In-situ monitoring scheme

Human-machine interface MV570
MNS Digital solution provides a human-machine interface MV570 to display the operating condition of connected devices. In addition, MV570 is also a web interface enabling the access via any standard personal computer web browser, such as Microsoft's Internet Explorer. MV570 is a touch tablet conforming to industry standard, which is mounted directly on the switchgear. ABB's “plant-wide informatization” concept is fully reflected here.

Based on users' access rights, MV570 provides the following functional options:

1. Monitoring:
- Realtime data for circuit operation (current, voltage, power, power factor, power contact temperature, etc.)
- Circuit status: run/stop
- Alarm and trip information

2. Parameterization
- Access control and protection parameters
- Download control and protection parameters

3. Control:
- Start/stop/trip reset

4. Maintenance:
- SOE
- Motor start/stop time
- Number of starts
- Number of trips
- MC510 firmware upgrading

5. Project management:
- Create new project, copy project or delete project
- Switchgear layout interface editing

6. User management:
- Add or delete accounts for different types of users
- Password management



Monitoring system integrated into plant area

MNS Digital is a LV switchgear platform integrated with control system which is really based on the Internet technology. ABB’s digital switchgear solutions integrates innovative protection, control and sensing devices, where all measurements, status and commands are reliably transferred on a realtime Ethernet communication bus via the Modbus TCP, OPC-UA or IEC 61850 protocol as applicable and desired based on the final needs. MNS Digital solution provides process operators, electrical engineers, maintenance teams and plant management personnel with the required engineering information.

Plant control system
The application of industrial process control system needs the support of multiple systems that are connected to the switchgear and motor control center via an Ethernet communication interface.

This is because specific users raise different control operational requirements and need different information at different operating locations.

MNS Digital solution strives to meet users’ needs and effectively support multiple industrial Ethernet communication interfaces and applications.

Grid monitoring / SCADA
The plant's electricity demand is increasing, so is the need for electrical monitoring and site conditions monitoring.

Being able to provide the right information at the right time is so vital that it may determine whether or not a plant is profitable.

This function is an important part of MNS Digital solution.

With the standard industry Ethernet interface, it is easy to access to the below electrical data:
- Measured values, equipment status and failure analysis
- Time records of alarms and events