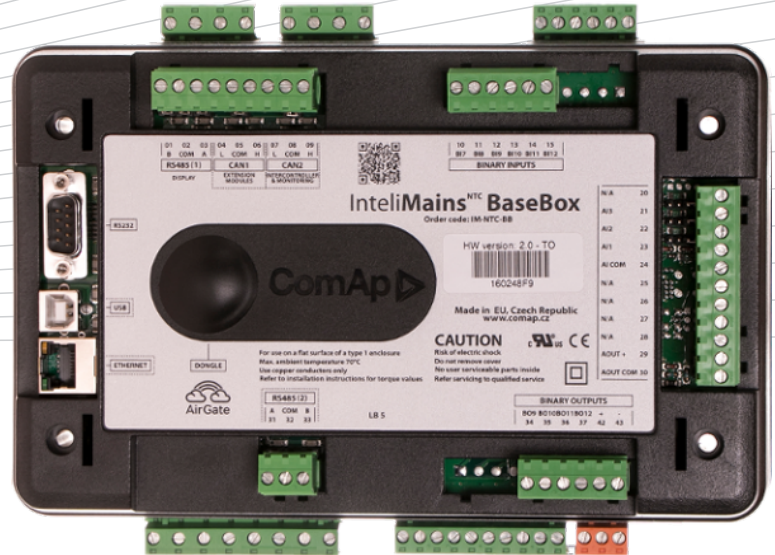


InteliMains NTCBaseBox



Comprehensive switchgear controller

Datasheet

Product description

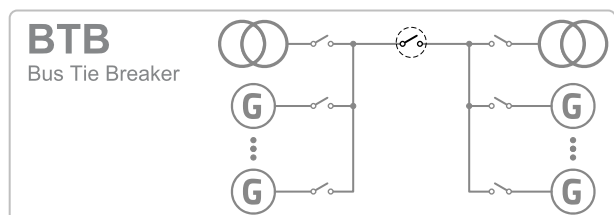
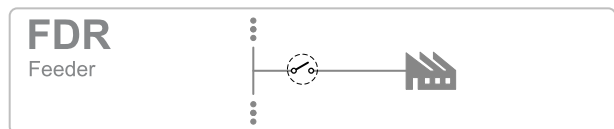
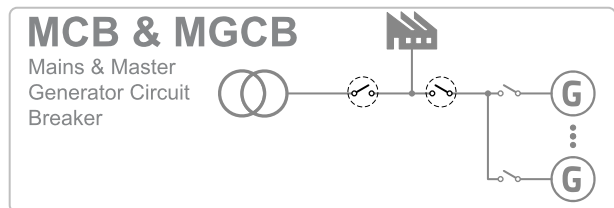
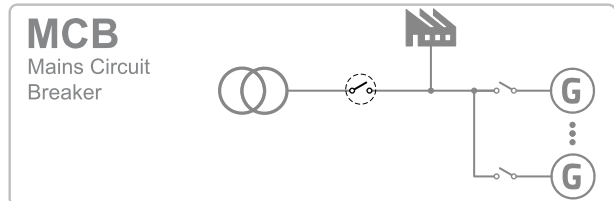
- Comprehensive switchgear controller
- Built-in control for up to 32 logic groups divided by Bus Tie Breakers
- High level control for complex systems

Key features

- Built-in breaker control
- Genset group synchronization, Loadsharring and VARsharring via CAN2
- Customizable load control in parallel to mains
- Extended communication capabilities
 - 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

| | |
|------------------------|--|
| 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 % non-condensing (EN 60068-2-30) |
| Vibration | 5-25 Hz, ± 1.6 mm 25-100 Hz, a = 4 g |
| Shocks | a=200m/s ² |
| 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 Ω ph-ph, 0.3 M Ω 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 Ω |

