BOLA™

BETTER OPERATIONS & LIFE BY ANALYTICS

An **IoT** enabled, remote monitoring & controlling solution for **Power, Distribution Transformers & Electrical** machines.

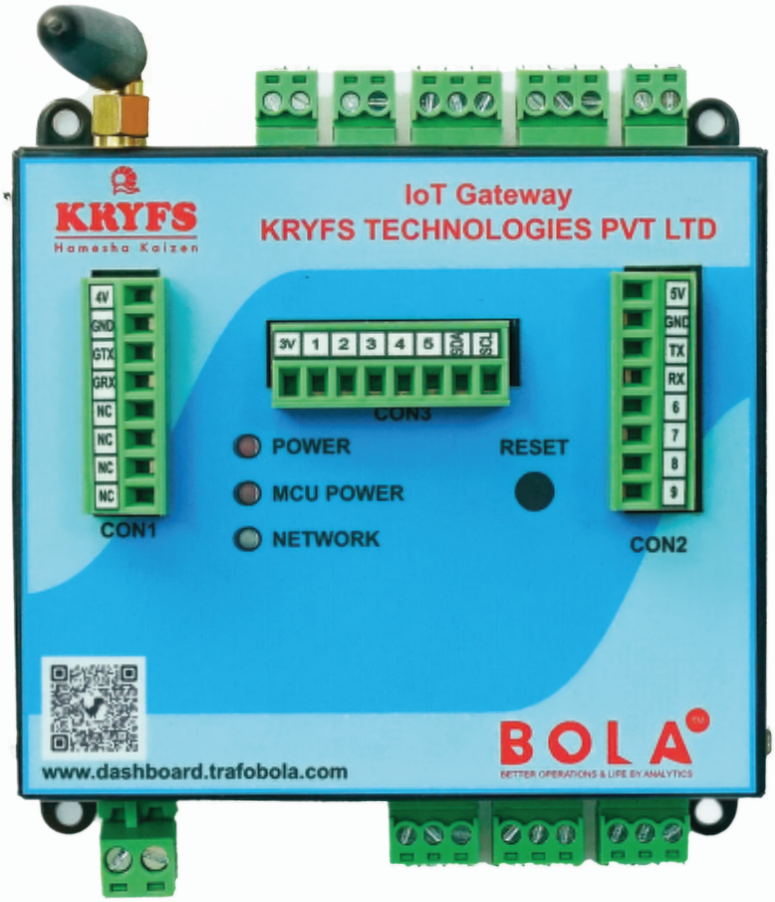
EQDC TYPE TESTED

(Electronics and Quality Development Centre)

INTRODUCING BOLA

An IIoT enabled, remote monitoring & controlling solution for Power, Distribution Transformers & Electrical machines.

BOLA is an IIoT based Low – Cost remote monitoring solution for Distribution, Power transformers & for Electrical machines that monitors the vital parameters (Electrical & Physical) in real-time from any location on our proprietary dashboard on your Mobile or Computer. The solution diagnoses & sends alerts/notifications on SMS & email whenever there is any abnormality sensed and hence allows to take preventive action before the failure actually happens. It is retro fit device which can be installed on any Old or New Transformer. The risk of failure is eliminated using alarm rules and detections of deviation from the reference values of threshold (e.g. Oil Level, Oil and winding temperature)



PHYSICAL PARAMETERS

- Oil temperature
- Winding temperature
- Oil level
- Bushing temperature/lug temperature
- OLTC tap position indicator & Counter
- Ambient temperature & humidity
- Moisture in Oil

ANALYTICS & CONTROLLING

- Health Index of transformer
- Comparison between load % of transformer, winding & oil temperature, Ambient temperature as per IS 1180/2026/6600
- Transformer Efficiency Analysis
- Downtime and Uptime analysis
- Unbalanced Load & Voltage Analytics

ELECTRICAL PARAMETERS

- Basic Parameters. (V, I, P.F)
- Energy Parameters. (kWH, kVARH,kVAH)
- Power Parameters. (kW, kVA,kVAR)
- Harmonics. (up to 31st level)

PROTECTION RELAY STATUS

- OTI Alarm/Trip status
- WTI Alarm/Trip status
- MOG Alarm/Trip status
- Buchholz Alarm/Trip status
- PRV Trip status
- OLTC PRV status

BOLA™
BETTER OPERATIONS & LIFE BY ANALYTICS

Around 20% of distribution transformers fail every year in India, compared to 2 - 3% in developed countries.

