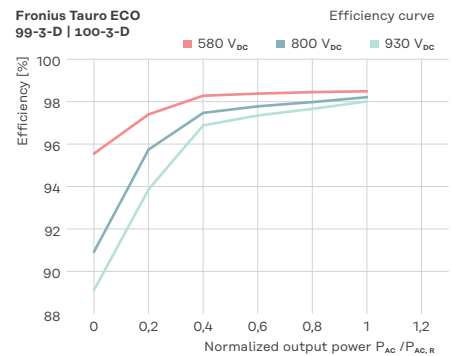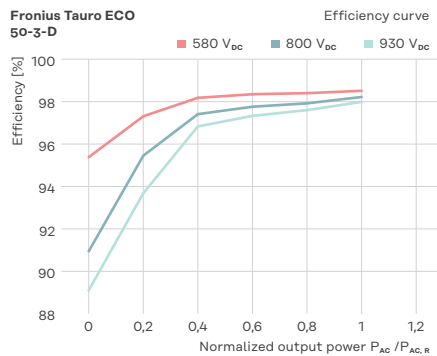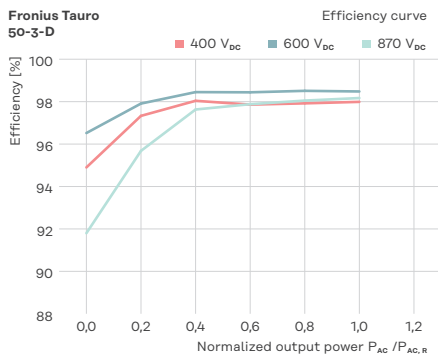|					
Interfaces	Wi-Fi	Fronius Solar.web, Modbus TCP Sunspec, Fronius Solar API (JSON)			
	Ethernet LAN RJ45 [8]	10/100 Mbit; max. 100 m Fronius Solar.web, Modbus TCP Sunspec, Fronius Solar API (JSON)			
	Wired Shutdown (WSD)	Emergency stop			
	2 x RS485	Modbus RTU SunSpec			
	6 digital inputs / 6 digital 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] 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.
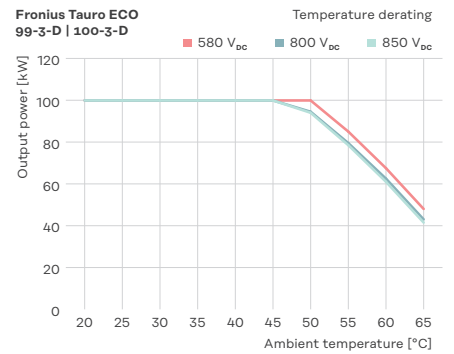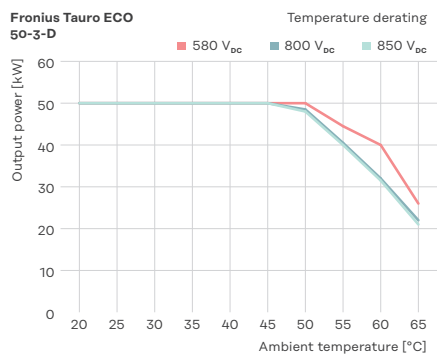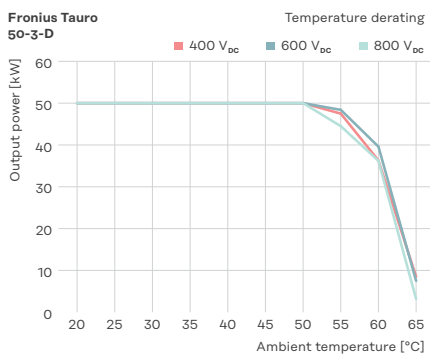
Measurably better

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

Efficiency

Fronius Tauro 50-3-D — Efficiency curve: 400 V_{DC}, 600 V_{DC}, 870 V_{DC}

Fronius Tauro ECO 50-3-D — Efficiency curve: 580 V_{DC}, 800 V_{DC}, 930 V_{DC}

Fronius Tauro ECO 99-3-D | 100-3-D — Efficiency curve: 580 V_{DC}, 800 V_{DC}, 930 V_{DC}

Power derating

Fronius Tauro 50-3-D — Temperature derating: 400 V_{DC}, 600 V_{DC}, 800 V_{DC}

Fronius Tauro ECO 50-3-D — Temperature derating: 580 V_{DC}, 800 V_{DC}, 850 V_{DC}

Fronius Tauro ECO 99-3-D | 100-3-D — Temperature derating: 580 V_{DC}, 800 V_{DC}, 850 V_{DC}

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

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