

SIMEAS T Digital Transducer



Fig. 13/16
SIMEAS T

Description

The SIMEAS T universal transducer allows measurement of all electrical quantities occurring in any network in a single unit. Especially in power plants and substations transducers are used for isolation of electrical signals and for further processing of measured values. Any desired measured value (current, voltage, active power, frequency, etc.) can be assigned to each of the 3 analog outputs, as well as any desired measuring range. The SIMEAS T universal transducer with RS232 interface can be ordered by additionally specifying a parameterization key along with plain-language data. The unit can also be reparameterized with the SIMEAS T PAR software package.

- SIMEAS T PAR - Parameterization software
SIMEAS T digital transducers with RS232 or RS485 interface can be parameterized or calibrated with the PC software SIMEAS T PAR. The measured quantities can be displayed on the PC online via a graphical meter or can be recorded and stored over a period of up to one week. The SIMEAS T PAR software enables the self-parameterization of the digital transducer according to the desired parameter setting.

- SIMEAS EVAL - Evaluation software
Using the SIMEAS EVAL evaluation software, the previously stored values with SIMEAS T PAR can be edited, evaluated and printed in the form of a graphic or table. SIMEAS EVAL is a typical Windows program, i.e. it is completely window-oriented and all functions can be operated with the mouse or keyboard. SIMEAS EVAL is installed together with the SIMEAS T PAR parameterization package.

Function overview

Application

- All measured values in any desired power supply system can be measured with one single unit, the SIMEAS T
- Any desired measured value (current voltage, active power, frequency, etc.) can be assigned to each of the 3 analog outputs, as well as any desired measuring range
- The output signal can be freely parameterized for every output
- The binary output can be used as a kWh meter to register the energy or as a limit monitor
- Input currents up to max. 10 A or input voltages up to 600 V with rated frequencies of 50, 60 or 16 2/3 Hz can be connected
- Three freely parameterizable analog outputs
- One binary output for work or limit signal
- For connection to any power system
- Inputs up to 500 V and 10 A

Features

- Smallest size
- CE mark
- EMC interference immunity
- Satisfies relevant international standards
- High quality, long life
- Electrical isolation with high test voltage
- High measuring accuracy
- Real r.m.s measurement
- Powerful output signal circuits
- One unit for all applications
- All data freely parameterizable
- High plant security and reliability

Communication interfaces

- RS232 or RS485 interface

Selection and ordering data

Description	Order No.
SIMEAS T	7KG6000-8A□
<i>Universal transducer with RS232 interface for self-parameterization via SIMEAS T PAR Windows software</i>	↑
<i>Auxiliary power</i>	
24 to 60 V DC	A
110 to 230 V AC/DC	B
PC connecting cable	7KG6051-8BA
SIMEAS T	7KG6000-8B□ - Z □ □ □
<i>Universal transducer with RS232 interface fully parameterized</i> (Add - Z as well as Y01 and plain text to order number; see also ordering examples and parameterization key on pages 13/19 and 13/20)	↑ ↑ ↑ ↑
<i>Auxiliary power</i>	
24 to 60 V DC	A Y 0 1
110 to 230 V AC/DC	B Y 0 1
SIMEAS T	7KG6000-8E□
<i>Universal transducer with RS485 interface</i>	↑
<i>Auxiliary power</i>	
24 to 60 V DC	A
100 to 230 V AC/DC	B
Operating instruction for 7KG6000 English/German (One set of operating instructions per unit is included in the scope of supply)	C53000-B876-C203

Accessories

RS232/RS485 converter	
For parameterization of the transducer with a 9/25-pin connector on the PC connecting cable on the transducer and 230 V plug-in power supply unit	
V _{aux} 230 V AC	7KG6051-8EB
V _{aux} 110 V AC	7KG6051-8EC
SIMEAS T PAR	
Languages can be chosen on installation: English, German, French, Spanish, Italian	7KG6050-8AA
SIMEAS EVAL with SIMEAS T PAR	
Languages can be chosen on installation: English, German, French, Spanish, Italian	7KG6050-8CA

