## SIEMENS

Data sheet

## 7KM4211-1BB00-3AA0

SENTRON, measuring device, 7KM PAC4200 and strd mnt. rail adapt. LCD, L-L: 500 V, L-N: 289 V, 5 A, 3- phase, Modbus TCP, optional Modbus RTU / PROFINET / PROFIBUS / DI/DO, apparent/ Active/reactive energy / cos phi, harmonics: 3. - 31., THD, class 0.2 acc. to IEC61557-12 or cl. 0.2S acc. to IEC62053-22, ext-low volt. pwr sup. unit DC, screw terminals



Model			
product brand name	SENTRON		
design of the product	compact		
Measurements			
measuring procedure			
<ul> <li>for voltage measurement</li> </ul>	TRMS		
<ul> <li>for current measurement</li> </ul>	TRMS		
type of measured value detection	complete		
voltage curve	Sinusoidal or distorted		
measurable line frequency			
<ul> <li>initial value</li> </ul>	45 Hz		
full-scale value	65 Hz		
operating mode for measured value detection automatic line frequency detection	Yes		
operating mode for measured value detection			
• set at 50 Hz	No		
• set to 60 Hz	No		
Supply voltage			
design of the power supply	Extra-low voltage power supply unit		
type of voltage of the supply voltage	DC		
supply voltage at DC	22 65 V		
Degree of protection protection class			
protection class IP on the front	IP65		
operating resource protection class when installed	safety class II		
Suitability			
suitability for operation	Installation in stationary panels in closed rooms		
Product Functions			
product function			
<ul> <li>voltage measurement</li> </ul>	Yes		
<ul> <li>current measurement</li> </ul>	Yes		
<ul> <li>active power measurement</li> </ul>	Yes		
<ul> <li>reactive power measurement</li> </ul>	Yes		
<ul> <li>frequency measurement</li> </ul>	Yes		
Display and operation			
design of the display	LCD		
height of the display	54 mm		
width of the display	72 mm		
color of the background of the display	white		
illuminance of display backlight adjustable	Yes		

basis/pip possible         res           continuitation display sorten is supported         yes           reational language on the display sorten is supported         ger, en, fr, spa, fa, por, tur, rus, chi, pol           rumber of keys         4           Continuitation         R445 (BP80)           protocol at the Ethernet Interface is supported         R445 (BP80)           protocol at the Ethernet Interface is supported         No Mobils           Tansfer rate 1 for Ethernet         10 Mbbis           Test Intra         10 Test Intra           Prot Intra Int	time-controlled reduction of the illuminance of display	Yes
Instantial language on the display screen is supported         ger, en. fr. spa, ita, por, tur, rus, chi, pol           number of knys         4           Communication         1           number of inferfaces according to Fast Ethernet         1/48 (BP8C)           type of electrication connection of the fast Ethernet Interface         RJ48 (BP8C)           types of electrication connection of the fast Ethernet Interface         RJ48 (BP8C)           transfer rate 1 for Ethernet         100 Mbi/s           Transfer rate 1 for Ethernet         100 Mbi/s           formation for instruction total measurement inaccuracy         Acc. to IEC01557-12           ior measured variable outpate         + 0.2 %           i for measured variable outpate         + 2.2 %           i for measured variable instruction factor         + - 0.2 %           i for measured variable outpate         2           i for measured variable reactive energy         Class 0 2 according to IEC61557-12 and/or class 0 25 according to IEC6353-22           number of digital nuputs         2           i proof outpate         2           number of digital outpate 10 compate         2           i for measured variable eactive energy         Class 0 2 according to IEC61557-12 and/or class 0 25 according to IEC6353-22           number of digital outpat 10 Cmaximum         30 V		
number of kays         4           Communication         Implement interfaces according to Fast Ethernet         1           Turnber of interfaces according to Fast Ethernet interface         PAIAS (SP8C)         PAIAS (SP8C)           protocol at the Ethernet interface is supported         10 Mbit/s         Implement interfaces           protocol at the Ethernet interfaces         10 Mbit/s         Implement interfaces           reference condition for metering accuracy         4 c. to IEC01557-12         Implement intercuracy           • for measured variable current         + 0.2 %         + 0.2 %           • for measured variable curve energy         Class 0.2 according to IEC01557-12 and/or IEC02053-22           Impute of digital inputs         scacording to IEC01567-12 and/or IEC02053-23           Impute of digital inputs         scacording to IEC01567-12 and/or IEC02053-23           Impute of digital inputs         scacording to IEC01567-12 and/or IEC02053-23           Impute of digital inputs         screw type terminals           operating conditions for digital inputs etheral voltage         30 V           inpute of digital inputs at DC maximum         2           standard for pulse and the digital outputs         screw type terminals           operating voltage at digital output standard for pulse emitter         30 V           turber of digital output wresion <t< td=""><td>display contrast adjustable</td><td></td></t<>	display contrast adjustable	
Communication           number of Interfaces according to Fast Ethemet         1           Pype of electroal connection of the fast Ethemet Interface         R445 (6P8C)           Pype of electroal connection of the fast Ethemet Interface         NODEUS TCP           Transfer rate 1 for Ethemet         100 Mbi/s           Transfer rate 1 for Ethemet         100 Mbi/s           Termater rate 1 for Ethemet         100 Mbi/s           Termater rate 1 for Themeting accuracy         Acc. to IEC61557-12           form measured variable current         + 0.2 %           + for measured variable current         + 2.2 %           - for measured variable current         - 2.2 %           - mumber of digital inputat 0.C	national language on the display screen is supported	ger, en, fr, spa, ita, por, tur, rus, chi, pol
