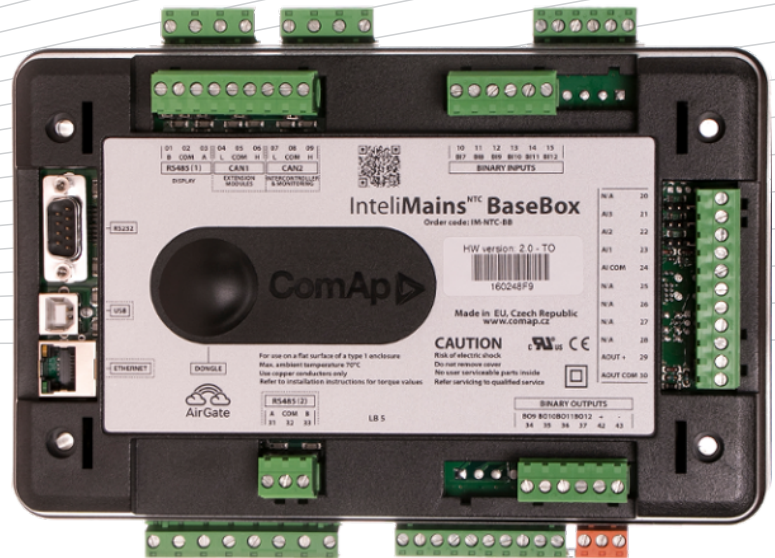


**InteliMains  
NTC BaseBox**



Order code: IM-NTC-BB

**Comprehensive switchgear controller**

**Datasheet**

**Product description**

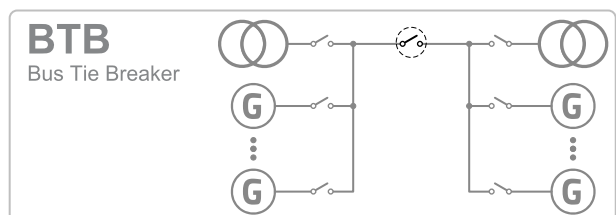
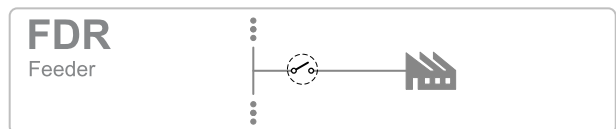
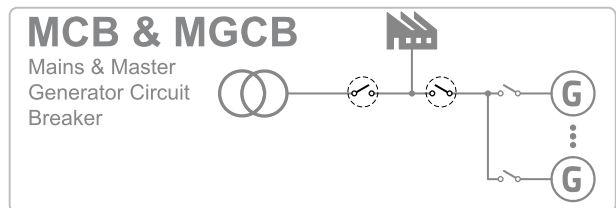
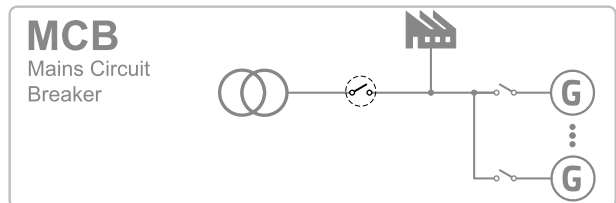
- ▶ Comprehensive switchgear controller
- ▶ Built-in control for up to 32 logic groups divided by Bus Tie Breakers
- ▶ High level control for complex systems

**Key features**

- ▶ Built-in breaker control
- ▶ Genset group synchronization, Loadsharring and VARsharring via CAN2
- ▶ Customizable load control in parallel to mains
- ▶ Extended communication capabilities
  - Built-in web server
  - Airgate support and more
- ▶ Highly configurable
  - Timers, internal PLC, Force value and more
- ▶ Compatible with ComAp's InteliVision displays
- ▶ Monitoring and configuration with ComAp's PC tools
- ▶ Extensive built-in protection functions
  - Undervoltage, overvoltage
  - Underfrequency, overfrequency and more
- ▶ Full Modbus slave support (RS232)
- ▶ Extendable with ComAp's extension modules

- ▶ True RMS (TRMS) is used with Voltage, Current and Power measurement

**Application overview**



## Technical data

### Power supply

<b>Power supply range</b>	8-36 V DC
<b>Power consumption</b>	0.4 A / 8 VDC 0.15 A / 24 VDC 0.1 A / 36 VDC
<b>RTC battery</b>	10 years (replacable by official service)
<b>Fusing</b>	2 A (without BOUT consumption)
<b>Max. Power Dissipation</b>	16 W

### Operating conditions

<b>Operating temperature</b>	-30 °C to +70 °C
<b>Storage temperature</b>	-40 °C to +80 °C
<b>Max. operating altitude</b>	2000 m above sea level 4000 m above sea level for max Ph-Ph voltage 400V AC
<b>Operating humidity</b>	95 % w/o condensation
<b>Vibration</b>	5-25 Hz, ± 1.6 mm 25-100 Hz, a = 4 g
<b>Shocks</b>	a=200m/s <sup>2</sup>
<b>Heat radiation</b>	16 W

### Voltage measurement

<b>Measurement inputs</b>	3 ph-n Mains voltage 3ph-n Bus voltage
<b>Measurement range</b>	110 V / 277 V
<b>Max allowed voltage</b>	125 % ph-n
<b>Accuracy</b>	1 % of 110 V / 277 V
<b>Frequency range</b>	40-70 Hz (at accuracy 0.1 Hz)
<b>Input impedance</b>	0.6 MΩ ph-ph, 0.3 MΩ ph-n