Parameterization key ¹⁾

	Basic parameters □□□□	-	Analog output 1 □□□	-	Analog output 2 □□□	-	Analog output 3 □□□	-	Binary input □□
<i>Type of connection</i>									
Single-phase networks	A								
Three-wire three-phase balanced	B								
Three-wire three-phase unbalanced	C								
Four-wire three-phase balanced	D								
Four-wire three-phase unbalanced	E								
Direct connection	F								
<i>Rated frequency</i>									
50 Hz	1								
60 Hz	2								
16 2/3 Hz	3								
<i>Rated input voltage</i>									
Without instrument transformer L-N = 0-90 V	1								
Without instrument transformer L-N = 0-180 V	2								
Without instrument transformer L-N = 0-450 V	3								
With instrument transformer (specify in plain text)	9								
<i>Rated input current</i>									
Without instrument transformer 0-2 A	1								
Without instrument transformer 0-4 A	2								
Without instrument transformer 0-10 A	3								
With instrument transformer (specify in plain text)	9								
<i>Measured quantity/measuring range</i>									
Without (analog output not used)		A 0 0		A 0 0		A 0 0			
Voltage L1-N		B 9		B 9		B 9			
Voltage L2-N		C 9		C 9		C 9			
Voltage L3-N		D 9		D 9		D 9			
Voltage L1-L2		E 9		E 9		E 9			
Voltage L2-L3		F 9		F 9		F 9			
Voltage L3-L1		G 9		G 9		G 9			
Current L1		H 9		H 9		H 9			
Current L2		K 9		K 9		K 9			
Current L3		L 9		L 9		L 9			
Frequency in L1		M 9		M 9		M 9			
Phase angle		N 9		N 9		N 9			
Total power factor		P 9		P 9		P 9			
Total active power		R 9		R 9		R 9			
Total reactive power		S 9		S 9		S 9			
Total apparent power		T 9		T 9		T 9			
<i>Output signal</i>									
0 to 10 mA			1		1		1		
0 to 20 mA			2		2		2		
4 to 20 mA			3		3		3		
-10 to 10 mA			4		4		4		
-20 to 20 mA			5		5		5		
0 to 10 V			6		6		6		
-10 to 10 V			7		7		7		
<i>Binary output</i>									
Unit in operation									B 1
Energy pulses, active power, demand									C 9

1) A plain-text description must be provided for every "9" in the parameterization key.
The parameters given in the table can be reparameterized with the SIMEAS T PAR software.

Ordering examples

for a completely parameterized transducer

Ordering example 1

Connection	3-wire, balanced
Voltage transformer	11 / 0.1 kV / 60 Hz
Current transformer	250/1 A
Analog output 1	
Current L1	0 to 300 A = 4 to 20 mA
Analog output 2	
Voltage L1 - L2	10 to 12 kV = 4 to 20 mA
Analog output 3	
Frequency	58 to 62 Hz = 4 to 20 mA
Binary output	–
Energy pulses	10 kWh / pulse
Auxiliary power	110 V DC

Order No. [7KG6000-8BB-ZY01](#)

Parameterization key [B299-H93-E93-M93-C9](#)

Plain text

Instrument transformer	11 / 0.1 kV-250 / 1 A
Analog output 1	0 to 300 A
Analog output 2	0 to 12 kV
Analog output 3	48 to 52 Hz
Binary output	10 kWh / pulse

Ordering example 2

Connection	4-wire, unbalanced
Direct connection	400 V / 50 Hz, 500/5 A current transformer
Analog output 1	
Voltage L1-N	0 to 420 V = 4 to 20 mA
Analog output 2	
Active power	-400 to +400 kW = -10 to 10 mA
Analog output 3	
Power factor	0.5 inductive to 0.5 capacitive = 0 to 20 mA
Auxiliary power	230 V AC

Order No. [7KG6000-8BB-ZY01](#)

Parameterization key [E139-B93-R94-P92-B1](#)

Plain text

Instrument transformer	500/5 A
Analog output 1	0 to 420 V
Analog output 2	-400 to +400 kW
Analog output 3	0.5 inductive to 0.5 capacitive
Binary output	–

Ordering example 3

Frequency transducer	
Input	45 to 55 Hz / 100 V / $\sqrt{3}$
Output	4 to 20 mA
Auxiliary power	60 V DC

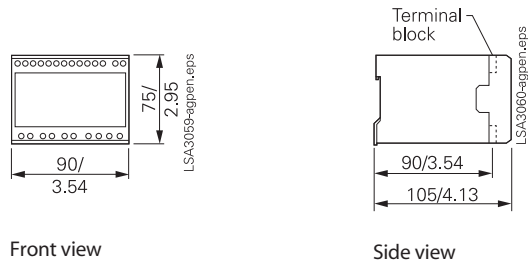
Order No. [7KG6000-8BA-ZY01](#)

Parameterization key [F111-M93-A00-A00-B1](#)

Plain text

Instrument transformer	–
Analog output 1	45 to 55 Hz
Analog output 2	–
Analog output 3	–
Binary output	–

Dimension drawings in mm / inch



Front view

Side view

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