

IntelliLite^{NT}

SINGLE SET GEN-SET CONTROLLER



Description

The IntelliLite^{NT} range offers a wide choice of integrated control solutions for gen-sets operating in single standby mode.

Based on the field proven IntelliLite architecture, this family of controllers fulfills every requirement from simple to complex and AMF to MRS applications – with specific models providing remote communication and internet control, user configuration and complete gen-set monitoring and protection.

All IntelliLite^{NT} controllers are easy to use with a simple intuitive user interface and graphic display. Units are designed for quick and cost saving commissioning and bring seamless integration with the latest breed of EFI diesel engines from all major manufacturers. This offers a higher level of functionality with users able to display a comprehensive range of values from the EFI engine on standard analog gauges and true RMS measurement of electric values.

Benefits

- ▷ Less wiring and components
- ▷ Less engineering and programming
- ▷ Cost saving commissioning
- ▷ Remote monitoring reduced call-out costs of service engineers
- ▷ Internet connection support
- ▷ Hybrid binary inputs and outputs module – simple way of extension the unit performance
- ▷ SMS and E-mail on alarm/event
- ▷ Direct communication with EFI engines
- ▷ Perfect price/performance ratio



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



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

Features

▶ 3 phase AMF function *(only AMF models)*

- Over/Under frequency
- Over/Under voltage

▶ 3 phase generator protections

- Over/Under frequency
- Over/Under voltage
- Over current

▶ True RMS Voltage measurement

- 3 phase generator voltages:
 - Phase to neutral L1 – N, L2 – N, L3 – N
 - Phase to phase L1 – L2, L2 – L3, L3 – L1
- 3 phase mains voltages *(only AMF models)*
- Voltage range 277 V p-n, 480 V p-p
- Maximal measured voltage 300 V p-n

▶ True RMS current measurements

- 3 generator phase currents
- Current range 5 A
- Maximal measured current 10 A

▶ Power measurements

- Apparent power per phase
- Total apparent power

▶ Event and performance log

- Gen-set text event log
- Engine hours history log
- ECU text event log *(only MRS 4 and AMF 9 models)*
- Test Run scheduler *(only AMF models)*

▶ 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

- 2 configurable analog inputs
- 4 binary inputs
- 4 to 6 binary outputs
- D+ preexcitation terminal
- Optional 8 hybrid binary inputs/outputs
- Optional 8 analog gauge drive outputs, compatible with VDO, Datcon gauges

▶ EFI engine support

- Cummins Modbus
- Engine specific J1939 for all major manufacturers (see table below)
- Diagnostic messages in plain text

▶ Engine protections

- Oil pressure protection
- Coolant temperature
- Fuel level

▶ Active calls

- 1 channel
- SMS or E-mails

▶ Miscellaneous features

- MRS switch – AMF running in manual and remote start application *(only for AMF models)*

▶ Communication interfaces

- Optional RS232, RS485 (including Modem support) or USB plug-in interface
- Optional Internet/Ethernet via IB-Lite
- Optional embedded web server via IB-Lite
- Optional GSM modem via IL-NT GPRS

▶ 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
 - -40°C to +70°C low temperature version
- Power supply voltage 8–36 V
- Voltage drops shorter than 50 ms do not affect operation

ANSI code	Protection
59	Overvoltage
27	Undervoltage
81H	Overfrequency
81L	Underfrequency
50+51	Overcurrent*
47	Phase rotation**
71	Gas (Fuel) level

* For MRS 3, 4 and AMF 8, 9 models Shortcurrent only

** Fixed setting

IntelLite^{NT} MRS 4 & AMF 9 supports J1939 for all major brands:

- | | | |
|------------------|--------------|--------------------------|
| • Caterpillar | • Iveco | • Sisu |
| • Cummins | • John Deere | • VM Motori |
| • Detroit Diesel | • MAN | • Volvo Penta and others |
| • Deutz | • MTU | |
| • GM | • Perkins | |
| • Isuzu | • Scania | |



Key:

