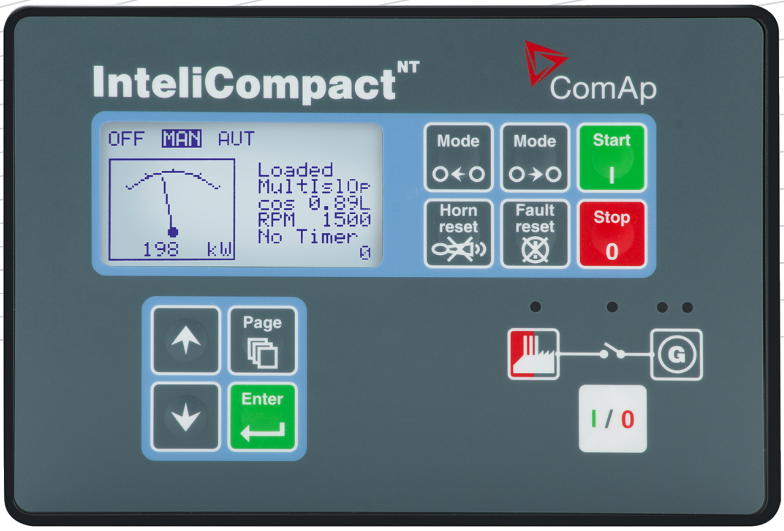
InteliCompact^{NT} MINT


InteliCompact NT
ComAp
OFF MAN AUT
Loaded
MultIslOp
cos 0.89L
RPM 1500
No Timer 0
198 kW
Mode
Mode
Start
Horn reset
Fault reset
Stop
Page
Enter
I / 0

Order code: IC-NT MINT

Datasheet

Genset Controller for Gensets in Multiple Parallel Applications

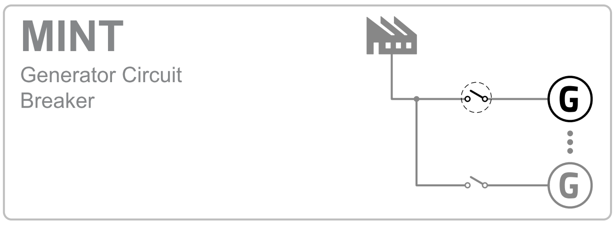
Product description

- Compact gen-set controller for gensets operating in multiple island and/or parallel to mains mode (together with MainsCompact NT)
- Cooperation of up to 32 gen-sets
- Simple paralleling (easy wiring, installation and configuration

Key features

- Generator measurements: V, A, kW, kVAr (3 phase, true RMS), Hz, including energy counters
- Bus measurements: V (3 phase, true RMS), Hz
- Generator and Engine protections (incl. Vector Shift)
- Automatic synchronizing and load control (via speed governor or ECU)
- AVR control (Volt and PF control)
- Digital active and reactive load sharing
- Advanced power management function
  - Load Dependent Start/Stop
  - Load Demand Swap
  - Running Hours Equalization
- Wide range of communication interfaces – RS232, RS485, USB, Modbus, GSM/Analog modem, GPRS, Ethernet
- Support of electronic controlled engines (J1939, Modbus)
- Event based history with capacity for nearby 200 records.

Application overview


MINT
Generator Circuit Breaker
G
G

Technical data

Power supply

Power supply range	8-36 V DC
Power supply drop-out immunity	50 ms (from min. 10 V)
Power consumption	approx. 200 mA / 8 V; 50 mA / 36 V
Peak power consumption (LT)	approx. 0,56 A / 8 V; 1,8 A / 36 V
Backup battery type	CR 1225
Estimated backup battery lifetime	10 years
Max. Power Dissipation	4,5W

Operating conditions

Operating temperature	-20-70 °C
Operating temperature (LT version)	-40-70 °C
Operating humidity	95% non-condensing (IEC/EN 60068-2-30)
Protection degree (front panel)	IP65
Vibration	5-25 Hz, +/- 1,6 mm; 25-100 Hz, a = 4 g
Shocks	a_{max} 200 m/s^2
Storage temperature	-30-80 °C

Voltage measurement

Measurement inputs	3 ph generator voltage 3 ph bus voltage
Measurement type	True RMS
Voltage range	480 V Ph-Ph (277 V Ph-N)
Max. measured voltage	340 V Ph-N
Voltage accuracy	1 % from the range
Frequency range	30-70 Hz, measured from L3
Frequency accuracy	0,05 Hz

Current measurement

Measurement inputs	3ph generator current
Measurement type	True RMS
Current range	5 A
Max. measured current	9 A
Max. allowed current	12 A continuous, 50 A/1 s
Current accuracy	2 % from the range

Binary inputs

Number	9 non-isolated
Input resistance	4,2 kΩ
Common pole	Positive, V_s = 8-36 V DC
Close/Open indication	0-2 V close contact 4 V - V_s open contact

