## **SIEMENS**

Data sheet 7KT1681



SENTRON, measuring device, 7KT PAC1600, LCD, L-L: 400 V, L-N: 230 V, 5 A, strd rail instr., 3-phase, power monitoring incl. THD, AC/DC, screw terminals

Figure similar

product designation multimeter design of the product basic product type designation  Messurements  measuring procedure  • for voltage measurement  • for current measurement  TRMS  • for current measurement  type of measured value detection voltage curve  • initial value  • full-scale value  • full-scale value  • full-scale value  • set at 60 Hz  • set to 60 Hz  • supply voltage  design of the power supply  type of voltage of the supply voltage  ### Wide-range power supply  Wide-range power supply  type of voltage of the supply voltage  ### ACCC  ### Supply voltage of the supply voltage  ### ACCC  ### Supply voltage of the power supply  ### Voltage of protection protection class  ### protection class IP on the front  ### Product Functions  ### Pro	Model	
design of the product product type designation 7KT PAC1600  Measurements  measuring procedure  • for voltage measurement  • for current measurement  type of measured value detection voltage curve  • initial value  • full scale value  • full scale value  • full scale value detection  operating mode for measured value detection  vested to Hz  • set to 60 Hz  Supply voltage  design of the power supply  type of voltage at AC  supply voltage  supply voltage  supply voltage  supply vol	product brand name	SENTRON
product type designation 7KT PAC1600  Measurements  measuring procedure  • for ovoltage measurement TRMS  • for current measurement TRMS  type of measured value detection complete  voltage curve Sinusoidal or distorted  measurable line frequency  • initial value 45 Hz  • full-scale value 0 Hz  operating mode for measured value detection automatic line frequency detection  • set at 50 Hz  No  • set to 60 Hz  No  set to 60 Hz  Supply voltage  design of the power supply Wide-range power supply type of voltage of the supply voltage AC/DC  supply voltage at AC  supply voltage at AC  supply voltage at DC  110 250 V  Degree of protection protection class  protection class IP on the front IP40  Suttability  suitability  suitability  suitability  suitability  suitability  suitability  suitability  suitability  suitability  suitability or operation  • voltage measurement Yes  • current measurement Yes  • frequency measurement Yes	product designation	multimeter
Measuroments         measuring procedure           • for voltage measurement         TRMS           • for current measurement         TRMS           type of measured value detection         complete           voltage curve         Sinusoidal or distorted           measurable line frequency         • initial value         45 Hz           • full-scale value         66 Hz           operating mode for measured value detection automatic line frequency detection         Yes           • set at 50 Hz         No           • set at 50 Hz         No           • set to 60 Hz         No           Supply voltage         AC/DC           supply voltage of the supply voltage         AC/DC           supply voltage at DC         110 240 V           supply voltage at DC         110 250 V           Degree of protection protection class protection class IP on the front         IP40           Suitability         suitability           suitability of operation         Standard mounting rail device           Product Functions         Yes           product Functions         Yes           product Functions         Yes           ecurrent measurement         Yes           • cactive power measurement         Yes	design of the product	basic
measuring procedure  • for voltage measurement  • for current measurement  • for current measurement  type of measured value detection  voltage curve  measurable line frequency  • initial value  • full-scale value  • full-scale value  operating mode for measured value detection automatic line  frequency detection  operating mode for measured value detection automatic line  • set at 50 Hz  • set of 60 Hz  No  Supply voltage  design of the power supply  type of voltage of the supply voltage  supply voltage at AC  supply voltage at AC  supply voltage at AC  100 240 V  supply voltage at DC  Degree of protection protection class  protection class IP on the front  Sultability  suitability  suitability  suitability for operation  • voltage measurement  • ves  • current measurement  • ves  • reactive power measurement  • ves  • reactive power measurement  • reactive p	product type designation	7KT PAC1600
• for voltage measurement FRMS • for current measurement type of measured value detection voltage curve sinusoidal or distorted measurable line frequency • initial value • full-scale value full-scale value operating mode for measured value detection automatic line frequency detection operating mode for measured value detection automatic line frequency detection operating mode for measured value detection • set at 50 Hz  • set to 60 Hz  Supply voltage  design of the power supply type of voltage of the supply voltage supply voltage at AC supply voltage at AC supply voltage at DC perere of protection protection class  protection class IP on the front  IP40  Suitability suitability suitability suitability suitability	Measurements	
for current measurement   TRMS	measuring procedure	
type of measured value detection complete  voltage curve Sinusoidal or distorted  measurable line frequency  • initial value 45 Hz  • full-scale value 66 Hz  operating mode for measured value detection automatic line frequency detection  operating mode for measured value detection  • set at 50 Hz  • set to 60 Hz  Supply voltage  design of the power supply Wide-range power supply type of voltage of the supply voltage AC/DC  supply voltage at AC  supply voltage at AC  supply voltage at DC  Degree of protection protection class  protection class IP on the front IP40  Suitability  suitability for operation  • voltage measurement  • current measurement  • current measurement  • cacitive power measurement  • reactive power measurement  • reactive power measurement  • frequency measurement  • frequency measurement  • reactive power measureme	<ul> <li>for voltage measurement</li> </ul>	TRMS
