SIEMENS

Data sheet 6AT8000-1BB00-4XA0

SIPLUS CMS - HARDWARE IFN VIB-A ACQUISITION OF ANALOG SIGNALS; DETECTION OF MACHINE VIBRATIONS 6*IEPE-INPUT FOR VIBRATION ACCELERATION MEASUREMENT; UB=24VDC; IP67 MEASUREMENT; UB=24VDC; IP67

General information	
Product brand name	SIPLUS
Product designation	IFN VIB-ACC
Product description	Six IEPE sensor signals or five IEPE sensor signals and one analog input signal (e.g. for speed) are measured with the IFN VIB-A.

Installation type/mounting	
Mounting type	standard rail
Mounting accessories	Mounting bracket, can be ordered as option
Required clearance	
• for side-by-side mounting at the front	80 mm
• for side-by-side mounting at the top	25 mm
• for side-by-side mounting at the back	25 mm

Supply voltage	
Design of the power supply	stabilized
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	32 V

Reverse polarity protection	Yes
Overvoltage protection	max. 35 V
Input current	
from external supply (24 V DC), max.	0.2 A
Power	
Active power input, max.	4.8 W
Analog inputs	
Number of analog inputs	1
Designation of the analog input	CH6
Measured variable	Voltage
Connector type	Connector plug 5-pole (M12)
Electrical input frequency, min.	0 Hz
Electrical input frequency, max.	1 kHz
Overvoltage strength, min.	-60 V
Overvoltage strength, max.	60 V
Short-circuit detection	No
Input ranges (rated values), voltages	
• At DC, min.	-30 V
Input ranges (rated values), currents	
• with DC	0.012 mA
Analog value generation for the inputs	
Parameterizable down sampling frequencies	4 / 8 / 16 / 24 / 48 / 64 / 96 kHz
Sampling frequency, max.	192 kHz
Integration and conversion time/resolution per channel	
• Resolution with override range (bit including sign)	16 bit
Sensor input	
Number of sensor inputs	6
Designation of the sensor inputs	CH1 ... CH6
Design of the sensor	IEPE
Overvoltage strength, min.	-60 V
Overvoltage strength, max.	60 V
Open-circuit detection	Yes
Short-circuit detection	Yes
Encoder signals, IEPE	
• Electrical input frequency, min.	0.1 Hz
• Electrical input frequency, max.	40 kHz
• Sampling frequency, max.	192 kHz
• Parameterizable down sampling frequencies	0.014 / 0,33 / 4 / 8 / 16 / 24 / 48 / 64 / 96 kHz
• Resolution with override range (bit including sign)	16 bit

• Connector type	Connector plug 5-pole (M12)

Errors/accuracies	
Relative measuring accuracy for analog input signals, min.	-1 %
Relative measuring accuracy for analog input signals, max.	1 %
Relative measuring accuracy for IEPE signals, min.	-0.7 %
Relative measuring accuracy for IEPE signals, max.	0.7 %
Crosstalk attenuation between analog input signals at 1 kHz	-78 dB
Crosstalk attenuation between sensor channels CH 1 and CH 2 at 1 kHz	-69 dB
Crosstalk attenuation between sensor channels CH 3 ... CH 6 at 1 kHz	-73 dB
Signal-to-noise ratio for analog input signals	-69 dB
Signal-to-noise ratio between sensor channels CH 1 and CH 2 for IEPE signals	-57 dB
Signal-to-noise ratio between sensor channels CH 3 ... CH 6 for IEPE signals	-70 dB

Interfaces	
Number of interfaces	3
Transmission rate	400 Mbit/s

Protocols	
Protocol	IEEE 1394a/b

Potential separation	
Potential separation analog inputs	
• Potential separation analog inputs	No
Galvanic isolation at sensor input	
• Galvanic isolation at sensor input	No

Degree and class of protection	
IP degree of protection	IP67

Standards, approvals, certificates	
CE mark	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
China RoHS compliance	Yes
Use in hazardous areas	
• ATEX	Yes
• IECEx	Yes

Ambient conditions

Ambient temperature during operation	
• min.	-40 °C
• max.	65 °C
Ambient temperature during storage/transportation	
• Storage, min.	-40 °C
• Storage, max.	85 °C
• Transportation, min.	-40 °C
• Transportation, max.	85 °C

Connection method	
Design of electrical connection for the PE conductor	M4 screw with contact washer
• Connectable conductor cross-section for PE terminal	2.5 mm²
Design of plug-in connection	Connector plug 8-pole (M12)
Design of the pin assignment of the inputs	Male connector 5-pole (M12)

Mechanics/material	
Material of housing	aluminum

Dimensions	
Width	86 mm
Height	210 mm
Depth	87 mm
Width when mounted on DIN rail	86 mm
Height when mounted on DIN rail	210 mm
Depth when mounted on DIN rail	96 mm

Weights	
Weight (without packaging)	1.24 kg

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