

Solar plant controller

on the basis of the MaxWeb NX pro



Control at the feed point

The solar plant controller MaxWeb NX pro allows the active and reactive powers to be controlled directly at the grid feed point. This way, solar plants easily provide the contribution to grid stabilisation required by law. Furthermore, they meet the requirements of the grid operators requesting direct control at the feed point and not at the inverter for large solar parks.

Flexible connection

Connection to the control room of the grid operator can be executed via a SCADA protocol (e.g. IEC 60870-5-101/104) or other digital and analogue interfaces. Using these, MaxWeb NX pro is provided with the required target specifications of the grid operator and compares these to the current ACTUAL values at the grid feed point. Now, MaxWeb NX pro controls the inverters of the plant so that

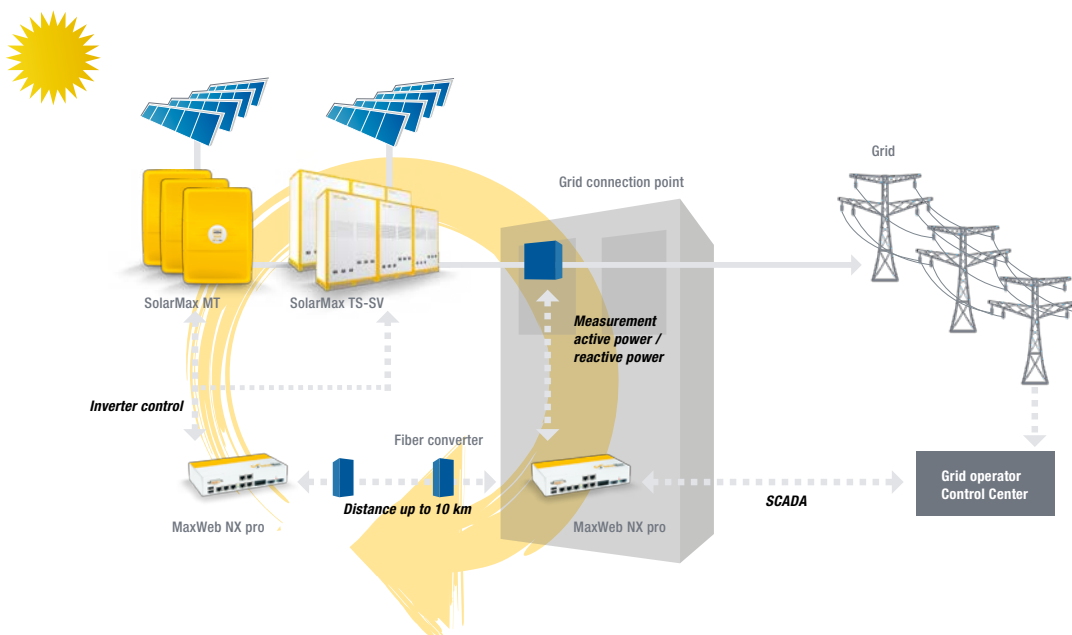
these feed into the public power grid according to the specifications. In this way, the $\cos-\phi$ value is controlled, the active power is reduced, the reactive power specification is met, and the circuit breaker is controlled, amongst other values.

Reliable and extendable

MaxWeb NX pro offers the highest reliability even in the most difficult conditions. For example, the operating temperature range is in the increased industrial range of -40 to +70 degrees Celsius. MaxWeb NX pro is maintenance-free and designed for continuous operation. Thanks to the processor performance and the diverse interfaces, the functionality can be extended easily so that future requirements can be implemented quickly as well.

Specifications

Configuration	Installation	35mm top-hat rail or wall installation
	Processor	Intel AtomE640T 1GHz / 1GB DDR2 RAM
	Integrated memory	4GB flash memory
	Plug or top-hat rail power supply unit	90VAC .. 230VAC / 24VDC
	Voltage input	9VDC .. 30VDC
	Power input	7W
Ambient conditions	Protection class	IP30
	Operating / storage temperature range	-40°C .. +70°C / -40°C .. +85°C
	MTBF	~200,000h (22.8 years) @ 25°C
	Shock / Vibration	EN60068-2-27 / EN60068-2-6
	EMI conformity	EN-55022 / 55024 / 61000-6-2 / 61000-6-4
Interfaces	Mobile phone	Quad band GSM / GPRS / EDGE / Dual band UMTS/HSPA
	GPS	A-GPS module
	Ethernet	3x LAN 10 / 100 / 1000
	Serial interfaces	RS485 4x galvanically isolated, 2x USB 2.0
	Relay output	1x 230VAC / 1A
	S0 interface	2 inputs
	Video output	DVI-D connection
	Connection radio ripple control receiver	6 digital inputs
Weight & dimensions	Weight / dimensions (W x D x H)	1400g / 229mm x 48mm x 127mm



Features

- Quick control of the ACTUAL values directly at the feed point, e.g. $\cos \varphi$, active power, reactive power, voltage
- Connection to the control room of the grid operator by SCADA protocol via Ethernet, RS485, or mobile phone connection; compatible with digital and analogue inputs / outputs
- Coverage of a distance of up to 10km between feed point and solar park
- autonomous mode possible (e.g. $\cos \varphi (U)$), when there are no TARGET specifications from the grid operator
- Documentation of the TARGET and ACTUAL values for later analyses
- Can be extended flexibly and, thus, is future-proof