ComAp
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InteliNano AMF 5

Controller for single gen-set applications

Operator Guide

1 Front panel elements
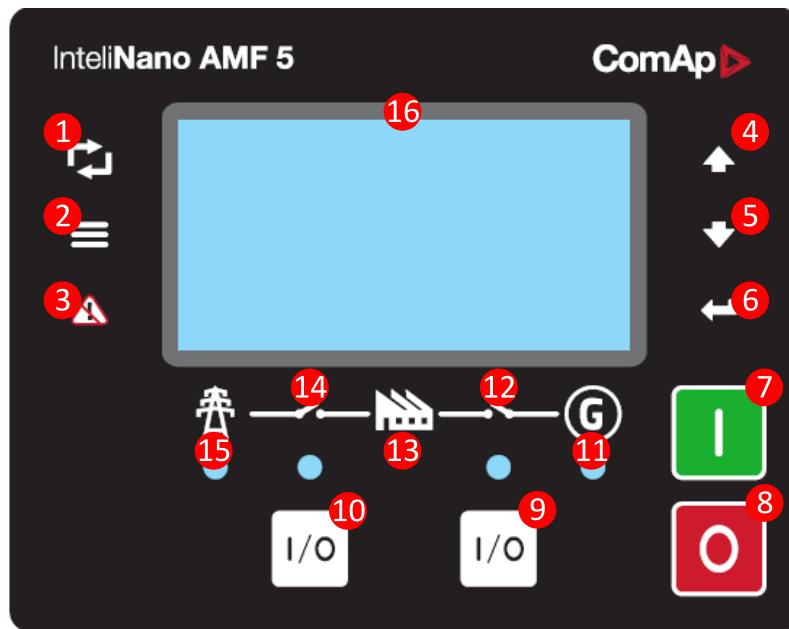
Image 1.1 Operator interface of InteliNano AMF 5

| Control buttons		
Position	**Picture**	**Description**
❶		**MODE** button. Use this button to cycle modes and to navigate in the interface. The Mode button is used as the Right button in most cases.
❷		**PAGE** button. Use this button to switch over display pages.
❸		**FAULT RESET** button. Use this button to acknowledge alarms. Inactive alarms will disappear immediately and status of active alarms will be changed to "confirmed" so they will disappear as soon as their reasons dismiss.
❹		**UP** button. Use this button to move up or increase value.
❺		**DOWN** button. Use this button to move down or decrease value.
❻		**ENTER** button. Use this button to finish editing a setpoint or moving right in the history page.
❼		**START** button. Works in MAN mode only. Press this button to initiate the start sequence of the engine.
❽		**STOP** button. Works in MAN mode only. Press this button to initiate the stop sequence of the Gen-set. Repeated pressing of button will cancel current phase of stop sequence (like cooling) and next phase will continue.

⑨	I/O	**GCB** button. Works in MAN mode only. Press this button to open or close the GCB.
⑩	I/O	**MCB** button. Works in MAN mode only. Press this button to open or close the MCB.
⑪	Ⓖ	**GENERATOR** status indicator. There are two states – Gen-set OK (indicator is green) and Gen-set failure (indicator is red). Green LED is on if the generator voltage and frequency is present and within limits. Red LED starts flashing when Gen-set failure occurs. After FAULT RESET button is pressed, Red LED goes to steady light (if an alarm is still active) or is off (if no alarm is active).
⑬		**LOAD**. Green LED is ON if load is supplied by power source. It means, that Gen-set or mains is healthy and proper circuit breaker is closed.
⑮		**MAINS** status indicator. There are two states – Mains OK (indicator is green) and Mains failure (indicator is red). Green LED is on, if mains is present and within limits. Red LED starts blinking when the mains failure is detected and after the Gen-set has started and connected to the load it lights permanently until the mains failure disappears.

Indicators and others

Position	Description
⑫	**GCB Status**. Green LED is on if GCB is closed. It is driven by GCB CLOSE/OPEN output or by GCB feedback signal.
⑭	**MCB Status**. Green LED is on if MCB is closed. It is driven by MCB CLOSE/OPEN output or by MCB feedback signal.
⑯	Graphic B/W display, 132 × 64 px.

2 Display screens and pages structure

The displayed information is structured into "pages" and "screens". Use the PAGE button to switch over the pages.

> The page Measurement consists of screens which display measured values such as voltages, current, oil pressure etc.; computed values such as Gen-set power, statistic data and the alarm list on the last screen.

> The page setpoints contains all setpoints organized to groups and also a special group for entering a password.

> The page History log shows the history log with the most recent record displayed first.