number of Interfaces according to Fast Element         1           type of electrical connection of the fast Element Interface         PAI46 (6P8C)           protocol at the Ethernet Interface is supported         MODEUS TCP           transfer rate 1 for Element         10 Mbit/s           transfer rate 1 for Ethernet         10 Mbit/s           form measured variable voltage         +/.0.2 %           + for measured variable current         +/.0.2 %           + for measured variable centre         Class 02 according to IEC61557-12 and/or EC62053-22           forust 5 orthouts         prover disclose energy           - for measured variable reactive energy         Class 02 according to IEC61557-12 and/or EC62053-23           transfer rate 1 for United to Cmaximum         20 V           input voltage at digital inputs external voltage         2           type d electrical connection at the digital inputs         2           type d electrical connection at the digital output         30 V           gital digital output with signal =0-P maximum         2           orthical voltage at IDC maximum         2 <td></td> <td>4</td>		4
type of electrical connection of the fast Ethernet interface protocol at the Ethernet interface is supported         RJ46 (6PPC)           transfor rate 1 for Ethernet         10 Mbbits           transfor rate 1 for relative total measurement inaccuracy         Acc. to EC61557-12           form measured variable outplace         +/-0.2 %           + for measured variable outplace for the tart         +/-0.2 %           + for measured variable outplace for the tart         +/-0.2 %           - for measured variable outplace for the tart         +/-0.2 %           - for measured variable outplace for the tart         +/-0.2 %           - for measured variable outplace for the tart         +/-0.2 %           - for measured variable outplace for the tart bit glast inputs         2           - for measured variable outplace for the tart inputs outplace outp	Communication	
protocol at the Ethernet Interface is supported         MODBUS TCP           transfer rate 1 for Ethernet         100 Mbit/s           transfer rate 2 for Ethernet         100 Mbit/s           Fault Immis         transfer rate 2 for Ethernet         100 Mbit/s           reference condition for metering accuracy         Acc. to IEC61557-12           formula for relative total measurement inaccuracy         + <0.2 %,	number of interfaces according to Fast Ethernet	1
Inside rate 1 for Ethernet       10 Mixis         transfer rate 2 for Ethernet       100 Mixis         reference condition for metering accuracy       Acc. to IEC61557-12         form masured variable voltage       +- 0.2 %         + for measured variable current       +- 0.2 %         + for measured variable reactive energy       Class 0.2 according to IEC61557-12 and/or Idass 0.25 according to IEC60205-23         Puble Orlights       2         number of digital inputs       2         type of electrical connection at the digital inputs       2         type of electrical connection at the digital input secternal voltage       Sol V         number of digital input at DC maximum       30 V         performation or digital output secternal voltage       secrew-type terminals         ooperating conditions for digital output solid state       solid state         digital output version       30 V         performation at the digital output solid solutours       secrew-type terminals         ooldu current       4.2 mA         • at digital output voltage at DC maximum       2.7 mA         sthe digital output voltage at DC maximum       <	type of electrical connection of the fast Ethernet interface	RJ45 (8P8C)
transfer rate 2 for Ethernet         100 Mbit/s           Fault limits         reference condition for metering accuracy         Acc. to IEC61557-12           formula for relative total measurement inaccuracy         + 0.2 %,           + for measured variable current         + / 0.2 %,           + for measured variable current         + / 0.2 %,           + for measured variable current         + / 0.2 %,           + for measured variable current         + / 0.2 %,           + for measured variable reactive energy         Class 0.2 according to IEC61557-12 and/or IEC62053-23           Inputs of digital inputs         2           type of electrical connection at the digital inputs         2           operating conditions for digital inputs         2           type of switching output         sold state           digital output version         30 V           particle output         sold state           digital output version         30 V           output digital output st DC maximum         30 V           et digital output st at DC inmaximum         30 V           state digital output st at DC inminut         30 V           titrat resistance at the digital outputs         screw-type terminals           output current         0.2 mA           zt digital output st DC limiket to 100 ms		MODBUS TCP
Fault limits         Acc. to IEC61557-12           reference condition for metering accuracy         Acc. to IEC61557-12           • for measured variable voltage         +/· 0.2 %           • for measured variable current         +/· 0.2 %           • for measured variable current         +/· 0.2 %           • for measured variable active energy         Class 0.2 according to IEC61557-12 and/or class 0.2S according to IEC62053-22           • for measured variable active energy         Class 2 according to IEC61557-12 and/or class 0.2S according to IEC62053-23 <b>Piputs Outputs</b> 2           • for digital inputs         2           screw-type terminals         Yees           speed electrical connections at the digital inputs         2           ype of electrical connection at the digital inputs         2           ype of electrical connection at the digital inputs         2           ype of electrical connection at the digital outputs         30 V           upper of alight output version         30 V           permission output voltage at DC maximum         20 YmA           • at digital output with signal <0- maximum		
