

Order code: IM-NT-BB

## Mains Supervision Controller Base Unit for Use with Detachable Colour Display

# Datasheet

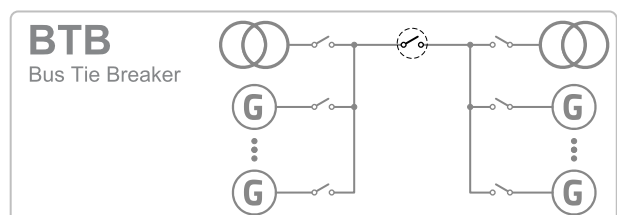
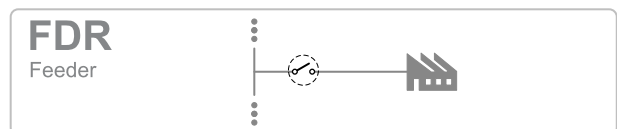
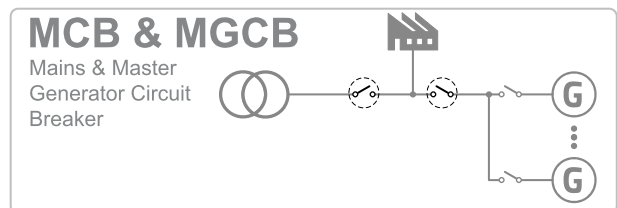
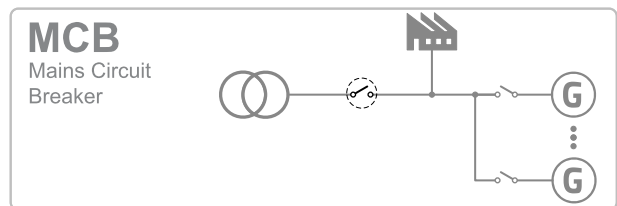
### Product description

- ▶ 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
- ▶ Highly configurable
  - Timers, internal PLC, Force value and more
- ▶ Compatible with ComAp's InteliVision displays
- ▶ Monitoring and configuration with ComAp's PC tools
- ▶ Extended communications with InternetBridge-NT
- ▶ 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

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

### Operating conditions

Operating temperature	-30 °C to +70 °C
Storage temperature	-40 °C to +80 °C
Max. operating altitude	2000 m above sea level for max 480 V 4000 m above sea level for max 400 V
Operating humidity	95 % w/o condensation
Vibration	5-25 Hz, $\pm 1.6$ mm 25-100 Hz, a = 4 g
Shocks	a=200m/s <sup>2</sup>
Heat radiation	16 W

### Voltage measurement

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

### Current measurement

Measurement inputs	3 ph-n Mains voltage 1ph Bus current galvanically isolated
Measurement range	1 A / 5 A
Max allowed current	200 % / 200 %
Accuracy	2 % of 1 A / 5 A
Input impedance	< 0.1 $\Omega$

### Binary inputs

Number	12, non-isolated
Input resistance	4.7 k $\Omega$
Close/Open indication	0-2 V DC close contact >4 V DC open contact

