SIEMENS

Data sheet 6AT8007-1AA10-0AA0

SIPLUS CMS1200 SM1281 condition monitoring for SIMATIC S7-1200 4 IEPE vibration channels 1 digital input for rotational speed acquisition

General information	
Product type designation	SM1281
Product description	S7-1200 module for the monitoring of vibrations on mechanical components based on parameters and frequency-selective analysis functions
Installation type/mounting	
Mounting type	Rail or wall mounting
Mounting position	Horizontal, vertical
Recommended mounting position	Horizontal
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption, typ.	200 mA
Current consumption, max.	250 mA
from backplane bus 5 V DC, typ.	80 mA
from backplane bus 5 V DC, max.	85 mA
Power loss	
Power loss, typ.	4.8 W
Memory	
Total memory capacity	1 Gbyte
Hardware configuration	
Design of hardware configuration	Modular, up to 7 modules per CPU
Digital inputs	
Number of speed inputs	1
Input voltage	
● Rated value (DC)	24 V
Sensor input	
Number of IEPE sensor inputs	4
Sampling frequency, max.	46 875 Hz
Interfaces	
Type of data transmission	Export of raw data as WAV file for further analysis (e.g. using CMS X-Tools) can be downloaded via browser/FTP, online data transfer to CMS X-Tools
Ethernet interface	Yes
Protocols	
Bus communication	Yes
OPC UA	Yes; OPC UA Server
Web server	
● HTTP	Yes
Interrupts/diagnostics/status information	

Alarms	
● Diagnostic alarm	Yes
Diagnostics indication LED	
● for status of the inputs	Yes
● for maintenance	Yes
● Status indicator digital input (green)	No
Integrated Functions	
Monitoring functions	
● Monitoring of the sensor inputs	Yes; Cable break and short-circuit
● Vibration characteristic monitoring via RMS value of the vibration speed	Yes
● Vibration characteristic monitoring via RMS value of the vibration acceleration	Yes
● Vibration characteristic monitoring via diagnostic characteristic value	Yes
● Frequency-selective monitoring via vibration speed spectrum	Yes
● Frequency-selective monitoring via vibration acceleration spectrum	Yes
● Frequency-selective monitoring via envelope curve analysis	Yes
Measuring functions	
● Physical measuring principle	Vibration acceleration
Measuring range	
— Measurement range vibration frequency, min.	0.1 Hz
— Measurement range vibration frequency, max.	23 000 Hz
Standards, approvals, certificates	
Certificate of suitability	CE
CE mark	Yes
EAC (formerly Gost-R)	Yes
China RoHS compliance	Yes
Ambient conditions	
Free fall	
● Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
● horizontal installation, min.	-20 °C
● horizontal installation, max.	60 °C
● vertical installation, min.	-20 °C
● vertical installation, max.	45 °C
Ambient temperature during storage/transportation	
● Storage, min.	-40 °C
● Storage, max.	70 °C
● Transportation, min.	-40 °C
● Transportation, max.	70 °C
Air pressure acc. to IEC 60068-2-13	
● Operation, min.	795 hPa
● Operation, max.	1 080 hPa
● Storage/transport, min.	660 hPa
● Storage/transport, max.	1 080 hPa
Relative humidity	
● Operation, min.	5 %
● Operation, max.	95 %
● Condensation permissible	No
Software	
Browser software required	Web browser Mozilla Firefox (ESR31) or Microsoft Internet Explorer (10/11)
connection method	
required front connector	Yes
Design of electrical connection	Screw connection
Mechanics/material	
Material of housing	Plastic: polycarbonate, abbreviation: PC- GF 10 FR
Dimensions	
Width	70 mm

Height	112 mm
Depth	75 mm

Weights

Weight, approx.	260 g

Classifications

	Version	Classification
eClass	14	27-20-14-11
eClass	12	27-20-14-11
eClass	9.1	27-20-14-11
eClass	9	27-20-14-11
eClass	8	27-20-14-04
eClass	7.1	27-20-14-04
eClass	6	27-20-14-04
ETIM	9	EC002959
ETIM	8	EC002959
ETIM	7	EC002959
IDEA	4	3552
UNSPSC	15	32-15-17-03

Approvals / Certificates

General Product Approval	EMV	Marine / Shipping

KC

Marine / Shipping

NK / Nippon Kaiji Kyokai

CCS (China Classification Society)

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