reference condition for metering accuracy         Acc. to IEC61557-12           formula for relative total measurement maccuracy         + + 0, 2 %           + for measured variable current         + + 0, 2 %           + for measured variable current         + + 0, 2 %           + for measured variable current         + + 0, 2 %           + for measured variable current         + + 0, 2 %           + for measured variable current         + + 0, 2 %           - for measured variable current         + + 0, 2 %           - for measured variable current         + + 0, 2 %           - for measured variable current         - 2 %           - for detectrical connection at the digital inputs         2           - type of electrical connection at the digital inputs         2           - greating voltage at digital output         30 V           - greating voltage at output voltage at DC maximum         30 V           - stid digital output voltage at DC maximum         - 2 mA           - at digital output voltage at DC intext to 100 ms         - 2 mA           - at digital output voltage at digital output maximum         - 2 mA           - at digit		100 Mbit/s
formula for relative total measurement inaccuracy     +/· 0.2 %       • for measured variable output factor     +/· 0.2 %       • for measured variable output factor     +/· 0.2 %       • for measured variable active energy     Class 0.2 according to IEC61557-12 and/or IEC62053-23 <i>Inputs</i> Outputs     2 <i>Inputs</i> Outputs     30 V <i>Inputs</i> Outputs     2		
• for measured variable current       +-0.2 %         • for measured variable current       +-0.2 %         • for measured variable active energy       Class 0.2 according to IEC61557-12 and/or class 0.2S according to IEC62053-23         Imputs Outputs       Income of digital inputs       2         • tor measured variable meative energy       Class 0.2 according to IEC61557-12 and/or class 0.2S according to IEC62053-23         Imputs Outputs       2         type of electrical connection at the digital inputs       screw-type terminals         operating conditions for digital input at DC maximum       30 V         number of digital output version       switching output         digital output version       switching output         operating scolape as output voltage at DC maximum       30 V         operating voltage as output voltage at DC maximum       30 V         operating voltage as output voltage at DC maximum       30 V         operating voltage as output voltage at DC maximum       2         ta digital output version       sorew-type terminals         output current       according to IEC62053-31         uppe of electrical connection at the digital outputs       55 Ω         standard for puise emitter       according to IEC62053-31         puise duration       maximum         i till scale value       500		Acc. to IEC61557-12
+ for measured variable output factor       +-0.2 %         • for measured variable output factor       +-2.9 %         • for measured variable exective energy       Class 0.2 according to IEC61557-12 and/or IEC62053-23         Inputs Outputs       2         number of digital inputs       2         type of electrical connection at the digital inputs       2         operating conditions for digital inputs external voltage supply       Yes         inputs of digital inputs external voltage supply       Yes         operating conditions for digital inputs external voltage supply       2         type of electrical connection at the digital inputs external voltage supply       2         type of electrical connection at the digital output       solid state         operating voltage as output voltage at DC maximum       30 V         permissible       30 V         type of electrical connection at the digital outputs       screw-type terminals         output current       0.2 mA         • at digital output signal <dc maximum<="" td="">       27 mA         • at digital output signal <dc maximum<="" td="">       27 mA         • at digital output signal <dc maximum<="" td="">       27 mA         • at digital output signal <dc maximum<="" td="">       20 mA         • at digital output signal <dc maximum<="" td="">       20 mA         • at digital output signal &lt;</dc></dc></dc></dc></dc>		
• for measured variable active energy       +i-2 %         • for measured variable active energy       Class 2 according to EC61557-12 and/or class 0.25 according to IEC6053-22         • for measured variable reactive energy       Class 2 according to IEC61557-12 and/or class 0.25 according to IEC6053-23         mumber of digital inputs       2         scree-type terminals       2         operating conditions for digital inputs external voltage asympty       Yes         input voltage at digital input at DC maximum       30 V         number of digital output external voltage at upt version       30 V         number of digital output version       solid state         digital output version       30 V         output current       acid gital output for signal <1> maximum         • at digital output for signal <1> maximum       22 mA         • at digital output for signal <1> maximum       27 mA         • at digital output for signal <1> maximum       20 mA         • at digital output store antimum       30 ms         • at digital output store (light of upt at DC limited to 100 ms       30 ms         • buil-scale value       30 ms	_	
• for measured variable active energy       Class 0.2 according to IEC61557-12 and/or class 0.28 according to IEC62053-22         Inputs Outputs       Class 2 according to IEC61557-12 and/or class 0.28 according to IEC62053-23         Inputs Outputs       2         number of digital inputs       2         Operating conditions for digital inputs external voltage supply       Yes         input voltage at digital inputs external voltage       Yes         umber of digital outputs       2         type of electrical connection at the digital outputs       30 V         number of digital output version       solid state         operating voltage as output voltage at DC maximum       30 V         perform voltage as output voltage at DC maximum       30 V         perform voltage as output voltage at DC maximum       30 V         output current       0.2 mA         • at digital output with signal <0 maximum		·