voltage curve measurable line frequency initial value full-scale value of ull-scale value operating mode for measured value detection automatic line frequency detection operating mode for measured value detection operating mode for measure surely who detection holds  In No  Voltage  AC/DC Supply voltage AC/DC Supply voltage at AC operating mode for measure supply operating the supply voltage operating mode for measure supply operating mode for measure supply operating mode for measure supply operating power supply operating mode for measure supply operating power s	<ul> <li>for current measurement</li> </ul>	TRMS
measurable line frequency  initial value  full-scale value  operating mode for measured value detection automatic line frequency detection  operating mode for measured value detection  is est at 50 Hz  is est to 60 Hz  No  Supply voltage  design of the power supply  type of voltage of the supply voltage  supply voltage at AC  supply voltage at DC  Degree of protection protection class  protection class IP on the front  IP40  Suttability  suitability for operation  voltage measurement  ves  reactive power measurement  reactive power measurement  ves  frequency measurement  ves  frequency measurement  ves  frequency measurement  ves  frequency measurement  ves  linth is provided in display  LCD  number of keys  4 Hz	type of measured value detection	complete
initial value  initial value  initial scale value  operating mode for measured value detection automatic line frequency detection  operating mode for measured value detection  is set at 50 Hz  is set to 60 Hz  No  Supply voltage  design of the power supply  type of voltage of the supply voltage  supply voltage at AC  supply voltage at AC  supply voltage at DC  110 240 V  supply voltage at DC  Degree of protection protection class  protection class IP on the front  Suitability  suitability  suitability  suitability  rouct function  i voltage measurement  ves  e current measurement  ves  i reactive power measurement  yes  i frequency measurement  yes  i frequency measurement  yes  leading of the display  design of the display  LCD  number of keys  Yes	voltage curve	Sinusoidal or distorted
• full-scale value  operating mode for measured value detection automatic line frequency detection  operating mode for measured value detection  • set at 50 Hz  • set to 60 Hz  No  Supply voltage  design of the power supply  type of voltage of the supply voltage  AC/DC  supply voltage at AC  100 240 V  supply voltage at DC  Degree of protection protection class  protection class IP on the front  Suitability  suitability  suitability  suitability operation  • voltage measurement  • voltage measurement  • current measurement  • current measurement  • reactive power measurement  • frequency measurement  • frequency measurement  design of the display  LCD  number of keys  4	measurable line frequency	
operating mode for measured value detection automatic line frequency detection operating mode for measured value detection  • set at 50 Hz  No Supply voltage  design of the power supply Wide-range power supply type of voltage of the supply voltage supply voltage at AC supply voltage at AC supply voltage at DC 110 250 V  Degree of protection protection class protection class IP on the front IP40  Suitability suitability suitability for operation Product Functions product function • voltage measurement Yes • current measurement Yes • reactive power measurement Yes • frequency measurement Yes • frequency measurement Yes  Display and operation  design of the display LCD number of keys  No  No No No No No No No No No No No N	• initial value	45 Hz
frequency detection operating mode for measured value detection • set at 50 Hz No Supply voltage design of the power supply type of voltage of the supply voltage supply voltage at AC supply voltage at AC supply voltage at DC Degree of protection protection class protection class IP on the front IP40 Suitability suitability suitability for operation Product Functions product function • voltage measurement • current measurement • current measurement • reactive power measurement • reactive power measurement • frequency measurement • frequency measurement • frequency measurement  design of the display LCD number of keys  No	• full-scale value	66 Hz
set at 50 Hz     set to 60 Hz     No  Supply voltage  design of the power supply		Yes
Supply voltage     design of the power supply     type of voltage of the supply voltage     supply voltage at AC     supply voltage at AC     supply voltage at DC  Degree of protection protection class protection class IP on the front  Suitability suitability for operation  Product Functions  product function     • voltage measurement     • current measurement     • cactive power measurement     • frequency measurement     • frequency measurement     • frequency measurement     design of the display     design of the display number of keys  Wide-range power supply  ### CIDD ##	operating mode for measured value detection	
design of the power supply type of voltage of the supply voltage supply voltage at AC supply voltage at DC supply voltage at DC 110 250 V  Degree of protection protection class protection class IP on the front Suitability suitability for operation Product Functions product function  • voltage measurement • current measurement • active power measurement • frequency measurement • frequency measurement • frequency measurement  Ves  • frequency measurement  Ves  Display and operation  design of the display number of keys  Wide-range power supply  ### Visor **  ### Ves  ### Pack to Active to Active power supply  ### Ves  ### Display and operation  ### LCD  ### Pack to Active power supply  ### Visor **  ### Display and operation  ### LCD  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Visor **  ### Pack to Active power supply  ### Pa	• set at 50 Hz	No
