InteliMains^{NT}

MAINS SUPERVISION CONTROLLER



Description

InteliMains^{NT} is designed for multiple (up to 31) gen-sets operating in parallel to mains. The InteliMains^{NT} controller connects the group of gen-sets to the mains. It can serve as a bus-tie synchronizing controller between two groups of gen-sets.

InteliMains^{NT} provides 3 applications for different site topology: with MCB (Mains Circuit Breaker), with MCB and MGCB (Master Generator Circuit Breaker) or with BTB (Bus-tie Breaker). According to the type of application, it controls MCB, MGCB or BTB and it allows reverse synchronizing of the gen-set group operating in multi-island mode to the mains (MCB application), to another group of gen-sets (BTB application) or forward synchronizing of the gen-sets (MGCB application). The controller measures mains power, power factor, reactive and apparent power and 3-phase system import/export.

InteliMains^{NT} controller is equipped with a powerful graphic display featuring icons, symbols and bar graphs for intuitive operation, which together with high functionality set new standards in gen-set control.

Benefits

- Easy solution even for complex systems with groups of gen-sets – less wiring and components
- Can be used as bus-tie synchronizer
- Graphical site schematic for easy site overview – aggregates in one place all important system parameters
- Many types of communication – easy supervision and servicing
- Perfect price/performance ratio

AMPS

ComAp is a member of AMPS (The Association of Manufacturers of Power generating Systems).

ISO 9001 CERTIFIED Quality Management Control System

ComAp products meet the highest standards, with every stage of production undertaken in accordance with the ISO certification obtained in 1998.

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Selected ComAp products have the UL Certification.