### Current measurement

<b>Measurement inputs</b>	3 ph-n Mains voltage 1ph Bus current
<b>Measurement range</b>	1 A / 5 A
<b>Max allowed current</b>	200 % / 200 %
<b>Accuracy</b>	2 % of 1 A / 5 A
<b>Input impedance</b>	< 0.1 Ω

### Binary inputs

<b>Number</b>	12, non-isolated
<b>Input resistance</b>	4.7 kΩ
<b>Close/Open indication</b>	0-2 V DC close contact >4 V DC open contact

### Binary outputs

<b>Number</b>	12, non-isolated
<b>Max current</b>	0.5 A (2 A per group)
<b>Switching to</b>	Negative/positive supply terminal

### Analog inputs

<b>Number</b>	3, non-isolated
<b>Type</b>	Switchable (Voltage, Resistance, Current)
<b>Resolution</b>	10 bits, max 4 decimals
<b>Range</b>	0-5 V DC / 0-2500 Ω / 0-20 mA
<b>Input impedance</b>	>100 kΩ / >100 kΩ / 180 Ω
<b>Accuracy</b>	±1 % of meas. value ±5 mV ±2 % of meas value ±2 Ω ±1 % of meas value ±0.5 mA

### Analog outputs

<b>Number</b>	1
<b>Type</b>	Switchable (Voltage, Current)
<b>Range</b>	0-10 V DC / 0-20 mA
<b>Max current/load</b>	5 mA / 500 Ω
<b>Accuracy</b>	±0.5 % of output value ±20 mV ±0.5 % of output value ±100 μA

### Communications

<b>RS232</b>	Direct / Modbus, non-isolated
<b>RS485</b>	Direct / Modbus, isolated
<b>Display port</b>	Non-isolated RS485, direct/modbus/terminal connection
<b>USB port</b>	Direct, Isolated
<b>Ethernet port</b>	LAN / Internet, Modbus TCP, SNMP, WebServer, Airgate
<b>CAN1</b>	External modules, 250kbps, max 200 m, Isolated
<b>CAN2</b>	Intercontroller and comm extensions 250 / 50 kbps, max 200 / 1000 m, Isolated



## Available extension modules

Product	Description	Order code
Intel IO8/8	8 Binary inputs and 8 Binary outputs packed in a small unit (HW switchable to IO16/0)	<a href="#">I-IO8/8</a>
Intel IO16/0	16 Binary inputs packed in a small unit (HW switchable to IO8/8)	<a href="#">I-IO8/8</a>
Intel AIN8	8 Analog inputs and 1 pulse/frequency input in a small unit	<a href="#">I-AIN8</a>
IntelAIN8TC	8 Thermocouple Analog inputs in a small unit	<a href="#">I-AIN8TC</a>
IS-AIN8	8 Analog inputs packed in a rugged metal unit	<a href="#">IS-AIN8</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>
I-AOUT8	8 Analog outputs packed in a rugged metal unit	<a href="#">I-AOUT8</a>
InternetBridge-NT	Multiple Internet connections (PC and Modbus) to all controllers on CAN2 or RS485	<a href="#">IB-NT</a>
I-LB+	Direct connection (PC) to all controllers on CAN2 or RS485	<a href="#">I-LB+</a>

**Note:** You can find all related manuals and materials for IntelIMains<sup>NTC</sup> BaseBox at <http://www.comap.cz/products/detail/intelimumains-ntc-basebox>

## Related products

Product	Description	Order code
IntelVision 5	Color 5.6" display for monitoring and control	<a href="#">INTELVISION 5</a>
IntelVision 5 RD	Color 5.6" display for monitoring and control (RS485 isolated and backlit buttons)	<a href="#">INTELVISION 5 RD</a>
IntelVision 8	Color 8" display for advanced monitoring, control & trending, USB capable	<a href="#">INTELVISION 8</a>
IntelVision17T	Color 17" display for complete monitoring and control of multiple controllers	<a href="#">INTELVISION 17T</a>


## Functions and protections

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

Examples are below. Other functions can be found in the IM-NT Reference guide.

Description	ANSI code	Description	ANSI code	Description	ANSI code
Synchronism check	25	Voltage asymmetry and phase sequence	47	Vector shift	78
Undervoltage	27	Temperature monitoring	49T	AC reclosing	79
Directional power relay	32	Overcurrent	50	Overfrequency	81H
Directional power	32P	Overcurrent (IDMT)	51	Underfrequency	81L
Undercurrent	37	Power factor	55	ROCOF	81R
Current unbalance	46	Overvoltage	59		

## Certificates and standards

<ul style="list-style-type: none"> <li>▶ EN 60068-2-6 ed.2:2008</li> <li>▶ EN 60068-2-27 ed.2:2010</li> <li>▶ EN 60068-2-30, May 2000</li> <li>▶ EN 60068-2-64</li> <li>▶ EN 61010-1:2003</li> <li>▶ IEC 60255-21-1</li> </ul>	<ul style="list-style-type: none"> <li>▶ IEC 60255-21-2</li> <li>▶ IEC 60255-11</li> <li>▶ IEC 60255-22-1</li> <li>▶ IEC 60255-22-2</li> <li>▶ IEC 60255-22-3</li> </ul>	<ul style="list-style-type: none"> <li>▶ IEC 60255-22-4</li> <li>▶ IEC 60255-22-5</li> <li>▶ IEC 60255-22-6</li> <li>▶ IEC 60255-25</li> <li>▶ IEC 60255-5</li> </ul>	
List of standards is available on: <a href="https://webstore.iec.ch/">https://webstore.iec.ch/</a>			