• for measured variable reactive energy         Class 2 according to IEC61557-12 and/or IEC62053-23           Inputs Outputs         2           number of digital inputs         2           type of electrical connection at the digital inputs         screw-type terminals           operating conditions for digital inputs external voltage supply         30 V           number of digital outputs         2           type of electrical connection at the digital outputs         30 V           pype of subtining output         solid state           digital output version         30 V           output version         switching or pulse output function           output current         30 V           • at digital output version         30 V           right output for signal <d maximum<="" td="">         30 V           • at digital output with signal <d- maximum<="" td="">         27 mA           • at digital output for signal <d maximum<="" td="">         27 mA           • at digital output for signal <d maximum<="" td="">         20 mA           • at digital output store Signal         55 Ω           standard for pulse emitter         according to IEC62063-31           property of the output short-circuit proof         Yes           • initial value         30 ms           • full-scale value         20 V           • maximu</d></d></d-></d>		
Inputs Outputs         2           Import of digital inputs         2           Lype of electrical connection at the digital inputs         screw-type terminals           operating conditions for digital inputs external voltage         Yes           solid state         solid state           digital output version         solid state           digital output version         solid state           operating voltage at digital input at DC maximum         30 V           operating voltage as output voltage at DC maximum         solid state           output version         switching or pulse output function           operating voltage as output voltage at DC maximum         0.2 mA           et digital output with signal <0> maximum         0.2 mA           et digital output version         screw-type terminals           output current         0.2 mA           et digital outputs at DC limited to 100 ms         maximum           et digital outputs at DC limited to 100 ms         according to IEC62053-31           pulse duration         initial value         30 ms           e full-scle value         50 Ω           adjustable time period minimum         10 ms           exarring inputS         CATI           Measuring inputS         S00 V           measurable supply vol		IEC62053-22
number of digital inputs         2           Type of electrical connection at the digital inputs         screw-type terminals           supply         30 V           number of digital outputs         2           type of switching output         solid state           digital output version         switching or pulse output function           operating voltage as output voltage at DC maximum         30 V           operating voltage as output voltage at DC maximum         30 V           operating voltage as output voltage at DC maximum         30 V           operating voltage as output voltage at DC maximum         screw-type terminals           output current         0.2 mA           • at digital outputs at DC limited to 100 ms         300 mA           internal resistance at the digital outputs         55 Ω           according to IEC62053-31         pulse duration           • initial value         30 ms           • full-scale value         300 ms           adjustable time period minimum         10 ms           switching frequency at digital output maximum         20 Hz           measurable supply voltage between (PE)N and L at AC         289 V           maximum rated value         500 V           measurable supply voltage between the line conductors at AC         500 V	5,	Class 2 according to IEC61557-12 and/or IEC62053-23
type of electrical connection at the digital inputs         screw-type terminals           operating conditions for digital inputs external voltage supply         Yes           input voltage at digital input at DC maximum         30 V           number of digital outputs         2           type of switching output         solid state           digital output version         switching or pulse output function           operating voltage as output voltage at DC maximum         30 V           type of electrical connection at the digital outputs         switching or pulse output function           • at digital output tor signal <1> maximum         0.2 mA           • at digital outputs at DC limited to 100 ms         30 om A           internal resistance at the digital outputs         55 Ω           standard for pulse emitter         according to IEC62053-31           pulse duration         30 ms           • full-scale value         30 ms           solid state         Solo ms           adjustable time period minimum         10 ms           switching frequency at digital output maximum         20 Hz           property of the output short-circuit proof         Yes           measurable supply voltage between (PE)N and L at AC         289 V           • minimum         300 V           • maximum <td< td=""><td></td><td></td></td<>		
operating conditions for digital input external voltage supply         Yes           input voltage at digital input at DC maximum         30 V           number of digital outputs         2           type of switching output         solid state           digital output version         30 V           operating voltage as output voltage at DC maximum permissible         50 V           type of electrical connection at the digital outputs         screw-type terminals           output current         0.2 mA           • at digital output with signal <0> maximum         0.2 mA           • at digital outputs at DC limited to 100 ms maximum         300 mA           internal resistance at the digital outputs         55 Ω           scoording to IEC62053-31         according to IEC62053-31           pulse duration         0 ms           • initial value         30 ms           • output short-circuit proof         Yes           measurable supply voltage between (PE)N and L at AC         289 V           maximum         246 V           measurable supply voltage between the line conductors at AC         346 V           o0 V         346 V           o0 V         346 V           o0 V         346 V           iminum         20 V           measurable suppl		