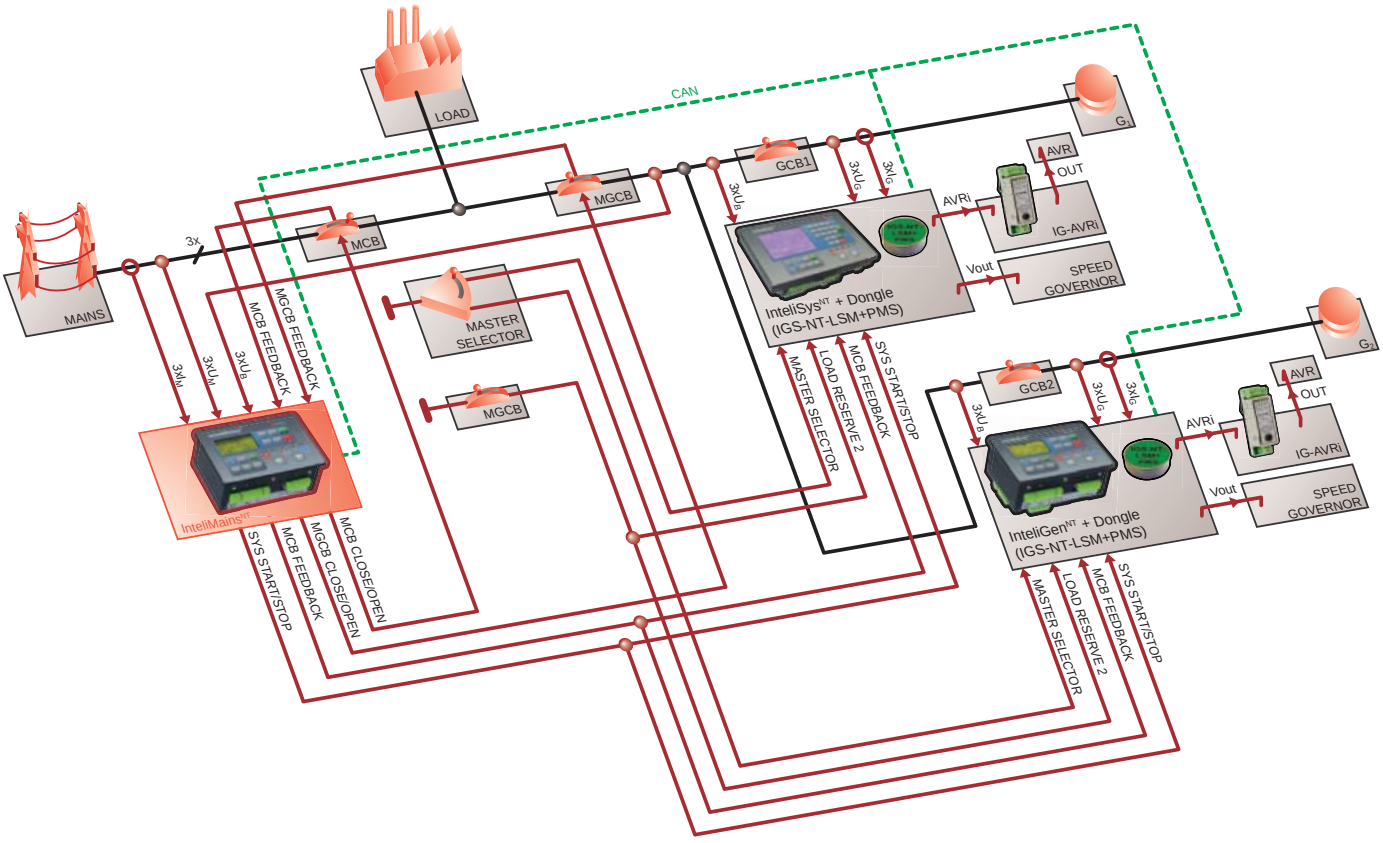
Features

- Integrated PLC programmable functions (same size as InteliSys^{NT})
- Selectable measurement ranges for AC voltages and currents 120/277 V, 0–1/0–5 A = High voltage applications support
- Inputs and outputs configurable for various customer needs
- Controller redundancy
- RS232/RS485 interface with Modbus support; Analog/GSM/ISDN/CDMA modem support; SMS messages
- The RS232/RS485 interface can serve as a bridge to all other controllers at the site (via CAN bus)
- Event-based history (up to 500 records) with customer-selectable list of stored values; RTC; statistic values
- Interface to remote display unit IG-Display LT GC
- Dimensions 180×120 mm (front panel)
- Sealed to IP 65

Integrated fixed and configurable protections

- 3 phase integrated mains protections (U + f), voltage unbalance
- Mains IDMT overcurrent + Shortcurrent protection, current unbalance, Mains Import/Export
- Vector shift protection
- All binary inputs free configurable for various protection types: Warning / Write history / Write history + Active call / Alarm Only / Alarm + History indication / Shutdown / Mains protect / Mains protect with fault reset / Sensor fail
- Phase rotation and phase sequence supervision
- Application security

Schematic diagram



Communication modules and PC tools

- **I-CR** – CAN repeater module
- **InternetBridge-NT** – Internet bridge module with wireless connection
- **I-LB+** – Local bridge
- **InteliMonitor** – PC monitoring tool
- **WebSupervisor** – Web based system for monitoring and controlling of ComAp controllers
- **WinScope** – Special graphical controllers' monitoring software
- **GenConfig** – PC configuration tool

Extension modules and remote displays

- **I-AOUT8** – Analog output extension module
- **IGL-RA15** – Remote annunciator
- **IGS-PTM** – Analog/binary input/output module
- **IS-AIN8** – Analog input module
- **IS-BIN16/8** – Binary input/output module
- **IG-Display LT GC** – Additional remote display
- **InteliVision 5** – Controller 5.7" colour display unit
- **InteliVision 8** – Controller 8" colour display unit
- **InteliVision 17Touch** – Site 17" colour display unit

Order codes

Controller	Order code
InteliMains^{NT}	IM-NT GC
InteliMains^{NT} BTB	IM-NT-BTB GC
InteliMains^{NT} MCB	IM-NT-MCB GC

ANSI CODES

ANSI code	Protection
59	Overvoltage
27	Undervoltage
47	Voltage asymmetry
81H	Overfrequency

