

Intelligent motor starting in Industrial^{IT}

Protect^{IT} MNS Motor Management INSUM



Information flow as a success factor in today's markets

The availability of information is becoming one if not the key factor for plant management. A decisive competitive edge can only be achieved by providing information at the right time, in the right place and in the right format to the right people. Industrial^{IT} – Innovative solutions in the form of various suits of applications now make knowledge available enterprise-wide – easier than ever before.

Protection, Monitoring, Alarming – Information delivery with INSUM

INSUM is the intelligence of MNS, ABB's reliable switchgear system for power distribution and motor control. INSUM is a control and instrumentation system for Motor Control Centers and utilizes standard fieldbus technology (e. g. PROFIBUS, Ethernet TCP/IP, MODBUS). Thus, INSUM provides you with indispensable information regarding motor operation. Gateways forward real time MCC data and control commands available to the plant wide control system, thus integrating intelligent motor control into the world of Industrial IT.



Industrial IT

Operate IT

Ethernet TCP/IP

Backplane installed with:

- Router:
Communication with the field bus for up to 2 x 32 MCU
- Gateway:
Communication with various process control systems (MODBUS, PROFIBUS DP, Ethernet)

MCUs (Motor Control Units)

Intelligent electronic devices (1 per starter) for protection, monitoring and control.

	MCU1	MCU2
non-reversing drive	■	■
reversing drive	■	■
TOL (thermal overload protection)	■	■
stall protection	■	■
underload protection	■	■
start limitation	■	■
phase currents	■	■
phase failure	■	■
star-delta starting		■
nonreversing		■
drive with two speeds		■
actuator drive		■
solenoid control		■
softstart/softstop		■
cosφ measurement		■
voltage measurement		■
undervoltage protection		■
starting with voltage		■
limitation by variable transformers		■

MNS with INSUM goes Industrial IT:

- Remote and local monitoring in real-time
- Higher system availability, reduced downtime
- Flexible, configurable protection matches changing plant requirements
- Centralized motor management for operations and protection parameters
- Reduced scope of wiring through fieldbus technology
- Shortest installation and commissioning times
- High stacking density in the switchgear cubicle
- Reduced size of starter modules
- Reduced number of spares holding through standardization
- Modular and flexible system
- Adjustable to fit almost every demand
- Compatible with ABB's Industrial IT: one single engineering strategy for automation and motor protection.
- High-availability option



Control IT
FieldController
AC 800 F

PROFIBUS- DP

Ethernet TCP/IP

INSUM Operator Station

- Plant-wide engineering station
- Status and alarm monitoring
- Remote configuration of MCUs



LON 1,2 MBaud



Human Machine Interface (HMI)

- 6-line LCD-display for convenient display of data from connected field units
- Status, warnings, alarms, measured values, etc.
- Encoder wheel and function keys for user friendly, menu controlled operation



LON 78 kBaud

The basis: MNS switchgear

The standardized switchgear system MNS is renowned for its reliability. 25 years in operation on all continents – the best choice for arc-proof low voltage switchgear.

Using a modular approach the MNS system is suited to fit almost every requirement imaginable: from high-current energy distribution to starters for motors up to 355 kW. Several standardized feeder modules can all be combined in the same cubicle for flexible and compact switchgear-design.

ABB manufactures and distributes the MNS system in 27 countries worldwide, providing you with a global service network you can count on.



ABB Low Voltage Systems

For local contact information see:
<http://www.abb.com/mns>