

MNS[®] Extended Automation Upgrade

Adding Intelligence to Switchgear through System Upgrade

The evolution of low voltage switchgear and motor control center has seen the introduction of intelligent electronic devices and motor controllers installed in the switchgear and MCC assembly. In order to leverage the available information from these devices, ABB offers the MNS[®] Extended Automation Upgrade as a solution to integrate state-of-the-art devices in a simple and user friendly method to the existing assembly.

The implementation of latest state-of-the-art digital and intelligent electronic technology in a low voltage switchgear and motor control center has enabled better monitoring of electrical system operational data and switchgear performance to enable highest process plant operation performance. Multiple intelligent devices can be installed in the low voltage switchgear to monitor, control and protect the equipment connected to the low voltage switchgear. The availability of switchgear operating condition through the intelligent devices enables the owner and operator of the switchgear to predictively plan and take action accordingly to current condition to improve the reliability and availability of the electrical system. In order to optimize the monitoring of all device installed in the switchgear, in the MNS[®] Extended Automation Upgrade solution the devices are integrated and represented in a single interface rather than multiple connections or PLC's.



The MNS[®] Extended Automation Upgrade provides the values to the owner and operator of an electrical low voltage switchgear and motor control center:

1. Simplicity in Engineering

No complex programming required to integrate the devices compared to PLC.

2. Communication interface

The solution supports the use of standard communication interfaces.

3. Higher Availability

Redundant gateway configuration is possible. No reprogramming of gateway is required during replacement. The gateway can be replaced in a "plug and play" manner.

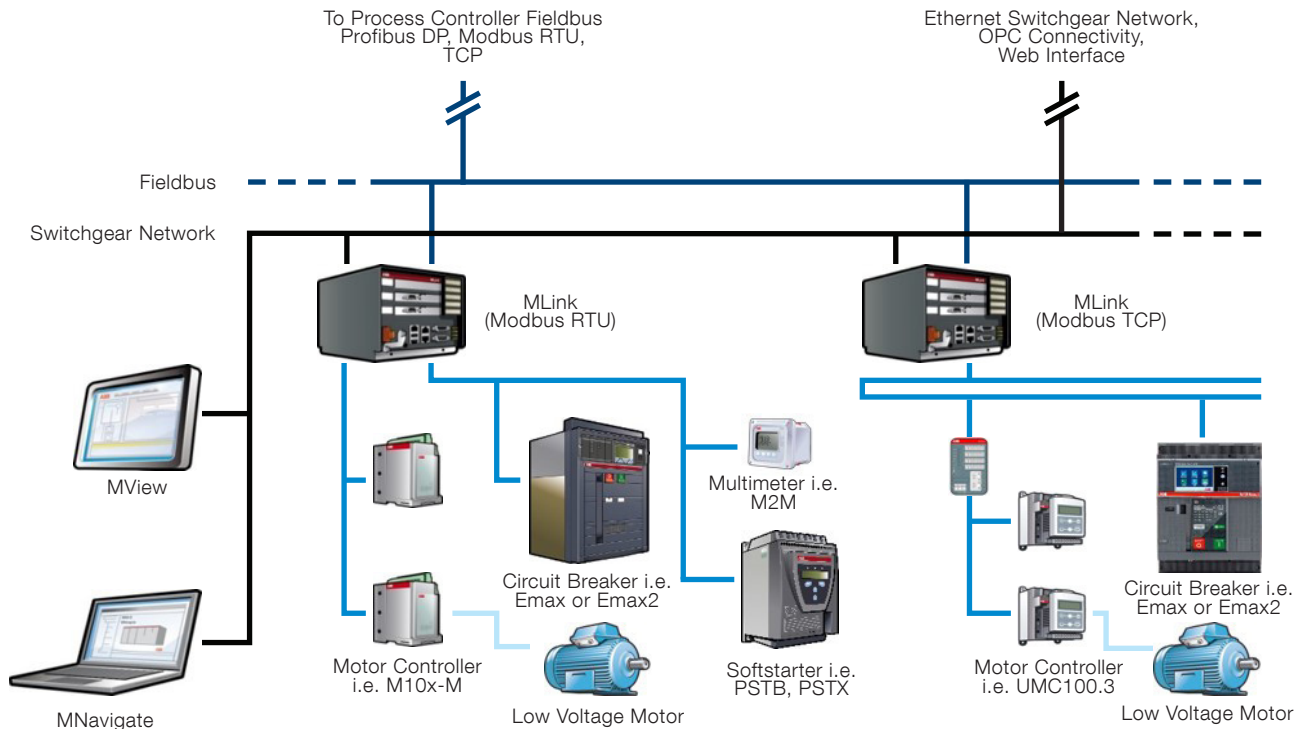
4. User Friendliness

A web based human machine interface is available for operator and maintenance team to monitor and control all the loads connected in the switchgear.

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System Architecture



Drawing shows logical connection only, devices are shown as examples

The MNS® Extended Automation Upgrade provides integration possibility of devices with Modbus RTU/ Modbus TCP interface to the communication gateway MLink.

The basic components of MNS® Extended Automation Upgrade consist of:

1. Intelligent devices with Modbus RTU/TCP

Example of such devices installed in low voltage switchgear and MCC, in the above figure, are M10x-M, UMC100.3, PSTB, Emax and Emax2, Multimeter M2M. Further Modbus RTU/TCP devices can be integrated.

2. Gateway MLink

Is used as the communication interface between field devices, process control system and electrical monitoring systems. The communication protocol between MLink and such systems are either Modbus RTU, Modbus TCP and Profibus DP (V0, V1).

3. Web browser based access MView

The MView is a high end industrial grade touch panel PC with a web based human interface which allows users to operate and monitor the system.

4. Parametering software MNavigate

The Windows PC based software used to configure MLink communication parameters.

The MNS® Extended Automation Upgrade can be used to upgrade the obsolete intelligent devices in low voltage intelligent switchgear and MCC. Furthermore, it is available as a solution to upgrade a conventional low voltage switchgear into an intelligent switchgear supporting the drive towards Industry 4.0 and Internet of Things.

For more information please contact:

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