IMx-S versus IMx-8 comparison

Feature	IMx-S (16 channel variant) 	IMx-8 
Size	Steel 500×400×155 mm (19.7×15.7×6.1in.) Stainless steel 500×500×220 mm (19.7× 9.7×8.7 in.)	• Enclosure: 172x104x40 mm (6.8x4.1x1.6 in) • Cabinet: 400 x 300 x 131 mm (15.7 x 11.8 x 5.2 in)
Weight	Steel – 33.1lb (15kg) Stainless steel – 47.4lb (21.5kg)	• Enclosure: 450 g (0.99lb) • Cabinet: 6,7 kg (14.77 lb)
Mounting	Wall	DIN rail or cabinet (wall)
Temp range	–20 to +60 °C (–4 to +140 °F)	-40 to +70 °C (-40 to +158F) on IMx-8 DIN Rail enclosure version
Power	100-250vAC, 47 – 63Hz. 30W	Redundant: • Power over Ethernet (<13 W) • 24-48 VDC (+/-5%) *It is possible to use an optional PS 85-264VAC
Analogue inputs	• 16 dynamic or DC Analogue differential inputs: • Individual 24 V power supply, maximum 35 mA per channel • Selectable standard accelerometer power supply (4 mA) • Input range: ±25 V • Impedance: >100 kΩ • Can interface 2-wired ICP-type sensors (e.g. accelerometers) and/or voltage signals. • Simultaneous measurement of all channels.	• 8 dynamic or DC inputs ±25 V (±5%) • Single ended inputs, referenced to chassis/enclosure ground. • Input range ±25 V • Software controlled power supply for standard accelerometers (~4 mA constant current) for each individual channel • Can interface 2-wired ICP-type sensors (e.g. accelerometers) and/or voltage signals. • Simultaneous measurement of all channels. • Impedance >100 kΩ
Digital inputs	• 8 digital opto-isolated inputs: • 4 Individual 24 V power supply, maximum 30 mA per channel: • Trigger level range • 24 V sensor supply, maximum 30 mA per channel. • Phase voltage range: up to 24V • Trigger level: 2.9 V (Hysteresis 0.1 V), Impedance 1.6 kΩ • Can interface 2- or 3-wired common speed sensors and/or CMCP 2502 (Eddy probe converters) • PNP and NPN	• 2 digital inputs, non-isolated, referenced to chassis/enclosure ground • 24 V sensor supply, maximum 30 mA per channel. • Phase voltage range: up to 24V • Trigger level: 2.9 V (Hysteresis 0.1 V), Impedance 1.6 kΩ • Can interface 2- or 3-wired common speed sensors and/or CMCP 2502 (Eddy probe converters) • PNP only
Analogue measurements	• 24-bit AD conversion enabling continuous transient capture (no gain or AC/DC switching necessary) • True simultaneous sampling • Simultaneous sampling of different channels with different sampling rates (no multiplexing), and one A/D converter for each channel • Frequency range: from DC to 40 kHz • Dynamic range: 120 dB	• 24-bit AD conversion enabling continuous transient capture (no gain or AC/DC switching necessary) • Simultaneous sampling of different channels with different sampling rates (no multiplexing), and one A/D converter for each channel • Frequency range: from DC to 40 kHz • Dynamic range: 120 dB

	• Signal to noise ratio: 90 dB • Cross-talk rejection: 100 dB • Accuracy amplitude: ±2% (up to 20 kHz), ±5% (20 to 40 kHz) • Accuracy phase: ±3° (up to 100 Hz) • Automatic detection of sensor fault and cable fault (software configurable) • Maximum sampling frequency: 102.4 KHz (though lower for event capture)	• Signal to noise ratio: 90 dB • Cross-talk rejection: 100 dB • Accuracy amplitude: ±2% (up to 20 kHz), ±5% (20 to 40 kHz) • Accuracy phase: ±3° (up to 100 Hz) • Automatic detection of sensor fault and cable fault (software configurable) • Maximum sampling frequency: 102.4 KHz (though lower for event capture)
Digital Measurements	• Frequency range – 0.1Hz to 20kHz (I/O board v1.24 or newer) 0.1Hz to 12.5kHz (I/O board older than V1.24) • Required pulse width: > 4 µs for electrical positive >40 µs for electrical negative • Accuracy frequency: 0,05% of measurement value (typically 0,01% up to 2,5 kHz) • Pulse counting	• Frequency range – 0,016 Hz to 20 kHz (1 cpm–1,2 Mcpm) • Accuracy frequency: 0.05% of measurement value (typically 0.01% up to 2,5 kHz) • Pulse counting
Channel config	Dip switches/hexadecimal	Software configurable (no jumpers or dip switches)
Relays	5 total – 4 warning/alarm 1 system alarm	3 total - 2 warning/alarm 1 system alarm
Internal memory	8 MB flash memory: • 2 MB for firmware, configuration files, etc. • 2 MB for trend value buffer About 13 000 vibration trend values can be buffered. Speed and process data use half the space of vibration. • 4 MB for spectra and time signal buffer About 250 spectra using 1600 lines with phase and time signal can be buffered. Using more lines reduces the number of spectrum Using less lines increases the number of spectrum Buffer – when full, first in first out.	4GB – 1GB trend/dynamic 1GB event capture 2MB for firmware, configuration files,etc. 2GB reserved
Multi parameter gating	yes	Yes
True simultaneous measurements of all channels	yes	yes
Multiple acceleration env filters	Yes	Yes
Adaptive alarms	Yes	Yes
Compatible with	@A & @O	@O & limited with @A
Stand alone mode	Yes – but with very limited functionality	Yes – interface via app
Crash detection capability	Yes – With limited local event data storage	yes
IP rating	IP65	• DIN rail IP30 • Cabinet IP65
Signal processing	• Time waveform	• Time waveform