design of the power supply type of voltage of the supply voltage supply voltage at AC supply voltage at DC Degree of protection protection class protection class IP on the front Suitability suitability suitability for operation Product Functions product function  • voltage measurement • current measurement • cactive power measurement • reactive power measurement • frequency measurement  • frequency measurement  design of the display number of keys   Mide-range power supply  AC/DC  100 240 V  Supply voltage in the supply volta	• set to 60 Hz	No
type of voltage of the supply voltage supply voltage at AC supply voltage at DC 110 240 V supply voltage at DC 1110 250 V  Degree of protection protection class protection class IP on the front IP40  Suitability suitability suitability or operation  Product Functions  product function  • voltage measurement • current measurement • current measurement • reactive power measurement • reactive power measurement • frequency measurement • frequency measurement  Display and operation  design of the display number of keys  AC/DC  100 240 V  Suitab V  104	Supply voltage	
supply voltage at AC supply voltage at DC 110 250 V  Degree of protection protection class  protection class IP on the front IP40  Suitability suitability for operation  Product Functions  product function  • voltage measurement • current measurement • current measurement • active power measurement • reactive power measurement • frequency measurement  • frequency measurement  design of the display number of keys  110 240 V  110 250 V  110 250 V  110 250 V  1120 250 V  1040 250 V  1050 240	design of the power supply	Wide-range power supply
supply voltage at DC  Degree of protection protection class  protection class IP on the front  Suitability  suitability or operation  Product Functions  product function  • voltage measurement • current measurement • active power measurement • reactive power measurement • frequency measurement • frequency measurement  design of the display number of keys  110 250 V  110 250 V  140  IP40  Standard mounting rail device  Yes  Standard mounting rail device   Yes   Standard mounting rail device   Yes  Yes   Standard mounting rail device   Yes   LCD  110 250 V  120 V  12	type of voltage of the supply voltage	AC/DC
Degree of protection protection class  protection class IP on the front  Suitability  suitability for operation  Product Functions  product function  • voltage measurement • current measurement • active power measurement • reactive power measurement • frequency measurement • frequency measurement  Display and operation  design of the display  number of keys  Attacher  IP40  Standard mounting rail device  Yes  Yes  Yes  • tenderic measurement  Yes  LCD  number of keys  Attacher  IP40  Standard mounting rail device  Yes  LCD	supply voltage at AC	100 240 V
protection class IP on the front  Suitability suitability suitability for operation  Product Functions  product function  • voltage measurement • current measurement • active power measurement • reactive power measurement • frequency measurement  Standard mounting rail device  Yes  Yes  • current measurement  Yes • active power measurement  Yes • frequency measurement  Yes  Display and operation  design of the display  LCD  number of keys  LCD	supply voltage at DC	110 250 V
Suitability suitability for operation  Product Functions  product function  • voltage measurement • current measurement • active power measurement • reactive power measurement • frequency measurement • frequency measurement  Display and operation  design of the display number of keys  Standard mounting rail device  Yes  Yes  Yes  Yes  Yes  LCD	Degree of protection protection class	
suitability for operation  Product Functions  product function  • voltage measurement • current measurement • active power measurement • frequency measurement • frequency measurement  Display and operation  design of the display number of keys  Standard mounting rail device  Yes  Yes  Yes  Yes  Yes  Yes  Yes  LCD	protection class IP on the front	IP40
product Functions  product function  • voltage measurement Yes  • current measurement Yes  • active power measurement Yes  • reactive power measurement Yes  • frequency measurement Yes  Display and operation  design of the display  number of keys  4	Suitability	
product function  • voltage measurement Yes  • current measurement Yes  • active power measurement Yes  • reactive power measurement Yes  • frequency measurement Yes  Display and operation  design of the display  number of keys  LCD	suitability for operation	Standard mounting rail device
voltage measurement     current measurement     ves     active power measurement     reactive power measurement     frequency measurement     ves     frequency measurement     ves      bisplay and operation  design of the display     LCD  number of keys	Product Functions	
current measurement     active power measurement     reactive power measurement     frequency measurement     Yes     frequency measurement     Yes  Display and operation  design of the display     LCD  number of keys  4	product function	
active power measurement     reactive power measurement     frequency measurement     Yes     frequency measurement     Yes  Display and operation  design of the display  number of keys  LCD	<ul> <li>voltage measurement</li> </ul>	Yes
<ul> <li>reactive power measurement</li> <li>frequency measurement</li> <li>Yes</li> </ul> Display and operation design of the display <ul> <li>LCD</li> <li>number of keys</li> <li>4</li> </ul>	<ul> <li>current measurement</li> </ul>	Yes
● frequency measurement  Display and operation  design of the display  number of keys  LCD  4	<ul> <li>active power measurement</li> </ul>	Yes
Display and operation  design of the display  number of keys  LCD  4	<ul> <li>reactive power measurement</li> </ul>	Yes
design of the display LCD number of keys 4	<ul> <li>frequency measurement</li> </ul>	Yes
number of keys 4	Display and operation	
·	design of the display	LCD
Fault limits	number of keys	4
	Fault limits	

