

6AT8007-1AA10-0AA0

SM1281_Condition_Monitoring

Technical data



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	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> HTTP 	Yes
Interrupts/diagnostics/status information	
Alarms	
<ul style="list-style-type: none"> Diagnostic alarm 	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> for status of the inputs for maintenance Status indicator digital input (green) 	Yes Yes No
Integrated Functions	
Monitoring functions	
<ul style="list-style-type: none"> Monitoring of the sensor inputs Vibration characteristic monitoring via RMS value of the vibration speed Vibration characteristic monitoring via RMS value of the vibration acceleration Vibration characteristic monitoring via diagnostic characteristic value Frequency-selective monitoring via vibration speed spectrum 	Yes; Cable break and short-circuit Yes Yes Yes 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:	12/18/2020