ANSI code	Protection
81L	Underfrequency
81R	ROCOF
78	Vectorshift
50+51	Overcurrent

ANSI code	Protection
46	Current unbalance
32	Overload
51N+64	Earth
32R	Reverse power

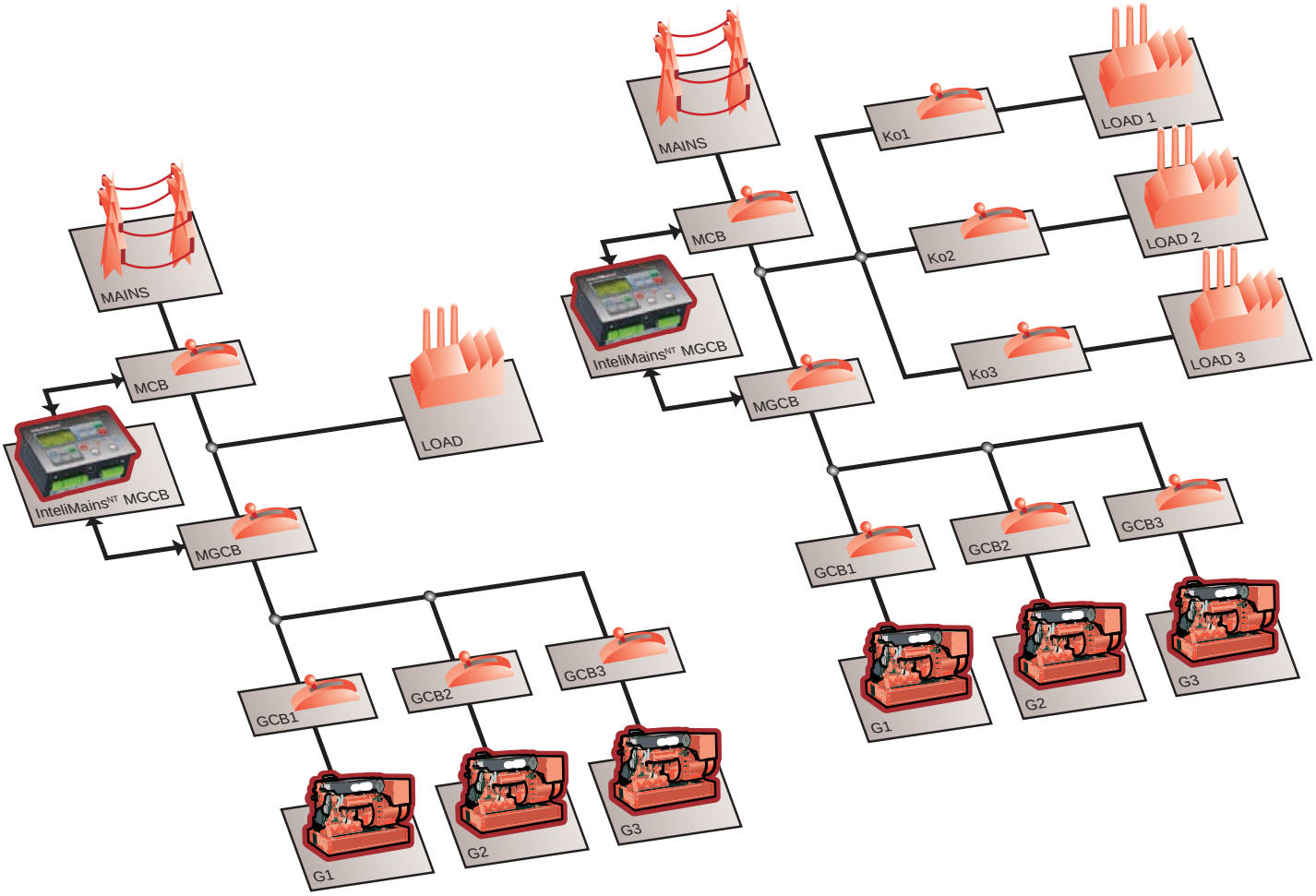
ANSI code	Protection
25	Synchronism check
47	Phase rotation
37	Undercurrent*
55	Power factor*