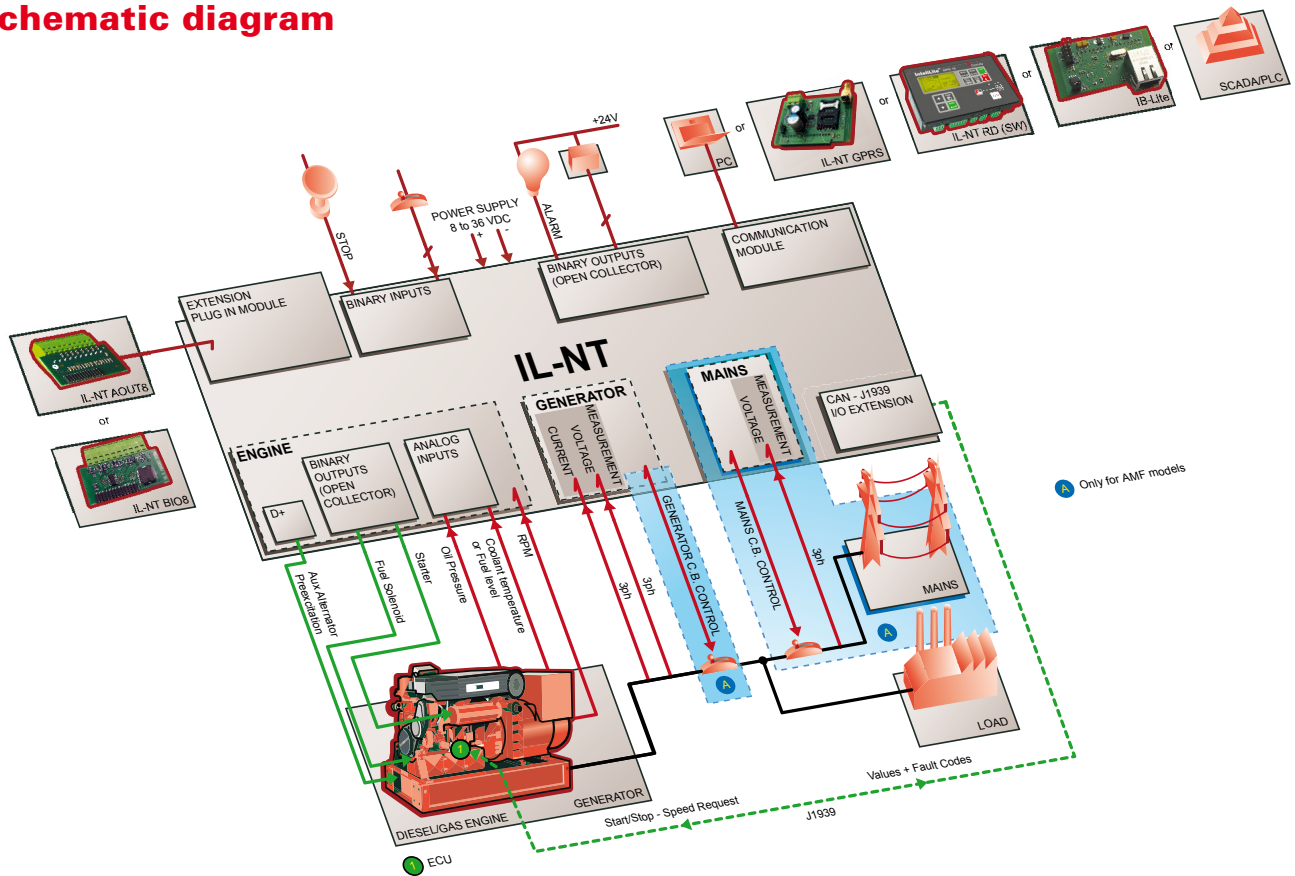
MRS – manual and remote start controller

AMF – automatic mains failure start controller

Accessories and PC tools

- ▶ **IL-NT AOUT8** – Analog Outputs for PWM Gauges Module
- ▶ **IL-NT BIO8** – Binary Input/Output (PWM) Module
- ▶ **IL-NT RD (SW)** – Remote Display Software for IntelLite^{NT} Controllers
- ▶ **IB-Lite** – Internet/Ethernet Plug-in Module including Web Server
- ▶ **IL-NT GPRS** – GSM Modem/Wireless Internet Module
- ▶ **IL-NT RS232** – RS232 Extension Board
- ▶ **IL-NT RS232-485** – Dual Port Extension Board
- ▶ **IL-NT S-USB** – Service USB Module
- ▶ **IntelIMonitor** – PC Monitoring Tool
- ▶ **WinScope** – Special Graphical Controllers' Monitoring Software
- ▶ **LiteEdit** – PC Configuration and Monitoring Tool

Schematic diagram



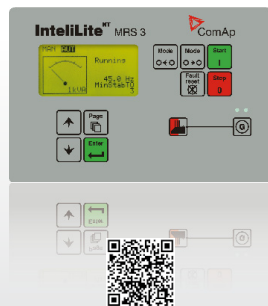
④ Only for AMF models

Available models

MRS 3

MANUAL AND REMOTE START CONTROLLER

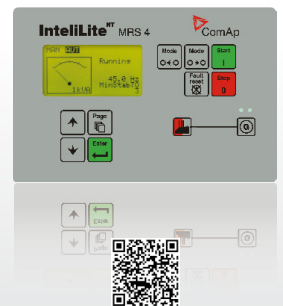
- ▷ 2 configurable analog inputs
- ▷ D+ preexcitation terminal
- ▷ 4 binary inputs
- ▷ 4 binary outputs