reference condition for metering accuracy	Acc. to IEC62053-21 and IEC62053-23
Inputs Outputs	Acc. to 1E002000-21 and 1E002000-20
number of digital inputs	0
	No
operating conditions for digital inputs external voltage supply	0
number of digital outputs	solid state
type of switching output type of electrical connection at the digital outputs	
Measuring inputs	screw-type terminals
	230 V
measurable supply voltage between (PE)N and L at AC maximum rated value	250 V
measurable supply voltage between (PE)N and L at AC	
• minimum	50 V
• maximum	415 V
measurable supply voltage between the line conductors at AC maximum rated value	400 V
voltage measuring range extension with external voltage transformers	yes
measuring category for voltage measurement	CAT III
measurable current	
• 1 at AC rated value	5 A
• 2 at AC rated value	5 A
relative measurable current at AC	
• minimum	0.5 %
• maximum	120 %
current measuring range extension with external current transformers	Yes
zero point suppression for current measurement	25 mA
apparent power consumption for current measurement	
with measuring range 5 A per phase	1.5 VA
measuring category for current measurement	CATIII
Connections	O/IIII
type of electrical connection	
at the measurement inputs for voltage	screw-type terminals
at the measurement inputs for current	screw-type terminals
Mechanical Design	Solicit type terminals
fastening method standard rail mounting	Yes
size of Power Monitoring Device	4MW
height width	90 mm 71.6 mm
depth pet weight	63 mm
net weight	280 g
mounting position Environmental conditions	any
ambient temperature during operation	20.00
• minimum	-20 °C
• maximum	60 °C
ambient temperature during storage	00.00
• minimum	-30 °C
• maximum	80 °C
relative humidity at 25 °C without condensation during operation maximum	80 %
installation altitude at height above sea level maximum	2 000 m
degree of pollution	2
Certificates	
certificate of suitability as EC Declaration of Conformity	yes
Approvals Certificates	
General Product Approval	other





