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
Speed input	
Number of speed inputs	1
Input voltage	
• 24 V DC digital	Yes
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
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.	10 000 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

last modified: 10/27/2020