### Binary outputs

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

### Analog inputs

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

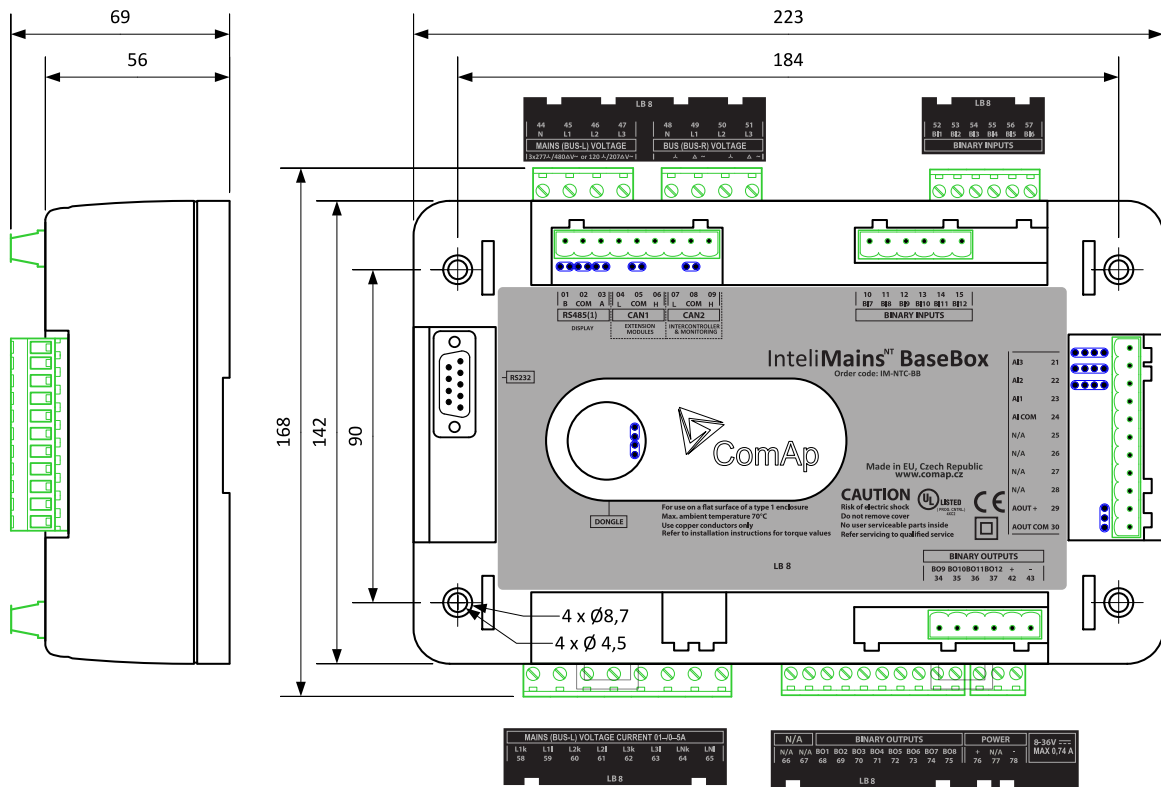
### Analog outputs

Number	1
Type	Switchable (Voltage, Current)
Range	0-10 V DC / 0-20 mA
Max current/load	5 mA / 500 $\Omega$
Accuracy	$\pm 0.5$ % of output value $\pm 20$ mV $\pm 0.5$ % of output value $\pm 100$ $\mu$ A

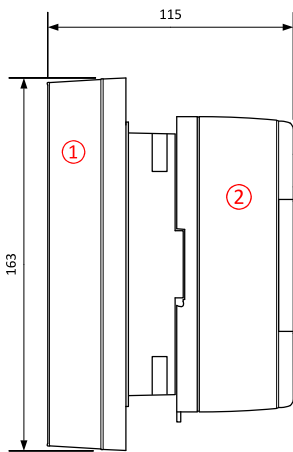
### Communications

RS232	Direct / Modbus
Display port	Non-isolated RS485, direct/modbus/terminal connection
CAN1	External modules, 250kbps, max 200 m, Isolated
CAN2	Intercontroller and comm extensions 250 / 50 kbps, max 200 / 1000 m, Isolated

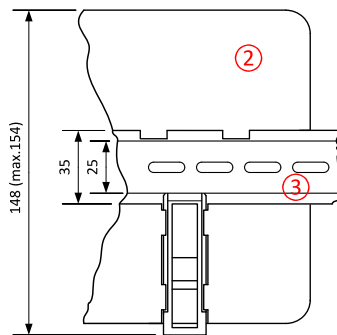
## Dimensions, terminals and mounting



### Panel door mounting with IntelliVision 5

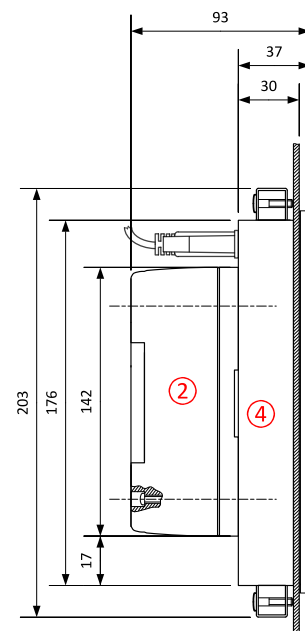


### DIN-rail mounting



- ① IntelliVision5
- ② IntelIMains<sup>NT</sup> BaseBox
- ③ DIN-rail
- ④ IntelliVision 8

### Panel door mounting with IntelliVision 8



**Note:** IntelIMains<sup>NT</sup> BaseBox can be mounted on a standard DIN rail or, in combination with IntelliVision 5 or IntelliVision 8, it can be door mounted. IntelliVision 5 features mounting rail for direct mounting. Mounting in combination with IntelliVision 8 uses four screws provided in the IntelIMains<sup>NT</sup> BaseBox package.

## Available extension modules

Product	Description	Order code
Inteli 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>
Inteli IO16/0	16 Binary inputs packed in a small unit (HW switchable to IO8/8)	<a href="#">I-IO8/8</a>
Inteli AIN8	8 Analog inputs and 1 pulse/frequency input in a small unit	<a href="#">I-AIN8</a>
InteliAIN8TC	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>NT</sup> BaseBox at <http://www.comap.cz/products/detail/intelimains-nt-basebox>

## Related products

Product	Description	Order code
InteliVision 5	Color 5.6" display for monitoring and control	<a href="#">INTELIVISION 5</a>
InteliVision 5 RD	Color 5.6" display for monitoring and control (RS485 isolated and backlit buttons)	<a href="#">INTELIVISION 5 RD</a>
InteliVision 8	Color 8" display for advanced monitoring, control & trending, USB capable	<a href="#">INTELIVISION 8</a>
InteliVision17T	Color 17" display for complete monitoring and control of multiple controllers	<a href="#">INTELIVISION 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	Temperature monitoring	49T	AC re-closing	79
Undervoltage	27	Overcurrent	50	Overfrequency	81H
Directional power relay	32	Overcurrent (IDMT)	51	Underfrequency	81L
Directional power	32P	Power factor	55	ROCOF	81R
Undercurrent	37	Overvoltage	59		
Current unbalance	46	Vector shift	78		

## 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> </ul>		
List of standards is available on: <a href="https://webstore.iec.ch/">https://webstore.iec.ch/</a>		