Binary outputs

Number	8 non-isolated
Operating voltage	8-36 V DC
Switching to	negative supply terminal
Max current	0,5 A (2 A per group)

Analog inputs

Number	3 non-isolated
Electrical range	0-2500 Ω
Resolution	10 bits, 4 digits
Precision	1 % from the range
Supported sensor types	Predefined: VDO 10Bar, VDO Temperature, VDO Fuel level User-defined: 10 points non-linear sensors can be defined by the user

Communication

CAN1	External modules 250 kbps, max 200 m Isolated
CAN2	Intercontroller and comm extensions 250/50 kbps, max 200/800 m Isolated

Magnetic pick-up

Voltage input range	2–70 V_{pp}
Frequency input range	4 Hz–10 kHz (min 2 V_{pp} @ 4 kHz, 6 V_{pp} @ 10 kHz)
Frequency measurement tolerance	0.2 %

D+

Excitation current	200 mA, during the engine start only
Charging fail threshold	80 % of U_{supply}

Voltage regulator output

Type	5 V TTL PWM / ± 10 VDC with IG-AVRi interface

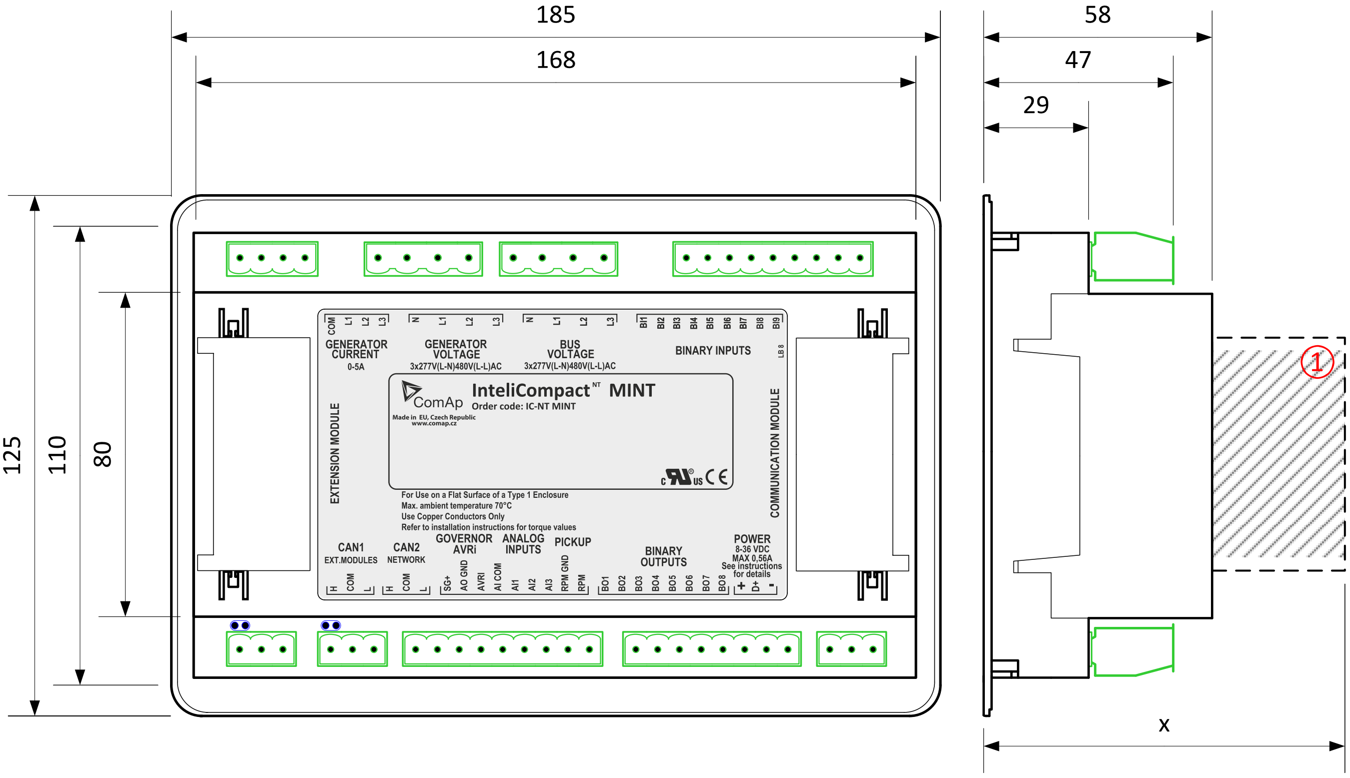
Speed governor output

Output type	0-10 V analog or 5 V @ 500 Hz PWM, selectable by jumper. Serial resistor 10 kΩ shortable by jumper
Galvanic isolation	Not isolated