WHY DO TRANSFORMERS FAIL?

Insulation failure // Moisture ingress // Oil decay

Improper Maintenance // Design & Manufacturing Defects

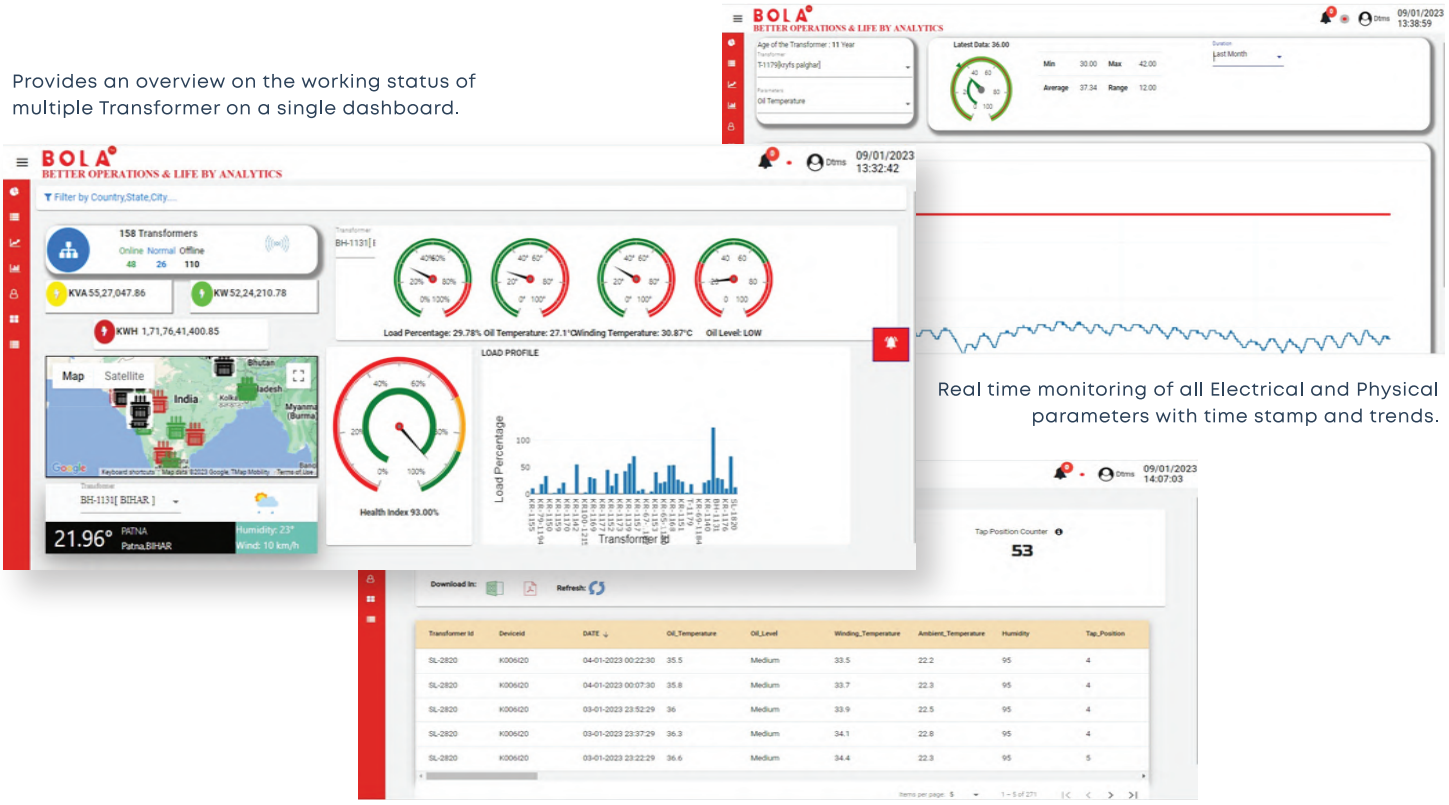
Overloading // Lack of monitoring/Manual monitoring.

Can this be avoided?

The answer is YES, most of these can be avoided with proactive monitoring and analysis from gathered Transformer data.

Bola Dashboard Snaphots

Provides an overview on the working status of multiple Transformer on a single dashboard.

