

Order code: MC-NT

# Datasheet

## Mains Controller for IntelliCompact NT MINT Gen-set Controllers

### Product description

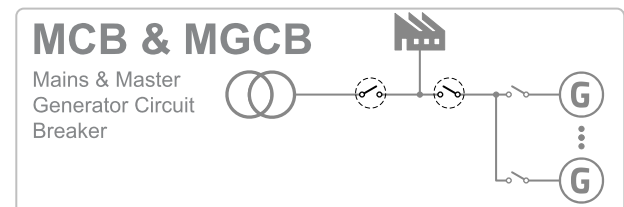
- ▶ Mains controller for multiple systems equipped with IntelliCompact NT MINT gen-set controllers
- ▶ Mains monitoring and protection
- ▶ Synchronizing of the gen-set group to the mains

- ▶ Event based history with capacity for nearby 200 records

### Key features

- ▶ Mains measurements: V, A, Hz, kW, kVA, PF, kWh, kVArh (3 phase, true RMS)
- ▶ Mains protections:
  - Undervoltage, overvoltage
  - Vector shift
  - Binary input for external mains decoupling relay
- ▶ Bus measurements: V (3 phase, true RMS), Hz
- ▶ Mains failure detection using integrated mains protections (voltage, frequency, phase shift)
- ▶ AMF Function, Mains import/export
- ▶ High tariff avoidance, Peak shaving, Peak lopping
- ▶ MCB control, MGCB control
- ▶ Soft loading / unloading
- ▶ Test of the Multi-AMF function (with or without load)
- ▶ Wide range of communication interfaces – RS232,
- ▶ RS485, USB, Modbus, GSM/Analog modem, GPRS, Ethernet

### Application overview



## 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	3,5W

### 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 <sup>2</sup>
Storage temperature	-30-80 °C

### Voltage measurement

Measurement inputs	3 ph bus voltage 3 ph mains 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 mains 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	7 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	6 non-isolated
Operating voltage	8-36 V DC
Switching to	negative supply terminal
Max current	0,5 A (2 A per group)

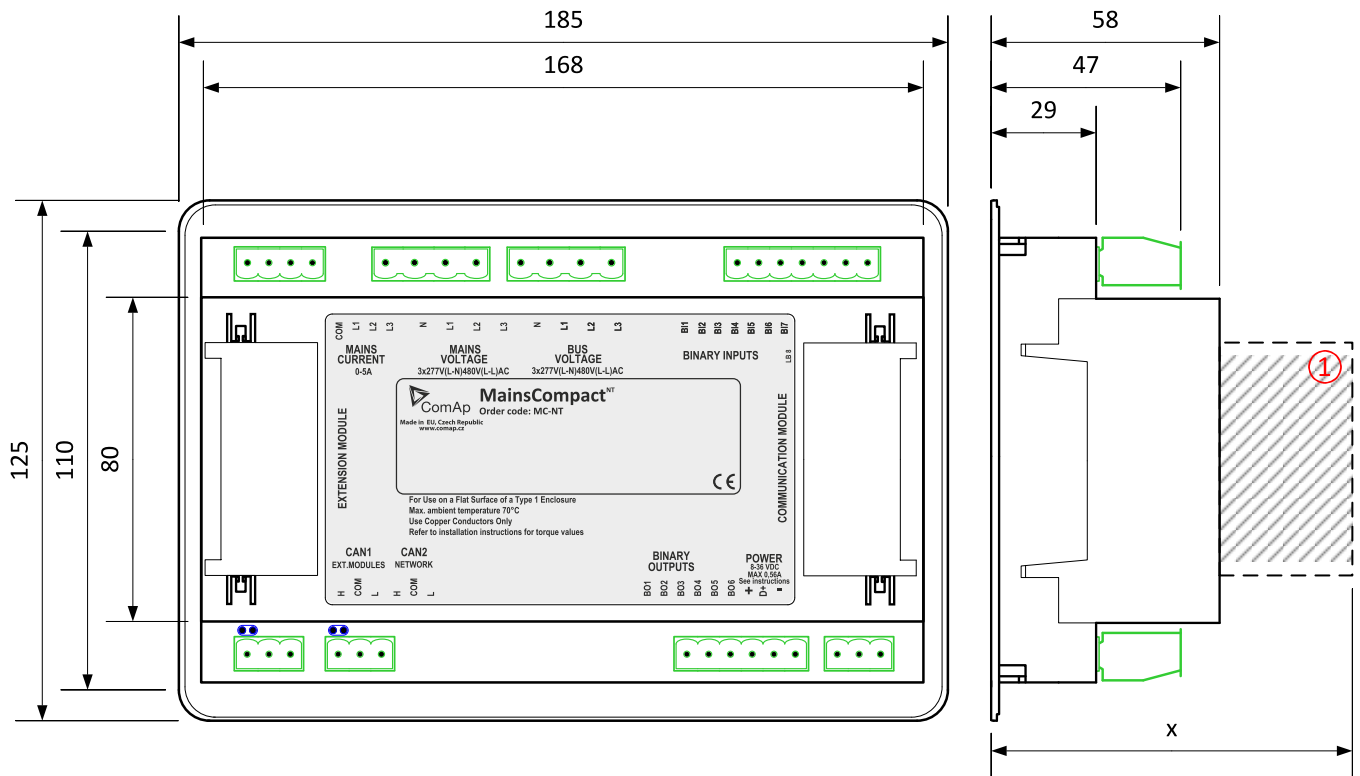
### Communication

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

### Display

Type	Built-in monochromatic
Resolution	128x64

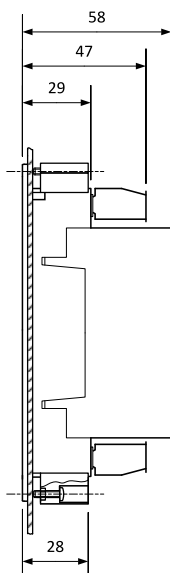
## Dimensions, terminals and mounting



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

## Related products

Product	Description	Order code
InteliCompact <sup>NT</sup> MINT	Gen-set Controller for MainsCompact <sup>NT</sup> controllers	<a href="#">IC-NT MINT</a>
IC-NT RD (SW)	Remote Display Software for InteliCompact NT	<a href="#">IC-NT RD</a>

## 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
Synchronism Check	25	Mains/bus under/overfrequency	81H,81L
Bus overload	32	Vector shift	78
Mains/bus under/overvoltage	59,27		

## Certificates and standards

<ul style="list-style-type: none"> <li>▶ EN 60068-2-30</li> <li>▶ EN 61000-6-1</li> <li>▶ EN 61000-6-2</li> <li>▶ EN 61000-6-3</li> <li>▶ EN 61000-6-4</li> <li>▶ EN 61010-1</li> </ul>	
List of standards is available on: <a href="https://webstore.iec.ch/">https://webstore.iec.ch/</a>	

