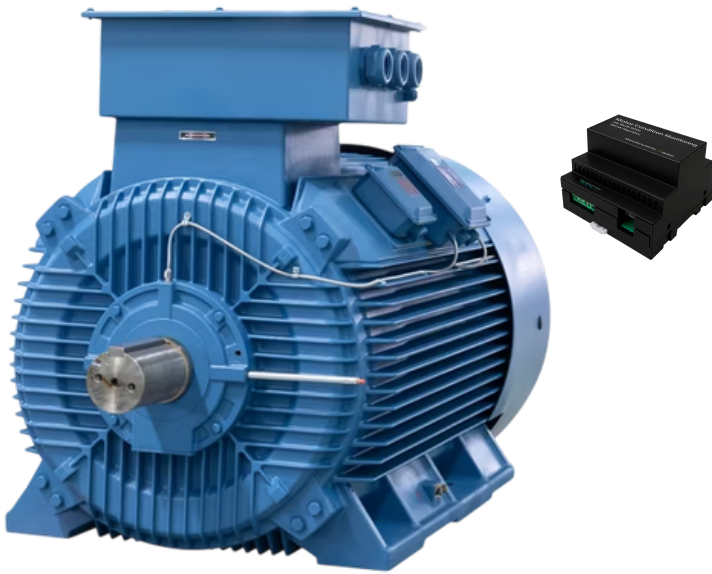




Motor Condition Monitoring

ITE-MCM-E-GO

MCSA Algorithm



Motor Condition Monitoring (MCM) system is an intelligent diagnostic solution developed using Motor Current Signature Analysis (MCSA) algorithms to detect and identify motor faults at an early stage. By continuously analyzing motor current patterns, the system provides real-time insights into motor health without requiring additional intrusive sensors.

The solution helps industries reduce unplanned downtime, improve maintenance planning, and enhance equipment reliability by identifying conditions such as Bearing Defects, Rotor Faults, Stator Faults, Air Gap Eccentricity.

Key Features

- **Early Fault Detection** – Identifies bearing, rotor, stator, mechanical, power quality, and load-related faults weeks before failure occurs.
- **Non-Intrusive Installation** – Uses clamp-on current sensors for quick deployment without motor shutdown or production interruption.
- **Advanced Real-Time Analytics** – Performs continuous current monitoring, FFT analysis, fault probability assessment, and health scoring.
- **Intuitive Dashboard & Alerts** – Provide live motor status, trend analysis, spectrum visualization, instant alerts, and exportable reports through a web-based platform.
- **Secure & Scalable Platform** – Supports multi-site deployments, role-based access control, encrypted communication, and monitoring of hundreds of motors across multiple plants.

Hardware Specification

CPU	32bit, 480 Mhz Microcontroller
Memory	Flash 512 Kb
Communication	Ethernet, 100 Mbps
Protocal	TCP Protocal binary streaming
LED indication	Power on -Red, TCP- Green, Data communication- Green Blink
Current Requirement	Minimum 1 A
CT Coil Range	((1-5A), 1000:1)
Sampling Rate	14000 Hz per second per phase
Motor Voltage Type	Single and Three Phase Induction motor
Motor Capacity	0.5 KW to 500 KW motor

Input Voltage Range	24VDC,5 Watts
Cabinet Type	ABS, Dinrail Mountable
Dimensions	Width108 x Height 74 x Length 110

Software Specification

Parameter	Specification
Signal Processing	FFT-based frequency spectrum analysis
Monitoring Type	Continuous,real-time online monitoring
Fault Detection	Bearing Fault, Rotor Fault, Stator Fault, Air Gap Eccentricity
Detection Stage	Early fault detection - weeks before failure
User Interface	Web-based dashboard (browser access)
Alerts	Instant alerts with severity classification (Critical/Warning)
Reports	Exportable fault and health trend reports
Scalability	Multi-site deployment; monitors hundreds of motors across multi plants
Security	Roles-based access control, encrypted communication

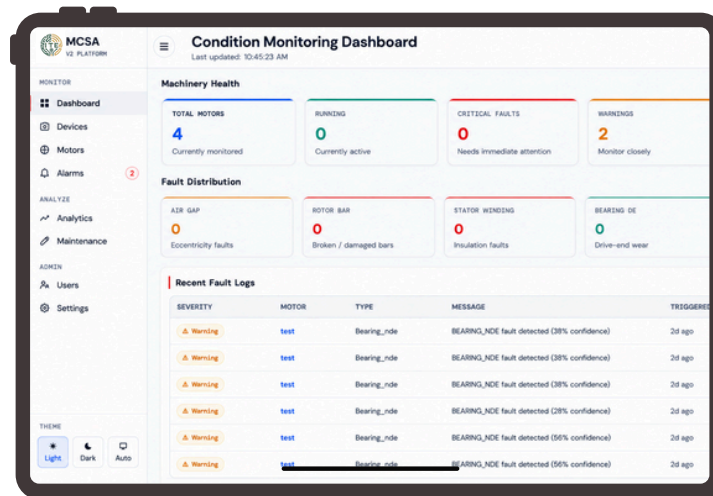
Product Selection

MODEL	COMMUNICATION	DESCRIPTION	DIMENSIONS (W*H*L)mm
ITE-MCM-E-GO	Ethernet	Motor Condition Monitoring	W108xH74XL110
ITE- SERAI-GOVO	Ethernet	Local Server for AI Analytics	AI Box H 50mm, W 103mm, L 145mm
ITE-SWLC	NA	Software Licence per motor	
ITE- CTCOIL-XX	Wired	CT Coil - XX (Maximum current) :5A	

