MNS PLUS

Auto transfer switch

- 3 phase monitoring for the Mains
- Remote start output
- Measurements on display
- Electrical protections
- Adjustable Timers

The MNS Plus is a control and protection panel designed to monitor the 3-phase mains voltages, send remote start commands to the generating set, and manage changeover of both the generator and the mains breakers. It shows the measured values on its displays.

The genset should be controlled by a Remote Start control unit.

The unit is able to control both contactors and motorized switches. The front panel mimic diagram provides information about mains and generator power availability as well as contactor positions.

EASILY ADJUSTABLE PARAMETERS

The MNS Plus provides a comprehensive set of digitally adjustable timers, threshold levels, input and output configurations and operating sequences. The unauthorized access to program parameters is prevented by the program lock input. All programs may be modified via the front panel pushbuttons, and do not require an external unit.

TELEMETRY AND REMOTE PROGRAMMING

The MNS Plus module provides the user with extensive telemetry facilities via its standard RS-232 serial port. The unit can be connected either to a PC or to a modem for remote communication. The PC software offers local, Local Area Network (LAN), internet and modem operation capabilities.
The PC program is used for parameter upload/download, remote monitoring, diagnostics and analysis. It automatically detects new versions over the internet.

STATISTICS AND EVENT LOGGING

The following incremental counters provide statistics about past performance of the generating set: Engine Hours Run, Engine Hours to Service, Time to Service, Number of Genset Runs, and Number of Gensets on Load.
The MNS Plus records the last 12 events with a date and time stamp (alarms and warnings, generator on-load/off-load information).
Event records are displayed on the PC screen.

CONFIGURABLE INPUTS/OUTPUTS

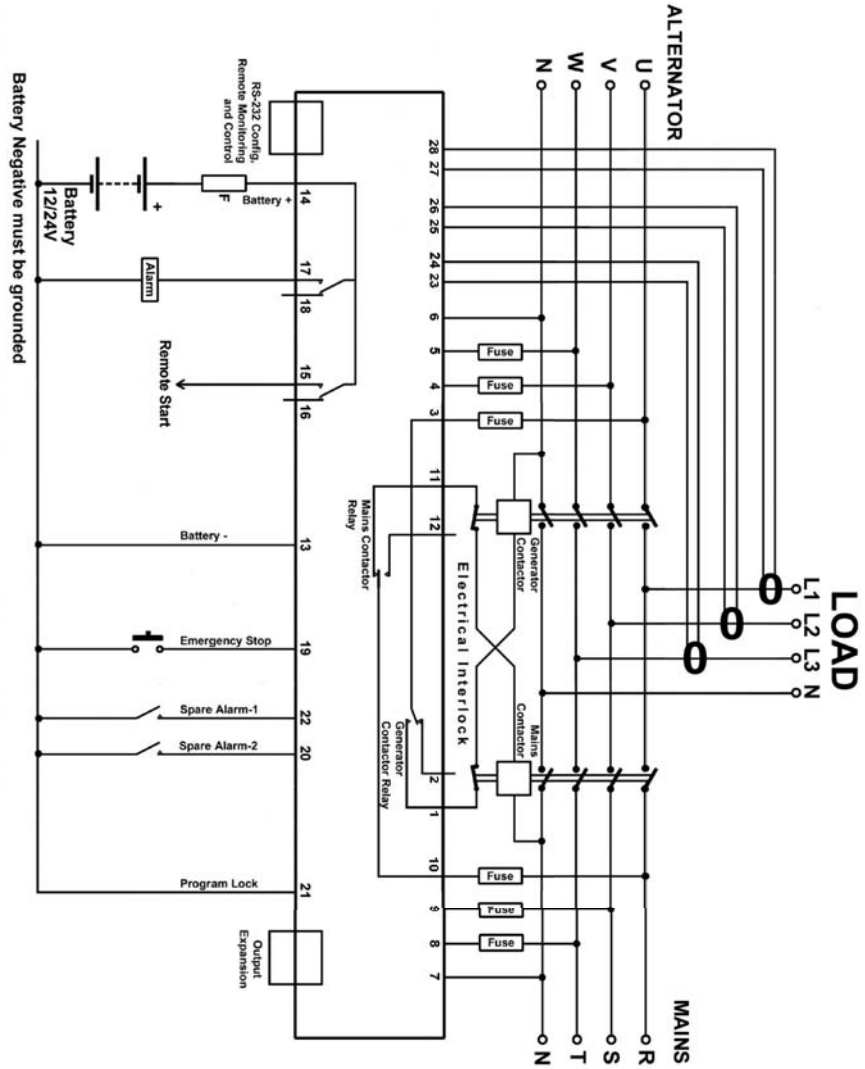
The unit has 4 configurable digital inputs. 2 of the 4 relay outputs have programmable functions, which can be selected from a list.
In addition to control signals, any specific alarm information may be transmitted via a relay output.
Using two Relay Extension Modules, the number of relays may be increased to 20 (16 of them being volt-free contacts).

FEATURES

- Automatic breaker control
- Automatic motorized switch control
- Remote start relay output
- Electrical protections for the busbar
- Built in alarms and warnings
- 3 phase mains voltage inputs
- 3 phase genset voltage inputs
- 3 phase busbar CT inputs
- Load active power measurement
- Load power factor measurement
- Periodic maintenance request indicator
- Daily / weekly / monthly exerciser
- Engine hours counter
- Event logging
- Statistical counters
- Real time clock with battery back-up
- Weekly operation schedule
- On site adjustable parameters
- RS-232 serial port
- Free MS-Windows Remote monitoring Software
- Output extension capability
- Simulated Mains operation available
- Survives cranking dropouts
- Plug-in connection system for easy replacement

MEASUREMENTS

- Generator Volts: U-N, V-N, W-N
- Generator Volts: U-V, V-W, W-U
- Load Amps: U, V, W
- Generator total KW
- Generator pf
- Generator Frequency
- Mains Volts: R-N, S-N, T-N
- Mains Volts: R-S, S-T, T-R
- Battery Voltage



TECHNICAL SPECIFICATIONS

Current, voltage & frequency

- Alternator voltage: 15-300 V-AC (Ph-N)
- Mains voltage: 0 to 300 V-AC (Ph-N)
- Alternator / Mains frequency: 0-100 Hz.
- Current inputs: from CTs, .../5A. Max load 0.7VA per phase.
- Digital inputs: input voltage 0 - 30 V-DC.
- DC Supply range: 9.0 V-DC to 30.0 V-DC
- Cranking dropouts: survives 0 V for 100ms
- Max. current consumption: 300 mA-DC (Outputs open)
- Generator/mains contactor outputs: 16 A / 250 V.
- DC relay outputs: 10A / 28 V.

Component details

- Comm. port: RS-232. 2400 bauds, no parity, 1 stop bit.

Environment

- Operating temp. range: -20°C to +70°C (-4 ºF to +158 ºF)
- Storage temp. range: -40°C to +80°C (-40 ºF to +176 ºF)
- Maximum humidity: 95%, non-condensing
- Protection: IP65 for the front panel, IP30 for the rear
- Case material: High temperature ABS (UL94-V0, 110 °C)

Dimensions & weight

- Dimensions: 165 x 125 x 48mm (WxHxD)
- Mounting cut-out dimensions: 151 x 111mm minimum.
- Weight: 300 g (approx.)

Homologation

- EMC
- Low Voltage
- UL Compatibility
- CSA Compatibility

PART NUMBER

A60W2

ASSOCIATED PRODUCTS

Reduced: MNS
Complementary: MDM-SCR