2.1 Main Screen
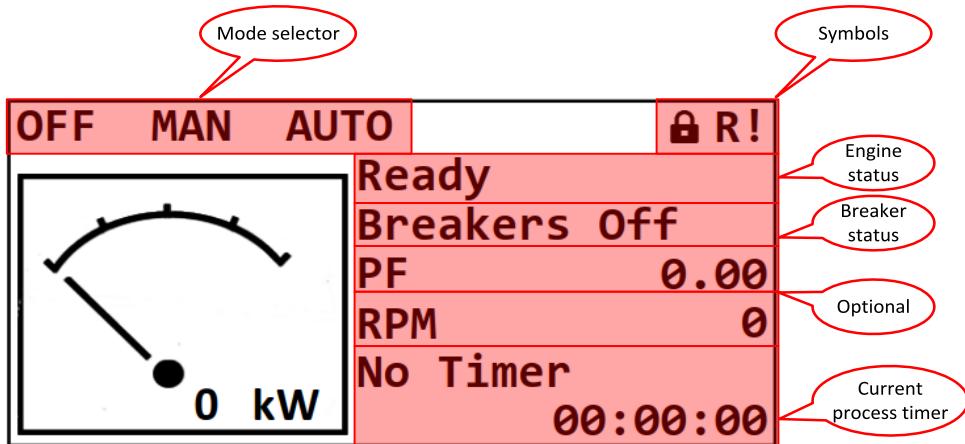
2.1.1 Symbols

> Padlock – active when LBI ACCESS LOCK is active

> R – active when there is active remote connection to controller

> Exclamation mark – active when there is any alarm in alarm list

2.1.2 Personalization of main screen

Main screen can be personalized by following setpoints:

> Main Screen Line 1

> Main Screen Line 2

> Main Screen Gauge

2.2 Measurement Screens

```
OFF   MAN   AUTO           🔒R!
┌──────────────┐ Ready
│              │ Breakers Off
│   ╱──────╲   │ PF          0.00
│  ╱        ╲  │ RPM            0
│      ●      │ No Timer
│    0  kW    │        00:00:00
└──────────────┘
```

⬆ ⬇
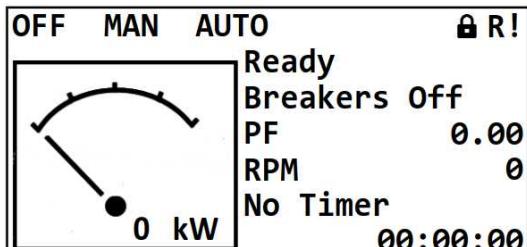
Note: Use the Up and Down buttons to move between measurement pages.

```
┌────────────────────────────┐
│          Generator         │
├────────────────────────────┤
│ L1N    230V   L1L2    400V │
│                            │
│ L2N    230V   L2L3    400V │
│                            │
│ L3N    230V   L3L1    400V │
│ Generator Freq       50.0Hz│
└────────────────────────────┘
```

⬆ ⬇

Note: Use the Up and Down buttons to move between measurement pages.

```
┌────────────────────────────┐
│     Analog Inputs      1/2 │
│ AIN1             ######### │
│                            │
│ AIN2             ######### │
│                            │
│ AIN3             ######### │
│                            │
└────────────────────────────┘
```

⬆ ⬇

Note: Use the Up and Down buttons to move between measurement pages.

Note: There are additional screens. Screen's visibility depends on actual configuration (usage of extension or communication modules, ECU, controller model, etc.).

```
┌────────────────────────────┐
│        Alarmlist        3  │
│ * Wrn Alarm 1              │
│ * BOC Alarm 2              │
│   Sd  Alarm 3              │
│                            │
│                            │
└────────────────────────────┘
```

⬆ ⬇

Note: Use the Up and Down buttons to move between measurement pages.

Note: *From all of these pages it is possible to switch seamlessly to the setpoint group page by pressing the Page button.*

2.3 Setpoint Screens
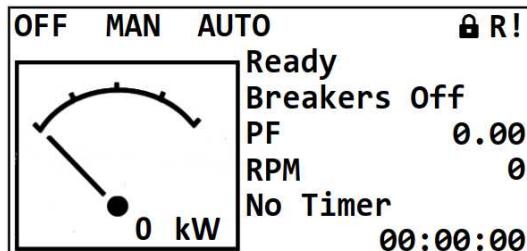
Note: From all measurement pages you can easily go to the setpoint group page by pressing the Page button.
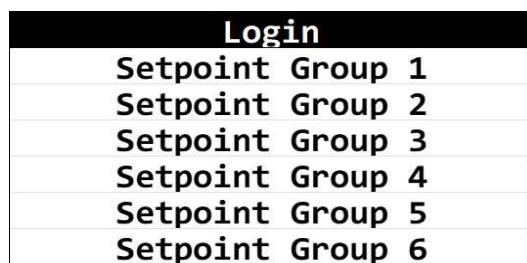
Note: Use Up and Down button to select required setpoint group.

Note: Use the Enter button to enter selected setpoint group.
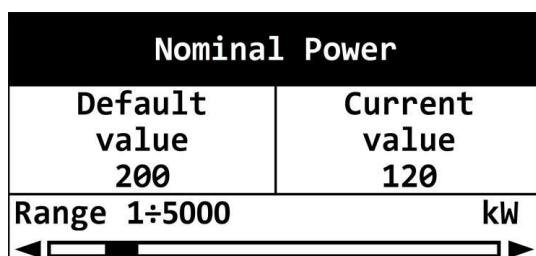

Note: Use Up and Down button to select required setpoint.

Note: Use the Mode button to select required setpoint.