* can be created using universal protections



Features MCB+MGCB controller mode

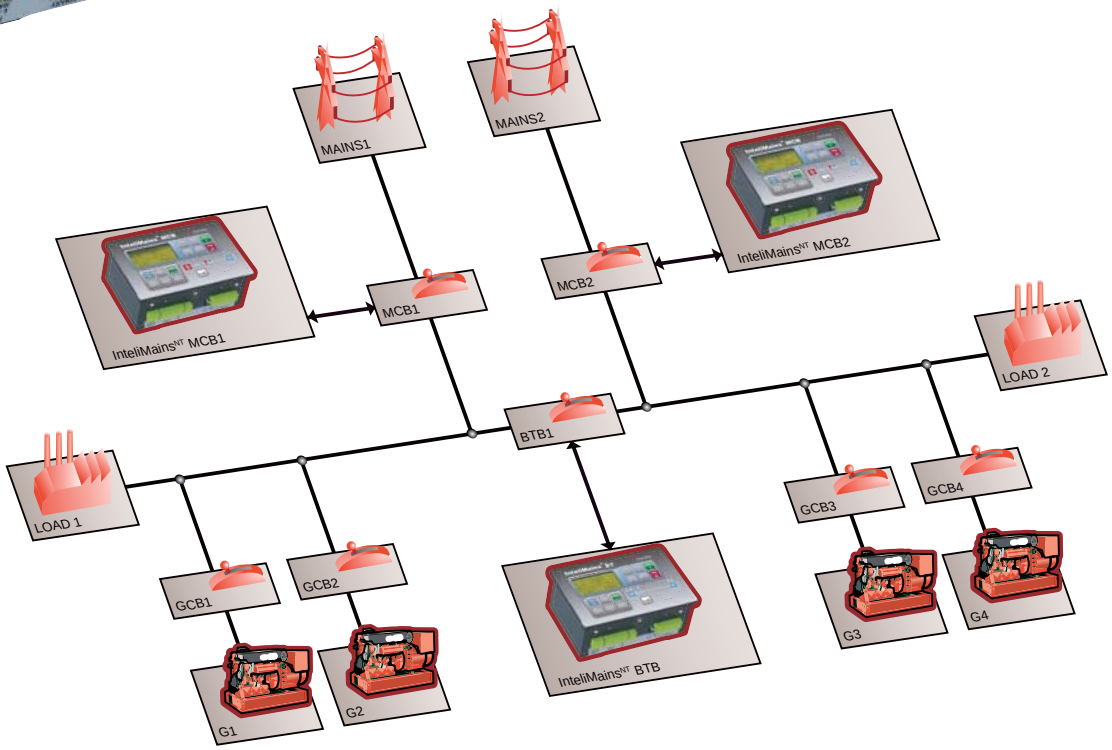
- AMF function based on mains failure, outputs a signal to start the gen-set group
- Many SPtM-equivalent mains parallel modes (SysBaseload, Analog Extern SysBaseload, Import/Export, Analog Extern Import/Export, Temp By Power)
- Peak shaving
- Test mode (Test on load for the complete gen-set group)
- Two application layouts – MCB only or MCB+MGCB control (see schematics)
- Mains measurement: U, I, Hz, kW, kVAr, kVA, PF, kWh exp., kWh imp., kVAhr exp., kVAhr imp.
- Bus measurement: U, Hz
- Sum gen-sets kWh and kVAhr
- Selectable partial or full MCB and/or MGCB control
- Load Shedding – 3 steps; selectable based on gen-sets power or mains import
- High voltage application support – AC voltage measurement range selectable 277/120V





Features Bus-Tie controller mode

- Bus Left measurement: U, I, Hz, kW, kVAr, kVA, PF, kWh exp., kWh imp., kVAhr exp., kVAhr imp.
- Bus Right measurement: U, Hz
- Manual or automatic (intelligent) selection of the gen-set group (side) to be influenced during synchronizing
- Selectable partial or full BTB control



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