supply         30 V           input voltage at digital outputs         2           type of switching output         solid state           digital output version         30 V           operating voltage as output voltage at DC maximum         30 V           pype of electrical connection at the digital outputs         screw-type terminals           output current         0.2 mA           • at digital output with signal <0> maximum         0.2 mA           • at digital output signal <1> maximum         20 mA           • at digital outputs at DC limited to 100 ms         300 mA           internal resistance at the digital outputs         55 Ω           standard for pulse emitter         according to IEC62053-31           pulse duration         10 ms           • Initial value         30 ms           • full-scale value         500 ms           adjustable time period minimum         10 ms           switching frequency at digital output maximum         20 Hz           property of the output short-circuit proof         Yes           measurable supply voltage between (PE)N and L at AC         289 V           maximum         460 V           measurable supply voltage between the line conductors at AC         460 V           measurubic supply voltage between the line conductors a		
number of digital outputs     2       type of switching output     solid state       operating voltage as output voltage at DC maximum     30 V       permissible     solid state       output current     0.2 mA       • at digital output with signal <0> maximum     0.2 mA       • at digital output for signal <1> maximum     0.2 mA       • at digital output of signal <1> maximum     0.2 mA       • at digital output at DC limited to 100 ms     300 mA       internal resistance at the digital outputs     55 Ω       standard for pulse emitter     according to IEC62053-31       pulse duration     00 ms       • full-scale value     500 ms       adjustable time period minimum     10 ms       switching requency at digital output maximum     20 Hz       property of the output short-circuit proof     Yees       measurable supply voltage between (PE)N and L at AC     289 V       maximum     346 V       measurable supply voltage between the line conductors at AC     500 V       AC     minimum     346 V       measurable supply voltage between the line conductors at AC     500 V       vidage measuring range extension with external voltage     yes       ine conductors and neutral conductors internal resistance     10.5 MΩ		
Type of switching output         solid state           digital output version         switching or pulse output function           operating voltage as output voltage at DC maximum         solid state           international permissible         30 V           type of electrical connection at the digital outputs         screw-type terminals           output current         0.2 mA           • at digital output st DC limited to 100 ms         300 mA           internal resistance at the digital outputs         55 Ω           standard for pulse emitter         according to IEC62053-31           pulse duration         internal resistance at the digital output maximum           0 full-scale value         30 ms           intum         10 ms           switching frequency at digital output maximum         20 Hz           property of the output short-circuit proof         Yees           measuring category for digital signals         CATI           Measuring inputs         360 V           measurable supply voltage between (PE)N and L at AC         500 V           measurable supply voltage between the line conductors at AC         500 V           measurable supply voltage between the line conductors at AC         500 V           measurable supply voltage between the line conductors at AC         500 V           in		
digital output version     switching or pulse output function       operating voltage as output voltage at DC maximum     30 V       bype of electrical connection at the digital outputs     screw-type terminals       output current     0.2 mA       • at digital output for signal <1> maximum     0.2 mA       • at digital outputs at DC limited to 100 ms     300 mA       maximum     0.2 mA       internal resistance at the digital outputs     55 Ω       standard for pulse emitter     according to IEC62053-31       pulse duration     30 ms       • full-scale value     30 ms       adjustable time period minimum     10 ms       switching frequency at digital output maximum     20 Hz       property of the output short-circuit proof     Yes       measurable supply voltage between (PE)N and L at AC     289 V       maximum     346 V       measurable supply voltage between the line conductors at AC maximum     11.5 V       • minimum     346 V       measurable supply voltage between the line conductors at AC maximum     500 V       voltage measuring range extension with external voltage transformers     20 V       • minimum     346 V		
operating voltage as output voltage at DC maximum         30 V           type of electrical connection at the digital outputs         screw-type terminals           output current         0.2 mA           • at digital output with signal <0> maximum         0.2 mA           • at digital output st DC limited to 100 ms         300 mA           maximum         55 Ω           standard for pulse emitter         according to IEC62053-31           pulse duration         30 ms           • full-scale value         30 ms           adjustable time period minimum         10 ms           switching frequency at digital output maximum         20 Hz           property of the output short-circuit proof         Yes           measurable supply voltage between (PE)N and L at AC         289 V           maximum rated value         500 V           • minimum         11.5 V           • maximum         346 V           measurable supply voltage between (PE)N and L at AC         20 V           • minimum         500 V           • minimum         20 V           • minimum         20 V           • minimum         20 V           • minimum         600 V           • minimum         20 V           • minimum         600 V		
permissible     screw-type terminals       type of electrical connection at the digital outputs     screw-type terminals       output current     0.2 mA       • at digital output for signal <1> maximum     27 mA       • at the digital outputs at DC limited to 100 ms     300 mA       maximum     300 mA       internal resistance at the digital outputs     55 Ω       standard for pulse emitter     according to IEC62053-31       pulse duration     0 ms       • full-scale value     30 ms       • full-scale value     500 ms       adjustable time period minimum     10 ms       switching frequency at digital output maximum     20 Hz       property of the output short-circuit proof     Yes       measuring category for digital signals     CATI       Measuring inputs     289 V       maximum rated value     500 V       • maximum     346 V       measurable supply voltage between (PE)N and L at AC     11.5 V       • maximum     500 V       • maximum     20 V       • maximum     <		