MRS 4

MANUAL AND REMOTE START CONTROLLER WITH SUPPORT FOR EFI ENGINES

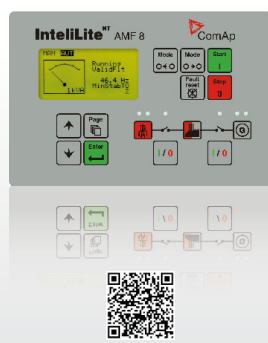
- ▷ 2 configurable analog inputs
- ▷ D+ preexcitation terminal
- ▷ 4 binary inputs
- ▷ 4 binary outputs
- ▷ CAN with J1939 support



AMF 8

AUTOMATIC MAINS FAILURE START CONTROLLER

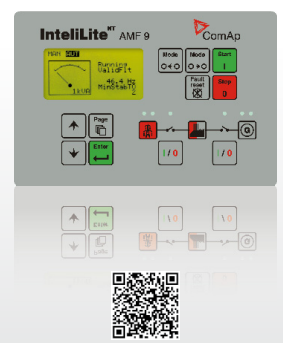
- ▷ 2 configurable analog inputs
- ▷ D+ preexcitation terminal
- ▷ 4 binary inputs
- ▷ 6 binary outputs
- ▷ GCB and MCB control
- ▷ Test run schedule



AMF 9

AUTOMATIC MAINS FAILURE START CONTROLLER WITH SUPPORT FOR EFI ENGINE

- ▷ 2 configurable analog inputs
- ▷ D+ preexcitation terminal
- ▷ 4 binary inputs
- ▷ 6 binary outputs
- ▷ GCB and MCB control
- ▷ CAN with J1939 support
- ▷ Test run schedule



Order codes

Controller	Order code
IntelliLite ^{NT} MRS 3	IL-NT MRS 3
IntelliLite ^{NT} MRS 4	IL-NT MRS 4

Controller	Order code
IntelliLite ^{NT} AMF 8	IL-NT AMF 8
IntelliLite ^{NT} AMF 9	IL-NT AMF 9

The Chart of Functions of selected IntelliLite^{NT} Controllers

FUNCTIONS/CONTROLLERS	IntelliLite ^{NT} MRS 3	IntelliLite ^{NT} MRS 4	IntelliLite ^{NT} AMF 8	IntelliLite ^{NT} AMF 9
Model	MRS 3	MRS 4	AMF 8	AMF 9
Binary inputs/outputs	4 / 4	4 / 4	4 / 6	4 / 6
Analog inputs	2	2	2	2
AMF function	-	-	●	●
MRS switch	-	-	●	●
Input configuration	●	●	●	●
Output configuration	●	●	●	●
Voltage measurement Gen. / Mains	3 ph / -	3 ph / -	3 ph / 3 ph	3 ph / 3 ph
Current measurement	3 ph	3 ph	3 ph	3 ph
kW/kWh/kVA measurement	- / - / ●	- / - / ●	- / - / ●	- / - / ●
Generator protections	●	●	●	●
GCB/MCB control with feedback	- ¹⁾ / -	- ¹⁾ / -	● ²⁾ / ● ²⁾	● ²⁾ / ● ²⁾
D+ battery charging alternator circuit	●	●	●	●
Engine hours	●	●	●	●
Engine hours history log	●	●	●	●
CAN-J1939 interface	-	●	-	●
Internet support	with IB-Lite	with IB-Lite	with IB-Lite	with IB-Lite
8 binary input/output (PWM) module	0	0	0	0
8 analog gauge drivers	0	0	0	0
Remote communication interface ³⁾	0	0	0	0
Remote display	0	0	0	0
Cummins Modbus	-	0	-	0

- Key:**
- included
 - excluded
 - 0 optional – plug-in module required
 - 1) Automatic GCB control without feedback
 - 2) Manual/Automatic GCB and MCB control, but without feedback
 - 3) RS232, RS485, USB, ETHERNET

- GCB: Generator circuit breaker
- MCB: Mains circuit breaker
- MRS: Manual and remote start controller
- AMF: Automatic mains failure start controller

For more information about our products and applications visit

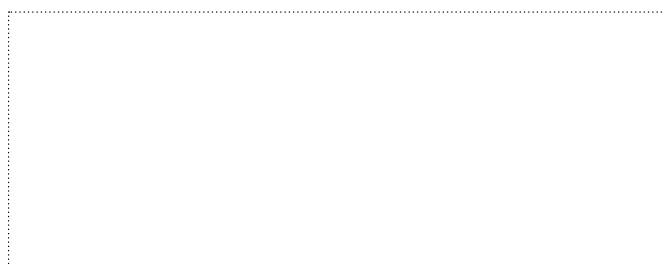
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