Display

Type	Built-in monochromatic
Resolution	128x64

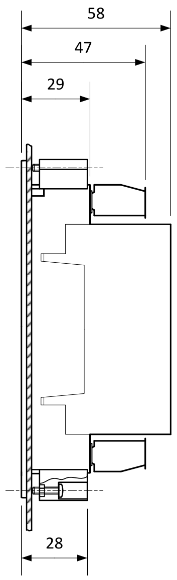
Dimensions, terminals and mounting


185
168
58
47
29
125
110
80
x
①
GENERATOR CURRENT 0-5A
GENERATOR VOLTAGE 3x277V(L-N)480V(L-L)AC
BUS VOLTAGE 3x277V(L-N)480V(L-L)AC
BINARY INPUTS
InteliCompact NT MINT
ComAp
Order code: IC-NT MINT
EXTENSION MODULE
COMMUNICATION MODULE
For Use on a Flat Surface of a Type 1 Enclosure
Max. ambient temperature 70°C
Use Copper Conductors Only
Refer to installation instructions for torque values
CAN1 EXT.MODULES
CAN2 NETWORK
GOVERNOR AVRi
ANALOG INPUTS
PICKUP
BINARY OUTPUTS
POWER 8-36 VDC MAX 0,56A See instructions for details

① Plug in module

***Note:** Dimension x depends on plug-in module*

Panel door mounting



Overview of parameter x

Plug-in module	Parameter x [mm]
IL-NT-AOUT8	75
IL-NT-BIO8	74
IC-NT-CT-BIO7	76
IL-NT-RS232	113
IL-NT-RS232-485	115 @ RS232 / 74 @ RS485
IL-NT-GPRS	122
IL-NT-S-USB	128
IB-Lite	108

***Note:** Parameter x includes reserve for connectors of plug-in modules.*

***Note:** The controller is to be mounted onto the switchboard door. The requested cut-out size is 175x115 mm. Use the screw holders delivered with the controller to fix the controller into the door.*

Available extension modules

Product	Description	Order code
IL-NT-AOUT8	8 analog outputs packed in a unit	IL-NT-AOUT8
IL-NT-BIO8	8 binary inputs in a unit (HW switchable to 8 binary outputs)	IL-NT-BIO8
IC-NT-CT-BIO7	7 binary inputs (HW switchable to 7 binary outputs) and 1 AC current measuring input	IC-NT-CT-BIO7
IG-IOM	8 binary inputs, 8 binary outputs, 4 analog inputs and 1 analog output in a unit	IG-IOM
IGS-PTM	8 binary inputs, 8 binary outputs, 4 analog inputs and 1 analog output in a unit	IGS-PTM
IGL-RA15	15 binary LED output (3 colors) packed in a rugged metal unit	IGL-RA15
IL-NT-RS232	Communication module which provides additional RS232 interface for controller	IL-NT-RS232
IL-NT-RS232-485	Communication module which provides additional RS232 and RS485 interface for controller	IL-NT-232-485
IL-NT-GPRS	Communication module with integrated GSM modem with GPRS Internet connection	IL-NT-GPRS
I-LB+	Direct connection (PC) to all controllers on CAN2	I-LB+
InternetBridge-NT	Multiple Internet connections (PC and Modbus) to all controllers on CAN2 or RS485	IB-NT
IL-NT-S-USB	Communication module which provides additional USB interface for controller	IL-NT-S-USB
IB-Lite	Communication module which provides additional Ethernet interface for controller	IB-Lite

Related products

Product	Description	Order code
MainsCompact-NT	Mains Controller for InteliCompact NT MINT Gen-set Controllers	MC-NT
IG-AVRi	Interface between controller and generator AVR	IG-AVRi
IG-AVRi-TRANS/LV	Power supply transformer for IG-AVRi module	IG-AVRI-TRANS/LV
IC-NT RD (SW)	Remote Display Software for InteliCompact NT	IC-NT RD

Functions and protections

The described product fully supports the following functions and protections as defined by ANSI (American National Standards Institute):

Description	ANSI code	Description	ANSI code
Engine overspeed	12	Generator under/overfrequency	81H,81L
Underspeed	14	Generator overcurrent	51
Synchronism Check	25	Generator short current	50
Generator overload	32	Generator current unbalance	46
Generator reverse power	32R	Phase sequence	47
Excitation Loss	40	Earth fault	50N+64
Generator under/overvoltage	59,27	Gas (fuel) level	71
Generator voltage unbalance	47	Vector shift	78

Certificates and standards

- EN 60068-2-30
- EN 61000-6-1
- EN 61000-6-2
- EN 61000-6-3
- EN 61000-6-4
- EN 61010-1

List of standards is available on: https://webstore.iec.ch/

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