output current       0.2 mA         • at digital output for signal <0> maximum       27 mA         • at the digital outputs at DC limited to 100 ms       300 mA         internal resistance at the digital outputs       55 Ω         standard for pulse emitter       according to IEC62053-31         pulse duration       30 ms         • full-scale value       300 ms         adjustable time period minimum       10 ms         switching frequency at digital output maximum       20 Hz         property of the output short-circuit proof       Yes         measuring category for digital signals       CATI         Measuring inputs       289 V         measurable supply voltage between (PE)N and L at AC       amaximum rated value         measurable supply voltage between (PE)N and L at AC       500 V         • minimum       11.5 V         • maximum rated value       500 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC maximum       500 V         • minimum       20 V       600 V         • minimum       20 V       90 V         • maximum       600 V       90 V         • maximum       90 V       90 V	permissible	
• at digital output with signal <0> maximum     0.2 mA       • at digital output for signal <1> maximum     27 mA       • at the digital outputs at DC limited to 100 ms     300 mA       internal resistance at the digital outputs     55 Ω       standard for pulse emitter     according to IEC62053-31       pulse duration     0 ms       • full-scale value     30 ms       adjustable time period minimum     10 ms       switching frequency at digital output maximum     20 Hz       property of the output short-circuit proof     Yes       measuring category for digital signals     CATI       Measurable supply voltage between (PE)N and L at AC     289 V       measurable supply voltage between (PE)N and L at AC     11.5 V       • maximum     346 V       measurable supply voltage between the line conductors at     500 V       AC maximum rated value     500 V       measurable supply voltage between the line conductors at     AC       • minimum     11.5 V       • maximum     360 V       • woltage measurable supply voltage between the line conductors at     AC       • minimum     20 V       • maximum     600 V       • woltage measurable supply voltage between the line conductors at     AC       • minimum     20 V       • maximum     600 V       •		screw-type terminals
• at digital output for signal <1> maximum       27 mA         • at the digital outputs at DC limited to 100 ms       300 mA         maximum       300 mA         internal resistance at the digital outputs       55 Ω         standard for pulse emitter       according to IEC62053-31         pulse duration       0 ms         • initial value       30 ms         • full-scale value       500 ms         adjustable time period minimum       10 ms         switching frequency at digital output maximum       20 Hz         property of the output short-circuit proof       Yes         measuring category for digital signals       CATI         Measuring inputs       289 V         measurable supply voltage between (PE)N and L at AC       11.5 V         • minimum       11.5 V         • maximum       346 V         measurable supply voltage between the line conductors at AC       500 V         • maximum       20 V         • maximum       20 V         • maximum       500 V         • Maximum rated value       500 V         measurable supply voltage between the line conductors at AC       500 V         • maximum       20 V         • minimum       20 V         • minimum	•	
• at the digital outputs at DC limited to 100 ms maximum       300 mA         internal resistance at the digital outputs       55 Ω         standard for pulse emitter       according to IEC62053-31         pulse duration       0 ms         • initial value       30 ms         • full-scale value       500 ms         adjustable time period minimum       10 ms         switching frequency at digital output maximum       20 Hz         property of the output short-circuit proof       Yes         measuring category for digital signals       CATI         Measuring inputs       289 V         measurable supply voltage between (PE)N and L at AC       289 V         • minimum       11.5 V         • maximum rated value       500 V         Mcauring rade supply voltage between the line conductors at AC       500 V         • maximum rated value       500 V         • minimum       20 V         • minimum       600 V         • voltage measuring range extension with external voltage transformers       yes         Ine conductors and neutral conductors internal resistance       1.05 MΩ		
maximum       internal resistance at the digital outputs       55 Ω         standard for pulse emitter       according to IEC62053-31         pulse duration       initial value       30 ms         • full-scale value       500 ms         adjustable time period minimum       10 ms         switching frequency at digital output maximum       20 Hz         property of the output short-circuit proof       Yes         measuring inputs       measurable supply voltage between (PE)N and L at AC       289 V         measurable supply voltage between (PE)N and L at AC       289 V         • minimum       11.5 V         • maximum rated value       500 V         Measurable supply voltage between (PE)N and L at AC       20 V         • maximum       346 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         Measurable supply voltage between the line conductors at AC       500 V         • minimum       20 V         • maximum       600 V         voltage measuring range extension with external voltage       yes         Inne conductors and neutral conductors internal resistance       1.05 MΩ		