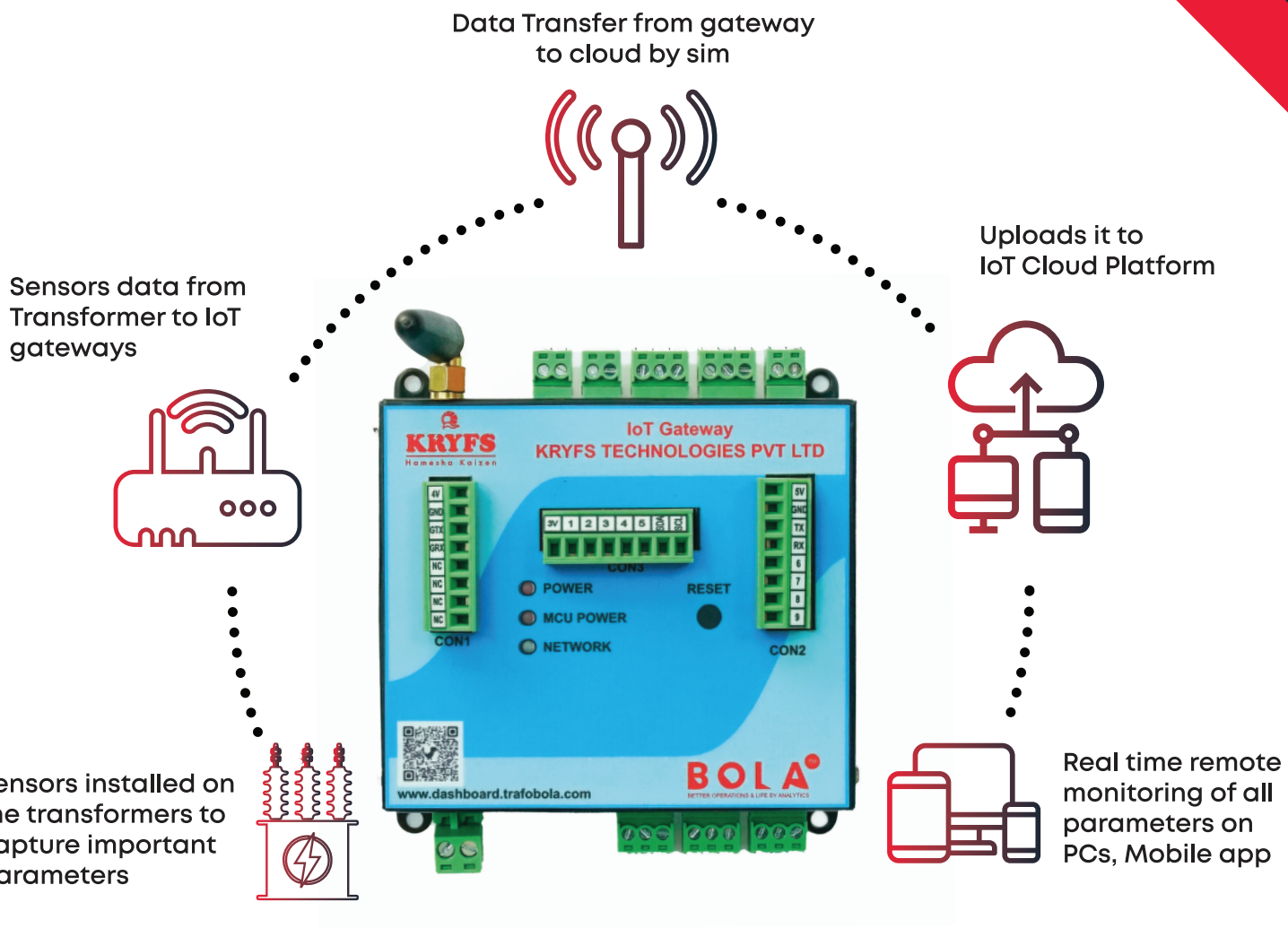


Real time monitoring of all Electrical and Physical parameters with time stamp and trends.

BOLA™
BETTER OPERATIONS & LIFE BY ANALYTICS

SYSTEM OVERVIEW

How BOLA works



Customer List

TOYOTA · FILATEX · KLJ GROUP (55+ Years | 90+ Countries | $1.4 Billion Group) · WELSPUN · embio

Type Test Conducted

- Radiation Susceptibility Test
- Electrostatic Discharge Test
- Electrical Fast Transient Test
- Surge Immunity Test
- Conducted Emission Test
- Radiated Emission Test
- Conducted Susceptibility Test
- Climatic/Environmental Test
- Vibration Endurance Test (Class1)
- Ingress Protection Test

KM PowerCon

Keshav Omprakash Mundada
9209003666 ; 7020984483
kmpowercon@gmail.com