Distribution L.T. Power Transformer Monitoring System: TMS-01

from TAS PowerTek, W-61, Ambad MIDC, Nashik-422010, Maharashtra State, India.

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TAS PowerTek System Features, Questionaire for Customer / Potential User Feedback. **Kindly fill-in below & provide details.**

Sr. No.	System Feature	Customer Requirements	Customer and / or TAS PowerTek Remarks
1	Application Location:	Factory-Campus / Agricultural Field / Rural / Urban / Isolated Remote	Please specify.
2	Application Site	Un-sheltered / Sheltered / Environmentally Protected	Please specify.
3	Primary Objectives, to prevent suddent transformer failures by way of EARLY Warning, and if Required, Tripping Mechanisms.	Transformer Health in terms of Phase-Loss, Voltage and / or Current Un-balance, Over-Voltage, Over-Load, Over-Temperature, Low Oil-Level, Loss of Oil, High Ambient Temperature etc. On User's Computer and / or on Mobile Phones.	TAS Provides Comprehensive Real-Time Status Monitoring, Limits Checking, Alarming, Data-Logging, Data Reporting, Archieveing, apart from the accurate measurements of all Electrical and Non-Electrical (Physical) Parameters, as part of the Total Solutions.
4	Additional Objective	Get AC Voltages, Currents, P.F., Power, Energy etc. Parameters for Long-Term Performance Monitoring and Trends Monitoring.	Makes the system important to avoid suddent Transformer Failures by way of early warnings & diagnostics, and prevents financial losses.
5	Based on TAS Monitoring Unit, TMS-01, and the TAS-Cloud Platform	TAS TMS-01 & the TAS-Cloud are Accepted based on the respective features & Specs.	TAS offers working solutions.
6	Users' PC / Mobile accesses TAS-Cloud for Central and / or Distributed Monitoring Device, thru' TAS Multple Levels Authorization Methods.	The new Mobile Devices normally have the in-built Internet Access (Browser). If the information is to be received on a PC, then, that PC should have Internet Access.	Various Software Modules accessible to the Users of TAS Cloud are: Basic Software and add-on such as Billing, Transformer Performance & Health Monitoring, and optionally, Automatic Power Factor Contol Capacitor Banks related data.
7	Number of Transformers to be independantly monitored at City / Taluka, District / State, National Levels.	There will be One TMS-01 Controller along with the necessary External Sensors for EACH Transformer. But NO Limitations on the Total Number of Transformers, individually and / or in Group and Sub-Groups, to be monitored on PC / Mobile.	TAS Provides the facilities of monitoring up to 5 Transformers via TAS Cloud, absolutely free of charge. For more than 5 Number of Transformers to be monitored, TAS offers reasonable Yearly Subsriptions Packages for Pay-&-Use.
8	Essential and Important Factor: There should be availability of Mobile RF Signals of sufficient strength and constancy for this System to work as it is the heart of the system.	Please Check if this is available NOW, at the Installtion Sites / Locations.	You can check from multiple operators / R.F. network serrvice providers as to who offers reliable communications at affordable costs.

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9	Wide-Area Monitoring is feasible only with "wireless" solutions!	This "Wireless" is based on GPRS (for File Transfer Mode) of Mobile Technology.	TAS has the necessary expertise in GPRS Communications and in "Cloud Computing" Platform.
10	Need for Administrative, Supervisor, and User Levels of Access Protections.	TAS-Cloud while providing almost a Global Access, has the necessary security levels and protections thru' appropriate authorizations and passwords.	TAS can provide the needed solutions.
11	After freezing basic functional requirements, then, go for other details as below:	Customer Priorities & Concerns can be high-lighted here	TAS is much willing to listen and understand your specific needs.
12	Transformer kVA Rating, and the much needed facilities built in to the Transformer for the required Sensors such as L.T. Side CTs of Proper ratings, Oil-Level Sensor Installation, Bi-Metalic Thermal Switch on the Transformer Body, PT-100 RTD inserted in the Transformer Body, etc. as per the TAS TMS-01 Wiring Diagram.	Please Confirm.	TAS can suggest suitable sources of manufacturers of CTs, Oil-Level Sensor, Temperature Sensors, Bi-Metalic Thermal Cut-Off Switches etc. A Video Clip of the Demo. is available from TAS.
13	Electrical System is: Three-Phase, Four-Wire, Nominal Phase-to-Neutral Voltage is 240 Vac, and the range can be 80 to 300 Vac	Specify if it is OK, as is the case in India.	Please specify if the TMS-01 is to be operated on AC at what Nominal Rated Voltage, along with the Operating Voltage Range.
14	Electrical Supply System Line Frequency of Operation: 50 +/- 3 Hz, 60 +/- 3 Hz.	Please specify.	No problem for nominal 50 Hz or 60 Hz Systems.
15	Operating Ambient Temperature Minmum, Nominal, and Maximum Values, Relative Humidity Range: Minimum & Maximum (It must be Non-Condensing).	Please specify.	The Internal Temperature of the TMS-01 Controller is automatically measured, monitored, and alarmed as per the user specified limits. Similar User Setting is to be done for the External / Transformer Temerature Limits to be set by the User in the field.

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16	Range of Supply Current in Amps to be measured and monitored by TMS-01 Unit, indicating Minimum, Nominal and Maximum Values.	Please specify.	TAS has the necessary experience & expertise in this area too. User to provide field requirements.
17	Basic System is for the Transformer Monitoring, but optionally, it can be extended to include Power Factor Improvements by way of Capacitor Banks Switching.	TAS Specialization is in Electrical Systems Measurements, Monitoring, Controlling etc., alongwith Non-Electrical Parameters Ambient Temperature, Oil-Level Digital Status etc.	Discuss with TAS, if Automatic Power Fcator Controlling Functions is to be included.
18	Human-Machine-Interface at PC / Mobile, Dynamic Data Update Rate: Typical 1 Minute, but much depends on System Configuration and Project Budgets.	1 Minute Interval updated Dynamic Data is acceptable in almost all cases, but ready to exploer anything faster.	Customer specifies the most practical requirements.
19	Hard-Copy Outputs of Reports etc. on to a Color-Graphics Printer Required?	Paper Sizes of A3 and A4 are commonly utilized. Specify if different. All PCs have Printer Driver Software, so no problem!	MS-Windows Compatible Color-Graphics Laser Printer would be User's choice.
20	System Feature not included anywhere in the above?	Please specify.	Discuss with TAS.
21	Video Presentation of TAS Installed System	Possible at TAS PowerTek, Nasik.	Face-to-Face discussions always help!
This Document Revision Dated: 3rd July 2016. Note: Always ask for latest revision.			