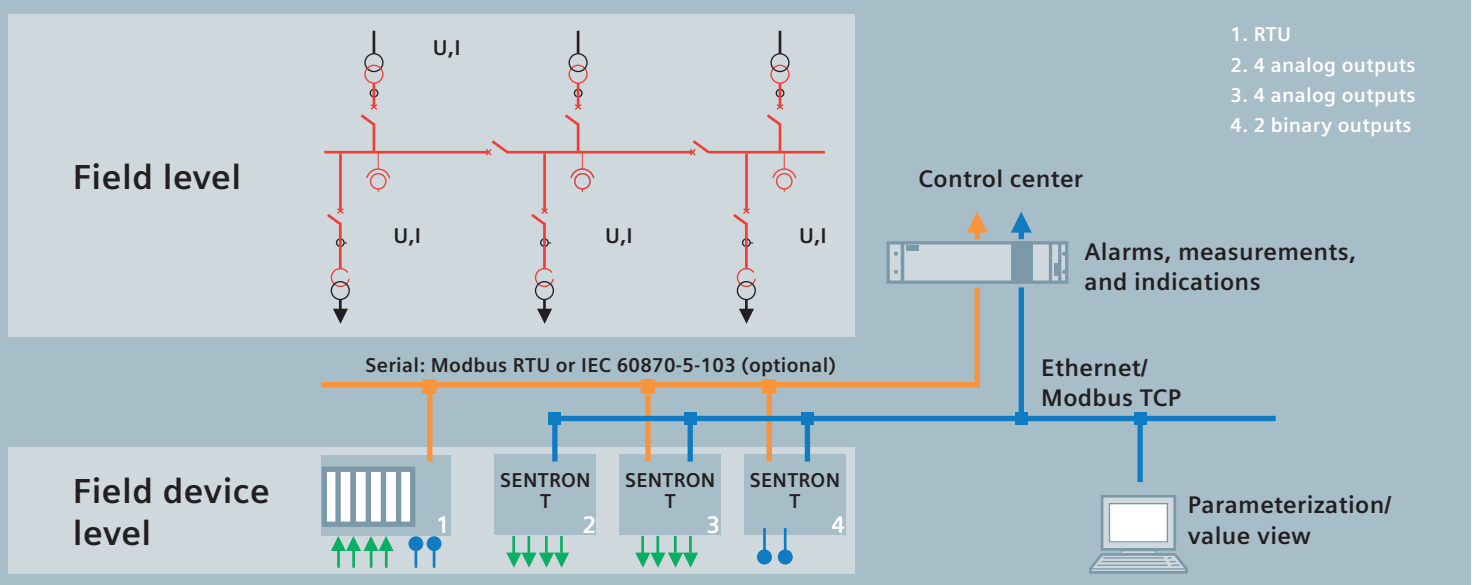# SENTRON T electrical measurement transducer

Smart technology at a reasonable price

Answers for energy.

SIEMENS

Field level

U,I U,I U,I

U,I U,I U,I

Control center

Alarms, measurements, and indications

Serial: Modbus RTU or IEC 60870-5-103 (optional)

Ethernet/ Modbus TCP

Field device level

SENTRON T 1

SENTRON T 2

SENTRON T 3

SENTRON T 4

Parameterization/ value view

SENTRON T application example: voltage and current measurement and assignment of parameters to analog and binary outputs for local monitoring or control purposes, through remote terminal unit devices (RTUs) while receiving the measurements for integration in the SCADA/monitoring systems through communication.

# A great contribution to ensuring power excellence

Comprehensive functions, high measurement accuracy, fast response, and Siemens quality – the SENTRON T offers all.

The world's increasing demand for electric power calls for highest efficiency and absolute reliability in power networks. Smart Grid technology provides consistent answers to these challenges, but requires technologies that can respond to the requirements mentioned. Fast controlling reaction, high accuracy, and open communication are essential features in this context.

Power transducer applications are not new to electrical systems, but today more than ever they are required to deliver precise and fast measurement data. They need to be user-friendly, compatible with the latest communication standards, impart long-term reliability, and provide comprehensive functionality at a reasonable price. This is exactly what the Siemens SENTRON T has to offer. It makes available 60 measured or calculated parameters, and any of these figures can be assigned to each of the SENTRON T's four analog outputs with 120 ms response time for 50 Hz signals.