standard for pulse emitter       according to IEC62053-31         pulse duration       30 ms         • full-scale value       30 ms         adjustable time period minimum       10 ms         switching frequency at digital output maximum       20 Hz         property of the output short-circuit proof       Yes         measuring category for digital signals       CATI         Measuring inputs       289 V         measurable supply voltage between (PE)N and L at AC       289 V         measurable supply voltage between (PE)N and L at AC       289 V         measurable supply voltage between (PE)N and L at AC       11.5 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC       500 V         AC maximum       246 V         measurable supply voltage between the line conductors at AC       500 V         AC maximum       20 V         e minimum       600 V         voltage measuring range extension with external voltage transformers       yes         line conductors and neutral conductors internal resistance       1.05 MΩ	maximum	
pulse duration     30 ms       • full-scale value     500 ms       adjustable time period minimum     10 ms       switching frequency at digital output maximum     20 Hz       property of the output short-circuit proof     Yes       measuring category for digital signals     CATI       Measuring inputs     adjustable supply voltage between (PE)N and L at AC     289 V       measurable supply voltage between (PE)N and L at AC     289 V       measurable supply voltage between (PE)N and L at AC     20 V       • minimum     11.5 V       • maximum rated value     346 V       measurable supply voltage between the line conductors at AC maximum rated value     500 V       Measurable supply voltage between the line conductors at AC     500 V       • maximum     346 V       measurable supply voltage between the line conductors at AC     500 V       • maximum     500 V       • maximum     500 V       • maximum     600 V       • maximum     600 V       voltage measuring range extension with external voltage yes       ine conductors and neutral conductors internal resistance     1.05 MΩ	·	
• initial value30 ms• full-scale value500 msadjustable time period minimum10 msswitching frequency at digital output maximum20 Hzproperty of the output short-circuit proofYesmeasuring category for digital signalsCATIMeasuring inputs289 Vmeasurable supply voltage between (PE)N and L at AC maximum rated value289 Vmeasurable supply voltage between (PE)N and L at AC maximum11.5 V• minimum • maximum346 Vmeasurable supply voltage between the line conductors at AC maximum rated value500 VMeasurable supply voltage between the line conductors at AC20 V• minimum • maximum20 V• minimum • maximum20 V• minimum • maximum20 V• monimum • maximum20 V• indicating range extension with external voltage transformers20 VIne conductors and neutral conductors internal resistance1.05 MΩ		according to IEC62053-31
• full-scale value500 msadjustable time period minimum10 msswitching frequency at digital output maximum20 Hzproperty of the output short-circuit proofYesmeasuring category for digital signalsCATIMeasurable supply voltage between (PE)N and L at AC maximum rated value289 Vmeasurable supply voltage between (PE)N and L at AC maximum rated value289 Vmeasurable supply voltage between (PE)N and L at AC maximum11.5 V• maximum measurable supply voltage between the line conductors at AC maximum rated value500 VMeasurable supply voltage between the line conductors at AC20 V• minimum • maximum20 V• maximum • maximum600 V• voltage measuring range extension with external voltage • yesyesIine conductors and neutral conductors internal resistance1.05 MΩ	•	20 mg
adjustable time period minimum       10 ms         switching frequency at digital output maximum       20 Hz         property of the output short-circuit proof       Yes         measuring category for digital signals       CATI         Measuring inputs       289 V         measurable supply voltage between (PE)N and L at AC       289 V         measurable supply voltage between (PE)N and L at AC       11.5 V         • minimum       146 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC       500 V         Measurable supply voltage between the line conductors at AC       500 V         measurable supply voltage between the line conductors at AC       500 V         measurable supply voltage between the line conductors at AC       500 V         measurable supply voltage between the line conductors at AC       500 V         measurable supply voltage between the line conductors at AC       500 V         measurable supply voltage between the line conductors at AC       500 V         image measurable supply voltage between the line conductors at AC       500 V         image measurable supply voltage between the line conductors at AC       500 V         image measurable supply voltage between the line conductors at AC       500 V		
switching frequency at digital output maximum       20 Hz         property of the output short-circuit proof       Yes         measuring category for digital signals       CATI         Measuring inputs       289 V         measurable supply voltage between (PE)N and L at AC       289 V         measurable supply voltage between (PE)N and L at AC       11.5 V         • minimum       346 V         • maximum rated value       500 V         AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC maximum rated value       20 V         measurable supply voltage between the line conductors at AC maximum       600 V         voltage measuring range extension with external voltage transformers       yes         line conductors and neutral conductors internal resistance       1.05 MΩ		
property of the output short-circuit proof       Yes         measuring category for digital signals       CATI         Measuring inputs       CATI         measurable supply voltage between (PE)N and L at AC       289 V         measurable supply voltage between (PE)N and L at AC       289 V         measurable supply voltage between (PE)N and L at AC       11.5 V         • minimum       346 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         Measurable supply voltage between the line conductors at AC       500 V         • minimum       20 V         • minimum       600 V         voltage measuring range extension with external voltage yes       yes         transformers       1.05 MΩ		
measuring category for digital signals       CATI         Measuring inputs       measurable supply voltage between (PE)N and L at AC maximum rated value       289 V         measurable supply voltage between (PE)N and L at AC       289 V         • minimum       11.5 V         • maximum       346 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         Measurable supply voltage between the line conductors at AC       20 V         • minimum       600 V         voltage measuring range extension with external voltage       yes         transformers       1.05 MΩ		