Binary inputs

| | |
|-----------------------|--|
| Number | 12, non-isolated |
| Input resistance | 4.7 k Ω |
| 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) group1: BO1-8; group2: BO9-12 |
| 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 Ω / 0-20 mA |
| Input impedance | >100 k Ω / >100 k Ω / 180 Ω |
| Accuracy | ± 1 % of meas. value ± 5 mV ± 2 % of meas value ± 2 Ω ± 1 % of meas value ± 0.5 mA |

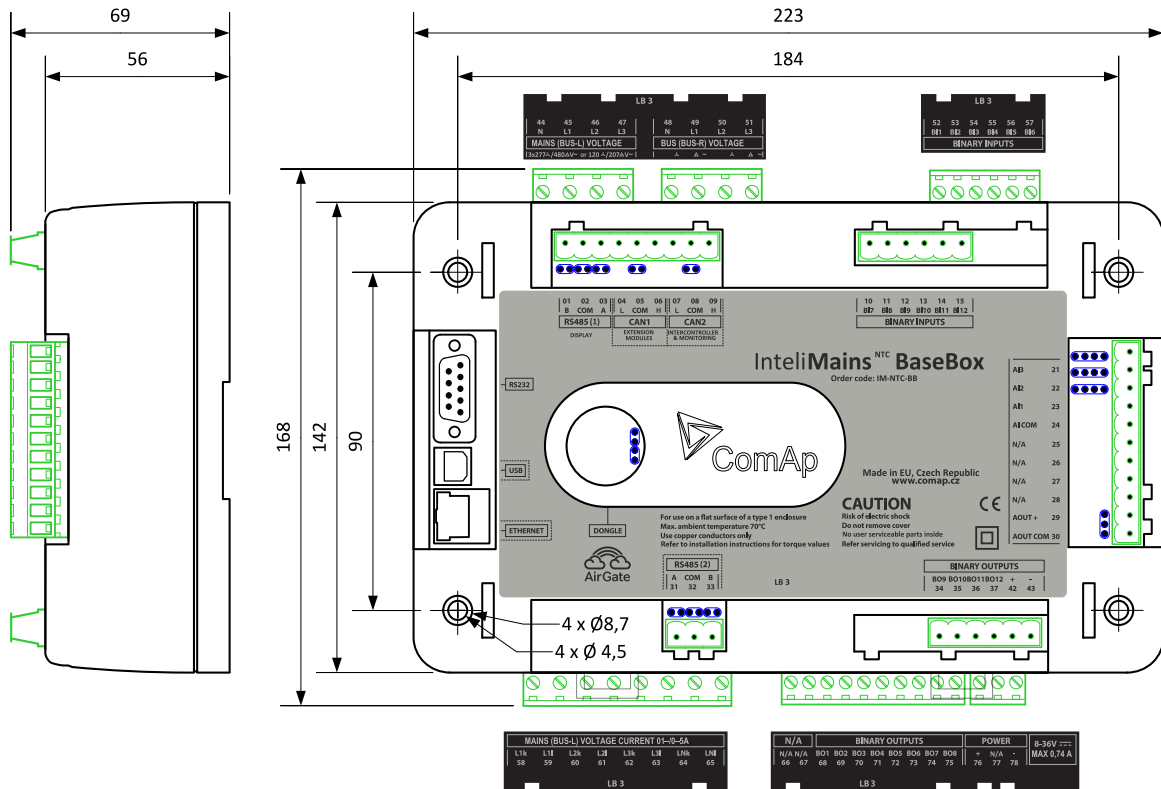
Analog outputs

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

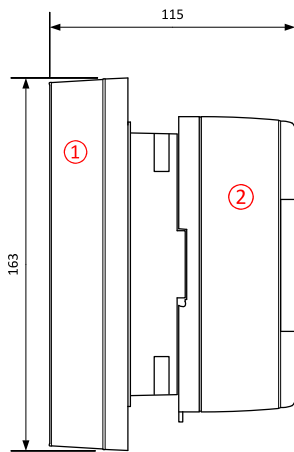
Communications

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

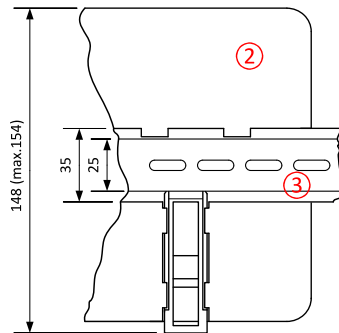
Dimensions, terminals and mounting



Panel door mounting with IntelliVision 5

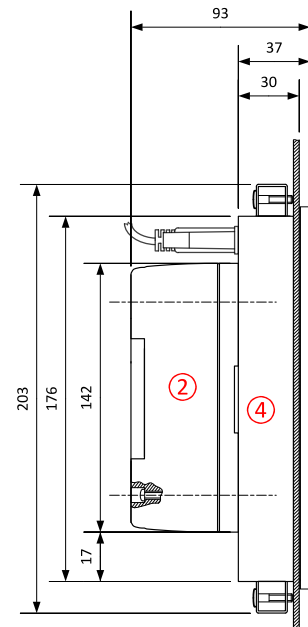


DIN-rail mounting



- ① IntelliVision5
- ② IntelliMains^{NTC} BaseBox
- ③ DIN-rail
- ④ IntelliVision 8

Panel door mounting with IntelliVision 8



Note: IntelliMains^{NTC} 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 IntelliMains^{NTC} BaseBox package.

Available extension modules

| Product | Description |
|-------------------|---|
| Inteli IO8/8 | 8 Binary inputs and 8 Binary outputs packed in a small unit (HW switchable to IO16/0) |
| Inteli IO16/0 | 16 Binary inputs packed in a small unit (HW switchable to IO8/8) |
| Inteli AIN8 | 8 Analog inputs and 1 pulse/frequency input in a small unit |
| InteliAIN8TC | 8 Thermocouple Analog inputs in a small unit |
| IS-AIN8 | 8 Analog inputs packed in a rugged metal unit |
| IGS-PTM | 8 Binary inputs, 8 Binary outputs, 4 Analog inputs and 1 Analog output in a unit |
