WIRELESS CONDITION MONITORING SYSTEM

SPECIFICATIONS

ZARK X8II HYBRID

Model Code / Additional Specification Code

ZX-3A1

Specification

INPUT

Number of ZARK Nano connection: Up to 16*1
Number of analog input: Up to 8
Number of rotation pulse input: 1 (TTL level)
Input analog sensor type: Acceleration sensor*2, displacement sensor*3, etc.
Input voltage range: -12 V to +12 V
Input frequency range: 2 Hz to 18.3 kHz (±3 dB)
Input analog signal VDC: -12 V to + 12 V (When a 4–20 mA output sensor is used, attach a 250 Ω resistor to the terminal block of the applicable channel.

*1 The total number of analog input and Nano connections.
Example: When 8 channels are used for analog input, up to 8 (16 - 8 = 8) ZARK Nano can be connected at the same time.
*2 Capable of supplying power for IEPE (Integrated Electronics Piezo-Electric) sensors, such as CA-302, made by SST.
*3 Such as FK-202F, the displacement/vibration transducer made by SST. Note: External power supply required for the transducer.

MEASUREMENT DATA

The measurement data differs depending on the input sensor.

Input		Trend										Waveform	Spectrum	Bias
						CIV*4*5*6								
		OA Acc.	OA Vel.	OA Disp.	Process	1×RPM (Max pk)	2×RPM (Max pk)	3×RPM (Max pk)	4×RPM (Max pk)	Sub 1×RPM (rss) *8	Over 1×RPM (rss) *8			
ZARK Nano		✓	✓	-	-	✓*7	✓*7	✓*7	✓*7	✓*7	✓*7	✓*9	✓*7	-
Analog input	Acceleration	✓	✓	-	-	✓*7	✓*7	✓*7	✓*7	✓*7	✓*7	✓	✓*7	✓
	Displace-ment	-	-	✓	-	-	-	-	-	-	-	✓	✓	✓
	Voltage (VDC)	-	-	-	✓	-	-	-	-	-	-	-	-	-
Pulse input	Rotation speed	-	-	-	✓	-	-	-	-	-	-	-	-	-

*4: Condition Indication Values
Velocity Spectrum band set on Machine Dossier
*5: The range of each frequency band is configurable on Machine Dossier.
*6: The rotations per minute (RPM) is configurable on Machine Dossier.
*7: Velocity
*8: Root-Sum-Square
*9: Acceleration

Trend Data

Measurement parameter: Acceleration : rms, true peak
Velocity : rms, cal. Peak
Displacement : p-p, rms
CIV*4, *5, *6 : 1, 2, 3, 4 × RPM (max peak), Sub 1× RPM (rss)*8,Over 1 × RPM (rss)*8
VDC scaling converted value
Rotation speed : Rotations Per Minute (RPM) calculated using rotation pulse

Waveform Data

Transmission conditions: Never, Only for Alarm, Always
Amount of data: 8192 points
Sampling frequency: Max. 47 kHz

Spectrum Data

Transmission conditions: Never, Only for Alarm, Always
Fmin: 2Hz
Fmax: 1500/3000/5000/10000/18300 Hz
Number of lines: 800/1600/3200

Specification

DATA COLLECTION

Configurable interval : 1-, 2-, 3-, 4-, 6-, 12-hour or 1-day *10,*11

*10 If the number of both connected wired sensors and Zark Nano is 10 or above, it is recommended to set the minimum interval to 2 hours or longer.
*11 The interval will be shortened by half (min 1 hour) during the alarm mode when the vibration exceeds the alarm threshold.

COMMUNICATION

Communication With ZARK Nano

Radio system:	Bluetooth® Low Energy (BLE) 5.0, 2.4 GHz
Maximum communication distance:	Approx. 40 m*12, *13, *14

*12 Line-of-sight
*13 The communication distance may vary greatly depending on the installation position and environment.
*14 Check the communication status before installation.

Communication With Machine Dossier

Radio system:	IEEE 802.11b/g/n (Connection to internet is also required.)

POWER SUPPLY

Power supply:	100 to 240 VAC, 50/60 Hz
Circuit braker:	6 A
Cable:	1.5m / Type B Plug

OPERATING ENVIRONMENT

Temperature:	-20 to 60°C
Humidity:	5 to 95% RH (no condensation)

PHYSICAL

Enclosure dimensions(mm):	280 (W) × 280 (H) × 130 (D) (excluding the protrusion and the mounting metal) 304 (W) × 452 (H) × 144 (D) (with the antenna fully extended)
Enclosure material:	Plastic
Mass:	Approx. 2.4 kg

⚠ WARNING
To use wireless devices in countries and regions around the world, it is necessary to obtain a certification under the radio law of the relevant country or region.
The wireless module used in the system can only be used in the country where it has been certified.
If the system is to be used outside Japan, contact the sales office where you purchased the system.

*The items or other information in the specifications may change without prior notice.