Measuring inputs         measurable supply voltage between (PE)N and L at AC maximum rated value       289 V         measurable supply voltage between (PE)N and L at AC       11.5 V         • minimum       346 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC       600 V         voltage measuring range extension with external voltage transformers       yes         line conductors and neutral conductors internal resistance       1.05 MΩ		
measurable supply voltage between (PE)N and L at AC       289 V         measurable supply voltage between (PE)N and L at AC       11.5 V         • minimum       346 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC       500 V         measurable supply voltage between the line conductors at AC       500 V         measurable supply voltage between the line conductors at AC       500 V         measurable supply voltage between the line conductors at AC       90 V         • minimum       20 V         • maximum       600 V         voltage measuring range extension with external voltage transformers       9es         line conductors and neutral conductors internal resistance       1.05 MΩ		
measurable supply voltage between (PE)N and L at AC       11.5 V         • minimum       346 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC       500 V         measurable supply voltage between the line conductors at AC       600 V         voltage measuring range extension with external voltage transformers       yes         line conductors and neutral conductors internal resistance       1.05 MΩ	measurable supply voltage between (PE)N and L at AC	289 V
• minimum       11.5 V         • maximum       346 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC       500 V         • minimum       20 V         • maximum       600 V         voltage measuring range extension with external voltage transformers       yes         line conductors and neutral conductors internal resistance       1.05 MΩ		
• maximum       346 V         measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC       20 V         • minimum       600 V         voltage measuring range extension with external voltage transformers       yes         line conductors and neutral conductors internal resistance       1.05 MΩ		11.5 V
measurable supply voltage between the line conductors at AC maximum rated value       500 V         measurable supply voltage between the line conductors at AC       500 V         • minimum • maximum       20 V         • maximum       600 V         voltage measuring range extension with external voltage transformers       yes         line conductors and neutral conductors internal resistance       1.05 MΩ		
measurable supply voltage between the line conductors at AC       20 V         • minimum       20 V         • maximum       600 V         voltage measuring range extension with external voltage transformers       yes         line conductors and neutral conductors internal resistance       1.05 MΩ	measurable supply voltage between the line conductors at	
• minimum       20 V         • maximum       600 V         voltage measuring range extension with external voltage transformers       yes         line conductors and neutral conductors internal resistance       1.05 MΩ	measurable supply voltage between the line conductors at	
• maximum     600 V       voltage measuring range extension with external voltage transformers     yes       line conductors and neutral conductors internal resistance     1.05 MΩ		20 V
voltage measuring range extension with external voltage transformers       yes         line conductors and neutral conductors internal resistance       1.05 MΩ		
line conductors and neutral conductors internal resistance 1.05 MΩ	voltage measuring range extension with external voltage	
	line conductors and neutral conductors internal resistance	1.05 ΜΩ

measuring category for voltage measurement	t	CATIII		
measurable current		OATIN		
1 at AC rated value		1 A		
<ul> <li>2 at AC rated value</li> </ul>		5 A		
relative measurable current at AC		07		
minimum		1 %		
• maximum		120 %		
current measuring range extension with exter	nal current	Yes		
transformers				
zero point suppression for current measurem		0 10 %		
measuring category for current measurement	i	CATIII		
Connections				
type of connectable conductor cross-sections	;			
<ul> <li>at the measurement inputs for voltage s</li> </ul>	solid	1x (0.5 4 mm²), 2x (0.5 )	2.5 mm²)	
<ul> <li>at the measurement inputs for voltage f stranded with core end processing</li> </ul>	finely	1x (0.5 2.5 mm²), 2x (0.5 .	1.5 mm²)	
<ul> <li>at the measurement inputs for voltage a cables solid</li> </ul>	at AWG	2x 20 to 14		
<ul> <li>at the measurement inputs for current s</li> </ul>	solid	1x (0.5 4 mm²), 2x (0.5 1	2.5 mm²)	
<ul> <li>at the measurement inputs for current f stranded with core end processing</li> </ul>	inely	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)		
<ul> <li>at the measurement inputs for current a cables solid</li> </ul>	at AWG	2x 20 to 14		
type of electrical connection				
<ul> <li>at the measurement inputs for voltage</li> </ul>		screw-type terminals		
<ul> <li>at the measurement inputs for current</li> </ul>		screw-type terminals		
Mechanical Design				
size of Power Monitoring Device		size 96		
height		96 mm		
width		96 mm		
depth		82 mm		
installation depth		77 mm		
net weight		905 g		
mounting position		vertical		
Environmental conditions				
ambient temperature during operation				
• minimum		-10 °C		
• maximum		55 °C		
ambient temperature during storage				
• minimum		-25 °C		
• maximum		70 °C		
relative humidity at 25 °C without condensation during operation maximum		95 %		
installation altitude at height above sea level maximum		2 000 m		
degree of pollution		2		
Certificates				
certificate of suitability as EC Declaration of Conformity		IEC 61010-1: 2001 (2nd Ed.) with Corr. 1, EN 61010-1: 2001 (2nd Ed.) and DIN EN 61010-1:2002 with "Berichtigung 1"		
reference code according to EN 61346-2		Р		
General Product Approval	other		Dangerous Good	
<u>Confirmation</u>	<u>Confirmation</u>	on <u>Miscellaneous</u>	Dangerous Goods Information	

Further information

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