

APPENDIX · HARDWARE

Sensor Specifications

A non-invasive triaxial vibration and temperature sensor, epoxy-mounted to the transformer tank in about 15 minutes. No drilling, no outage, no connection to electrical or IT systems.

HARDWARE

DIA × H	50 × 25 mm
WEIGHT	70 grams
BATTERY LIFE	10 years ¹
MATERIAL	Polycarbonate (UL-94 V0)
TEMP RANGE	−40 °C to +80 °C
BATTERY CERT	UL1642
COMPLIANCE	RoHS, NEMA 250, ATEX Zone 0/20
INGRESS	IP69K

FUNCTIONALITY

TRANSMIT RANGE	100 m
SAMPLING FREQ	0–6.6 kHz (3.3 kHz typ.)
MEASUREMENTS	Triaxial vibration + temperature
REPORTING RATE	4 samples/hr (typ.)
SCALE	±16 g
COMM CERT	FCC / IC Part 15
■ Over-the-air (OTA) configurable	
■ Auto-detect machine start	

¹ Normal use case with four transmissions per hour at ambient temperature.

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Gateway Specifications

A wall-mounted communications gateway that relays sensor data over cellular and network backhaul. One gateway serves a full sensor cluster with no IT infrastructure integration required.

HARDWARE

DIMENSIONS	15 × 15 × 9 cm
WALL POWER	110/220 V, 0.15 A
WEIGHT	1.5 kg
TEMP RANGE	−30 °C to +70 °C
COMM CERT	FCC / IC Part 15, Part 22/24
COMPLIANCE	RoHS, NEMA 6/6P, UL508A
INGRESS	IP69K

FUNCTIONALITY

BACKEND	LTE Cat1/Cat4 (global), Cat M1/M2 (US), 802.11 a/b/g, Ethernet
SENSOR LINK	BLE 5.0
SIMULTANEOUS SENSORS	Up to 100
■ Over-the-air (OTA) configurable	
■ Auto-recovery	