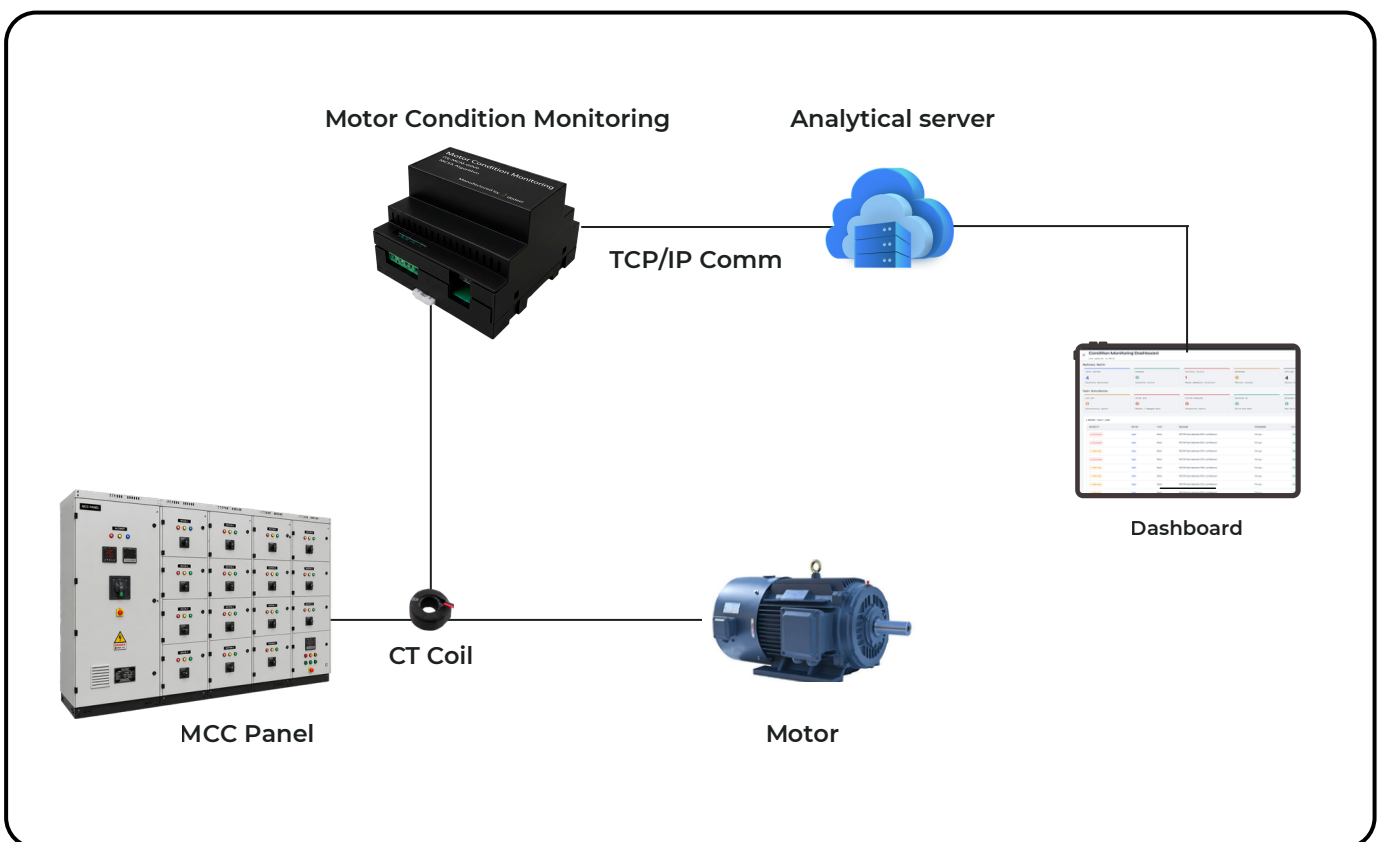
Product Dimensions



Motor Condition Monitoring Dashboard



Architecture Diagram



Applications

- Manufacturing Plants
- Water & Wastewater Treatment
- Oil, Gas & Chemical Industries
- Power Generation & Utilities
- HVAC, Mining & Industrial Automation

Calibration

This product is factory calibrated.

Warranty

1 Year warranty

Revision History

REV NO.	DATE	NO. OF PAGES	PREPARED BY	REVIEWED BY	APPROVED BY
00	04-08-26	06	RK	CT	AX

Disclaimer: The specifications and information provided in this datasheet are subject to change without prior notice. The manufacturer reserves the right to modify product features, design, and performance parameters at any time. Please verify the latest specifications before making purchasing or design decisions.