| IGL-RA15 | 15 Binary LED output (3 colors) packed in a rugged metal unit |
| I-AOUT8 | 8 Analog outputs packed in a rugged metal unit |
| InternetBridge-NT | Multiple Internet connections (PC and Modbus) to all controllers on CAN2 or RS485 |
| I-LB+ | Direct connection (PC) to all controllers on CAN2 or RS485 |

Related products

| Product | Description |
|-------------------|--|
| InteliVision 5 | Color 5.6" display for monitoring and control |
| InteliVision 5 RD | Color 5.6" display for monitoring and control (RS485 isolated and backlit buttons) |
| InteliVision 8 | Color 8" display for advanced monitoring, control & trending, USB capable |
| InteliVision17T | Color 17" display for complete monitoring and control of multiple controllers |

Functions and protections

Support of functions and protections as defined by ANSI (American National Standards Institute):

| Description | ANSI code | Description | ANSI code |
|-----------------------|-----------|---------------------------------|-----------|
| Master unit | 1 | Overcurrent IDMT | 51 |
| Multi-function device | 11 | AC circuit breaker | 52 |
| Synchronizing-check | 25 | Overvoltage | 59 |
| Undervoltage | 27 | Alarm relay** | 74 |
| Annunciator | 30 | Vector shift | 78 |
| Overload(real power) | 32P | Reclosing relay | 79 |
| Reverse power | 32R | Overfrequency | 81O |
| Current unbalance | 46 | Underfrequency | 81U |
| Voltage unbalance | 47 | ROCOF | 81R |
| Overcurrent | 50/50TD | Auto selective control/transfer | 83 |
| Earth fault* | 50G | Regulating device | 90 |

*Extension module EM-BIO8-EFCP required

**Extension module IGL-RA15 required



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