Confirmation



Miscellaneous

Confirmation

## Environment

Environmental Confirmations

## Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (catalogues, leaflets,...)

http://www.siemens.com/energy-automation

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=7KT1681

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/7KT1681

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

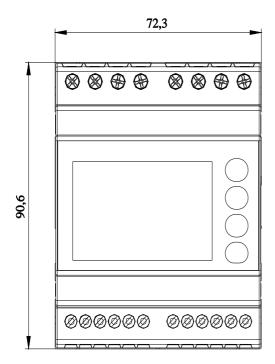
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=7KT1681

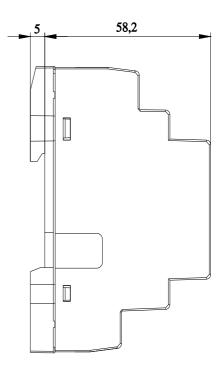
**CAx-Online-Generator** 

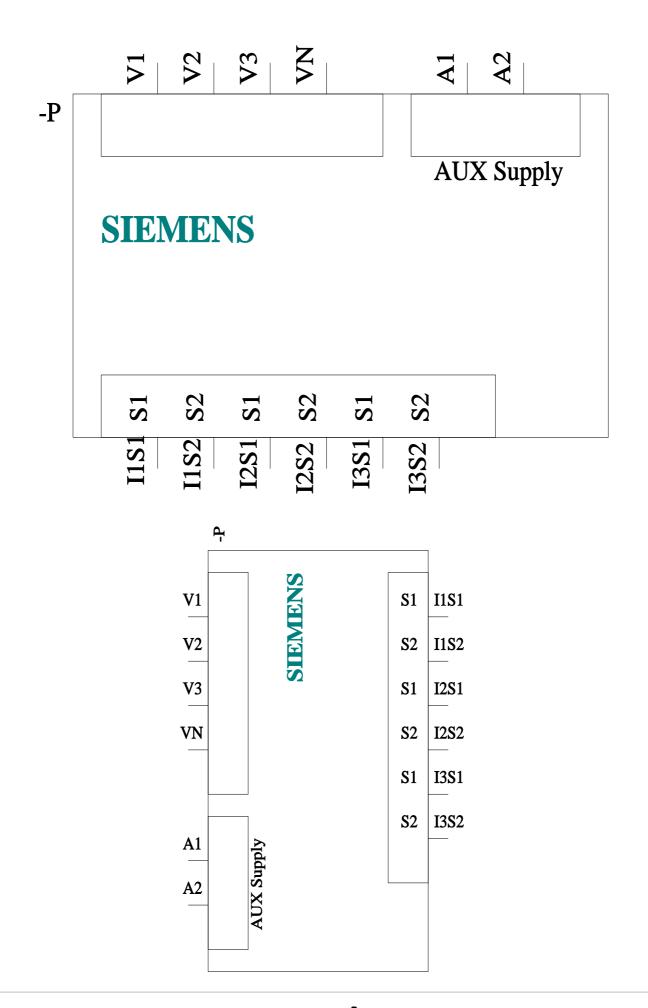
http://www.siemens.com/cax

Tender specifications

http://www.siemens.com/specifications







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