	• Vector analysis with circular alarms • FFT: 100 to 6 400 lines • SKF enveloping filters I, II, III, IV • Integration / differentiation in frequency domain • Window function: Hanning, uniform • Customer formulated mathematical equations • Dynamic alarm levels, active range determined on multiple parameters • Data storage on time, event, or alarm condition • Data buffering in flash memory when communication link is down • Detection of sensor and cable fault • Watchdog and self testing	• Vector analysis with circular alarms • FFT: 100 to 6 400 lines • SKF enveloping filters I, II, III, IV • Integration/Derivation in frequency domain • Window function: Hanning, uniform • Customer formulated mathematical equations • Dynamic alarm levels, active range determined on multiple parameters • Data storage on time, event or alarm condition • Data buffering in flash memory when communication link is down • Detection of sensor and cable fault • Watchdog and self-testing
Interface	• Ethernet: 100 Mbit RJ45, TCP/IP • RS 232 service interface • Ethernet switch for daisy chaining • RS 485 • Modbus RTU over RS485 • Modbus TCP IP • (S)NTP time synchronization protocol • Oil particle counter Modbus and digital inputs • (Including Gastops and MetalSCAN)	• Bluetooth • USB • Ethernet: 100 Mbit RJ45, TCP/IP • IEC 61850-MMS • CAN bus interface Electrical interface • Modbus RTU over RS485 • Modbus TCP IP • (S)NTP time synchronization protocol • Oil particle counter Modbus and digital inputs • (Including Gastops and MetalSCAN)
Certification	• CE certified according to EN61000-6-3 and EN61000-6-2 • DNV GL Marine Type DNV No 2.4:2006 Location class: “All locations except bridge and open deck” EMC A • ABS Marine Type ABS Part 4:2011, chapter 9, section 7, table 9 and 10, Installation class: “General power distribution zone” • Lloyd’s Marine Type Lloyds Register, Test Specification n:o 1, July 2013, • CE directive EMC Directive 2014/30/EU • EMC EN 61000-6-4:2007/A1:2011 • EMC EN 61000-6-2:2005 • ETL LVD-directive starts to apply from 75 V DC	• DNV GL Renewables GL-IV-4:2013, Guidance for the Certification of Condition Monitoring Systems for Wind Turbines. • DNV GL Marine Type DNV No 2.4:2006 Location class: “All locations except bridge and open deck” EMC A • ABS Marine Type ABS Part 4:2011, chapter 9, section 7, table 9 and 10, Installation class: “General power distribution zone” • Lloyd’s Marine Type Lloyds Register, Test Specification n:o 1, July 2013, Equipment in general power distribution zones • CE directive EMC Directive 2014/30/EU • EMC EN 61000-6-4:2007/A1:2011 • EMC EN 61000-6-2:2005 • ETL LVD-directive starts to apply from 75 V DC
Accessory Kits	• CMON 2308 IMx-S Screw terminal kit (for 16 channels) • CMON 2309 IMx-S BNC Adaptor	• CMON 4108 SKF Multilog online system IMx-8 DIN rail version • CMON 4150 IP 65 cabinet with pre drilled holes for IMx-8 • CMON 4151 IP 65 cabinet without pre drilled holes for IMx-8 • CMON 4133 Mini USB cable (isolated) for IMx-8 • CMON 4134 SKF Bluetooth dongle for IMx-8 • CMON 4135 Set of double deck connectors and resistors for modbus termination and 4-20mA inputs for IMx-8 • CMON 4136 Analogue isolator module. 4-20mA to voltage • CMON 4137 (New) Power supply for IMx-8 • CMON 4108-D SKF Multilog On-line System IMx-8 Dummy device

What you get	IMx-S	When ordering the SKF Multilog IMx-8 with the part number CMON 4108, the end user will get: • IMx-8 • Bluetooth dongle. • One resistor for Modbus termination. • Ground cable • Set of single deck push in connectors • Set of single deck screw connectors • One double deck push in connector for Modbus termination
Apps	None	IMx Manager iOS & Android allows"- • Perform network configuration tasks. • Create standalone measurement configuration. • View measurement configuration, as made via the @ptitude Observer client or via the SKF Multilog IMx Manager. • Update the IMx-8 firmware. • Select and download site specific machine templates. • Run a SAT (Site Acceptance Test) based on the installed sensors by using live charts and plots and generate a SAT Report with the relevant information. • Generate an IMx report that shows general IMx information, current IMx network and Modbus configuration including the company and user details. • Viewer; shows live data with bar charts, trends, time waveform and FFT. (Viewer works in stand-alone mode only)
SAT tool & report	Serial tool only	Via IMx Manager
LEDs	2 LED indicators on the CPU card. • Red LED SYS indicates system fault. On means that system fault has been detected. • Green LED PWR indicates the status of power. On means that the power is Ok.	2 LED indicators on the top endcap. • Green LED for Power • Red LED for System
Operating modes	Device initiated Server initiated *default network configuration fixed IP+device initiated.	Device initiated Server initiated Stand-alone *default network configuration is DHCP+server initiated.
ModBus	TCP & RTU	TCP & RTU
Maximum altitude	2 000 m (6 561.7 ft.)	2 000 m (6 561.7 ft.)
Serviceability	Yes – CPU, power supply and IO card	Full unit replacement