Eaton Automatic Transfer Switch, type ATS-PWR

The Eaton Automatic Transfer Switch (ATS-PWR) monitors the incoming AC mains supply (1 or 3 phases) for under voltage, over voltage, under frequency, over frequency and voltage unbalance. In the case of any mains supply disproportion it will send a remote start command to the generating set and make change over for both generator and mains contactors.

Configuration types

Standard version

ATS-PWR with RS232 extension board

Optional Communication interfaces

RS232 + RS485	Dual Port Extension Board
AOUT8	Analogue Output module
USB	Service USB module
IB-Lite	Internet / Ethernet module including Web Server

Benefits

- Transfer between mains and generator power
- Open delayed transition
- Open in phase transition (passive synchronization)
- Closed transition (short time parallel, passive synchronization)
- On-site controller configuration
- Less wiring and components
- Less engineering and programming
- Remote monitoring reduced call-out costs of service engineers
- Active SMS / E-mails
- Perfect price / performance ratio
- History log - easy troubleshooting and warranty claim handling

Open / delayed transition
Auto / manual transfer

- Stand-by gen-set. ATS continuously monitors mains supply for under voltage, over voltage, under frequency, over frequency and voltage unbalance. In the case of mains failure it sends a remote start command to the standby gen-set.
- ATS waits for "Ready To Load" signal or standby gen-set voltage - configurable - and switches load to the standby generator.
- After the mains returns the ATS switches load back to mains and sends remote stop command to the standby gen-set.
- Different delay intervals can be set for individual changeover phases.
- The changeover can take place also on explicit demand, not only after mains failure.
- ATS function works with backup battery or in reduced mode without backup battery.

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Features

3 phase ATS function

- Over/Under frequency
- Over/Under voltage
- Voltage asymmetry

3 phase generator protections

- Over / Under frequency
- Over / Under voltage
- Current / Voltage asymmetry
- Overcurrent / Overload

True RMS Voltage measurement

- 3 phase generator and mains voltages
- Voltage range 277 V p-n, 480 V p-p
- Maximal measured voltage 300 V p-n
- PT ratio range 0.1-500

True RMS current measurements

- 3 generator phase currents
- Current range 5 A
- Maximal measured current 10 A
- CT ratio range 1-5000
- CT location: generator, load

Power measurements

- Active / Reactive Power and Power Factor per phase
- Active and Reactive Energy counter
- Apparent power
- Active and Reactive Generator Energy counter
- Active and Reactive Mains Energy counter

Event and performance log + RTC

- Event based history with 119 events
- Reason, Data and Time + all important values are stored
- Battery backed-up RTC
- Test Run scheduler

User interface

- Graphic 128 × 64 pixels display
- 2 languages, user changeable from PC. Default English + Chinese.
- Setpoints adjustable via keyboard or PC
- Buttons with mechanical feedback

Inputs and outputs

- 7 Binary inputs
- 7 Binary outputs

Active SMS/E-mails

- 2 channels
- SMS or E-mails

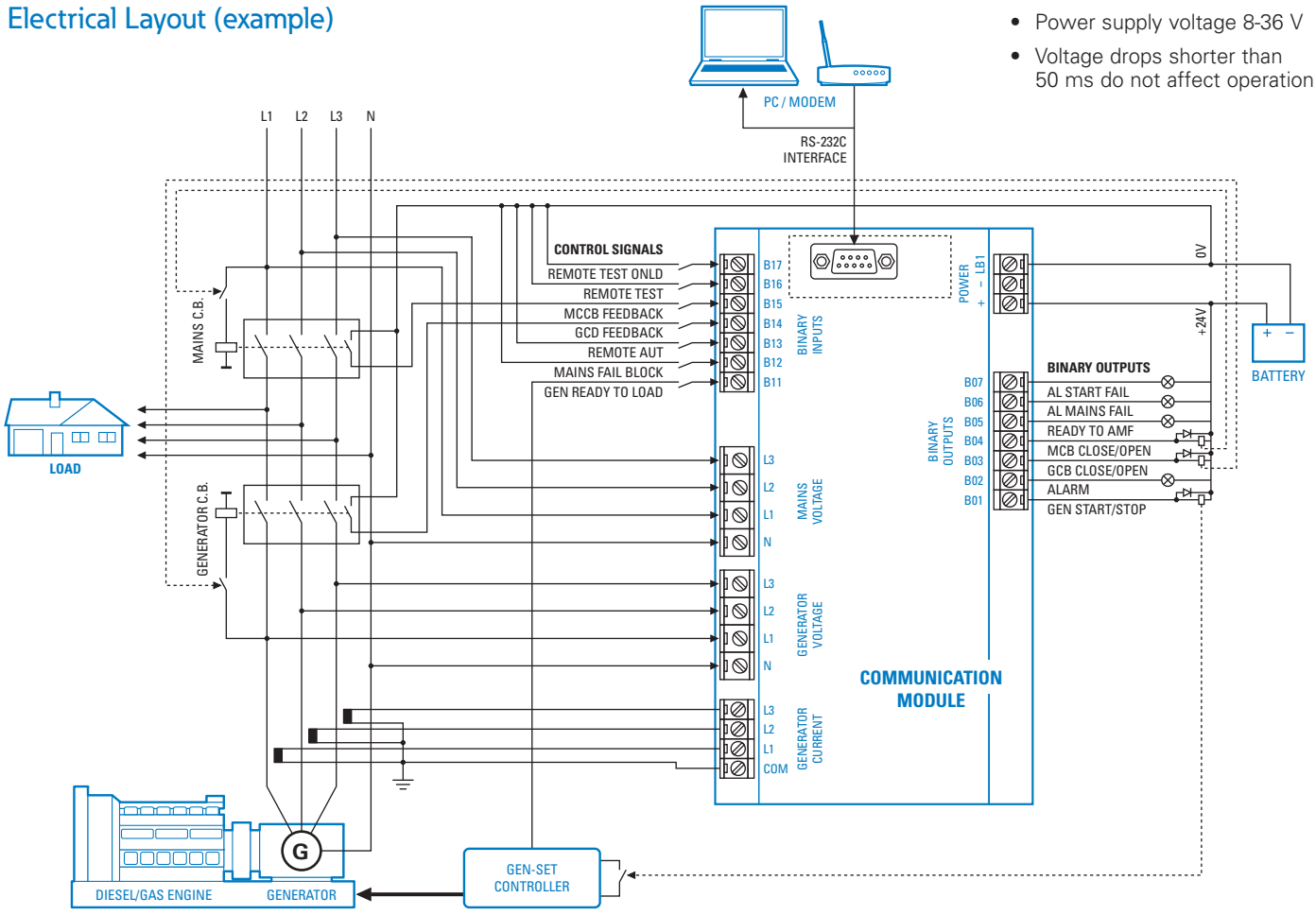
Optional communication interfaces

- RS232 + RS485 (including Modem support) or USB plug-in interface
- Modbus RTU (requires RS485 interface)
- Internet/Ethernet via IB-Lite
- embedded web server via IB-Lite

Mechanical and operation parameters

- Unit dimension 120 × 180 mm
- Sealed front face rated for IP65
- Hard plexiglass LCD cover
- Operation temperature
- -20 °C to +70 °C standard version
- Power supply voltage 8-36 V
- Voltage drops shorter than 50 ms do not affect operation

Electrical Layout (example)



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Form No. BR08703001UD_v2
December 2012