Its comprehensive communication abilities make the SENTRON T the power transducer of first choice for utilities as well as for industry customers. They include Modbus TCP, Modbus RTU, and IEC 60870-5-103 which allow seamless system and SCADA integration through Ethernet or RS485. External time synchronization via Ethernet NTP or via fieldbus using the Modbus RTU or the IEC 60870-5-103 is also available.

Thanks to its comprehensive onboard parameterization and visualization tool, the user-friendly SENTRON T can easily be parameterized and operated through the Web browser of any PC or notebook without the need for any extra software installation. Its high EMC immunity and its compact and robust design make the SENTRON T ideally suited for any application.

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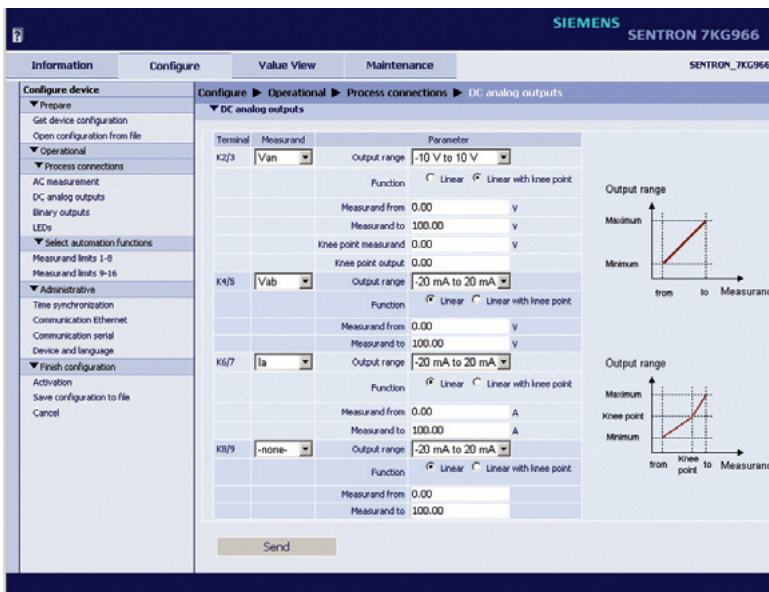
Convincing highlights

- Integrated Web server for easy and user-friendly parameterization with any Windows computer*

- High measurement accuracy TRMS (True RMS) of voltage and current

- Calculated measurands:
  – active, reactive, and apparent power
  – active, reactive, and apparent energy
  – frequency
  – phase angle
  – power factor
  – active power factor

- Ethernet communication through Modbus TCP or communication through serial RS485 interface based upon Modbus RTU or IEC 60870-5-103 communication protocol

- NTP, serial, and RTC time synchronization for accurate logging of events

- High degree of flexibility thanks to three inputs for alternating voltage (directly connected for rated voltage up to 400 V) and three inputs for alternating current measurements (rated current 1 A or 5 A, Imax = 2 x I-rated)

- Four fast-response analogue outputs 100 ms at 60 Hz or 120 ms at 50 Hz, individually programmable for flexible assignment and monitoring of 60 measured or calculated parameters

- Two individually programmable binary outputs for fast indications (e.g., limit violation) and operation status monitoring

- Local status signalization through four dedicated LEDs

- Internal battery for real-time clock and for the protection of counter values in case of a power outage

- Reasonable price

SENTRON T will replace the product line SIMEAS T. These are your advantages:

Device	RS 485	Ethernet	Analog output	Reaction time from analog output	Temperature of operation	Binary outputs	Time synch.	Parameter-ization	LED for local signal-ization
SIMEAS T	IEC 60870-5-103	No	3 4 mA to 20 mA −10/+10 V	approx. 300 ms	−10 °C to +50 °C	1	No	External software	No
SENTRON T	IEC 60870-5-103 Modbus RTU	Modbus TCP	4 −20 mA to 20 mA 4 mA to 20 mA −10 V to 10 V	approx. 120 ms (50 Hz) approx. 100 ms (60 Hz)	−25 °C to +55 °C	2	Yes RTC Fieldbus NTP	Web browser	4

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