Note: Use the Enter button to enter selected setpoint.

Note: Use Up and Down button to set required value of selected setpoint.


Note: Use the Enter button to confirm adjusted value of setpoint.

Note: Use the Page button to discard changes, to set setpoint to previous value and to return to the list of setpoints of selected group.

2.4 History Log

Note: From all measurement pages you can easily go to the setpoint group page by pressing the Page button.

Note: From setpoint group page we can fluently go to the history log pages by pressing the Page button.

```
 No. Reason
 000 GCB Closed
-001 GCB Opened
-002 GCB Opened


11:05:45        2021-12-03
```

Note: Use the Up and the Down button to select required alarm reason.

IMPORTANT: The records are numbered in reverse order, i.e. the latest (newest) record is "0" and older records have "-1", "-2" etc.

🔺 back to Display screens and pages structure

3 Browsing alarms
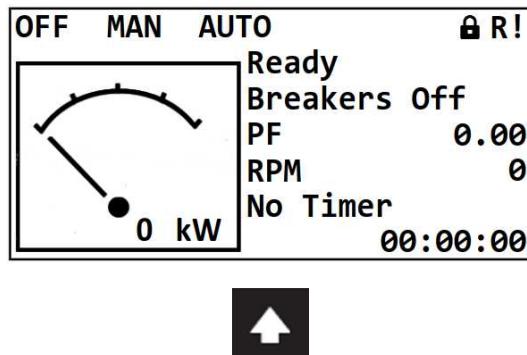
Note: Use the Up button to move to alarm list from main measurement screen.

> Active alarms are displayed as white text on black background. It means the alarm is still active, i.e. the appropriate alarm conditions are still present.

> Inactive alarms are displayed as black text on white background. It means the alarm is not active, i.e. the appropriate alarm conditions are gone.

> Unconfirmed alarms are displayed with an asterisk. This means the alarm is still not acknowledged (confirmed).

> ECU alarms: SPN/FMI/OC/SC

>> SPN – Suspect parameter number

>> FMI – type of protection

>> OC – number of errors

>> SC – source of error

3.1 User access management alarms

The controller comes to the customer with Production mode turned on, the default administrator password installed and with no prefilled email address for password reset. For security purposes, the following user access management alarms will appear. Detailed description of situation when the alarms are active is provided below:

> **Wrn Production Mode** is present in the alarm list any time the production mode is turned on. To turn off the Production mode go to User management and uncheck the checkbox Production mode or go to Production Mode display screen and select disable.

> **Wrn Default Password** appears in alarm list when the default administrator password is set and communication module is plugged in the controller. The purpose of alarm is to inform that the controller might be or is connected to an untrusted interface and cybersecurity rules are not fulfilled because there is default administrator password.

🔺 **back to Browsing alarms**

4 Login
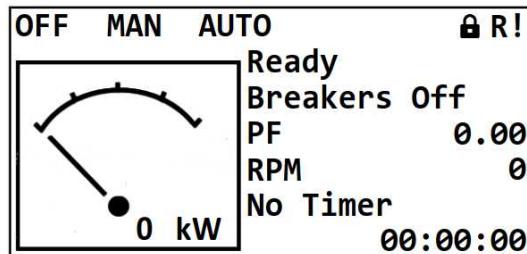
Note: From all measurement pages you can easily go to the setpoint group page by pressing the Page button.
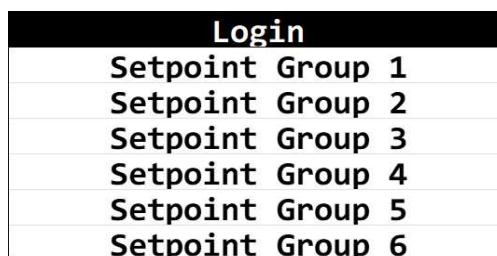
Note: Use the Up and the Down button to select setpoint group Login.

Note: Use the Enter button to enter setpoint group Login.
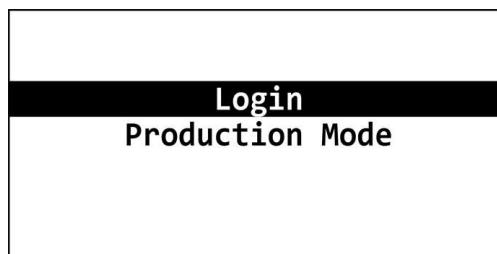
Note: Use the Up and the Down Button to select Login.

Note: Use the Enter button to enter Login.
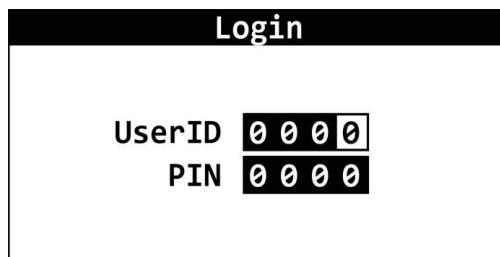
Note: *Use the Up and the Down Button to change the digit.*

Note: *Use the Mode button to move between digits.*

Note: *Use the Enter button to confirm the UserID or Page button to cancel entering Login.*
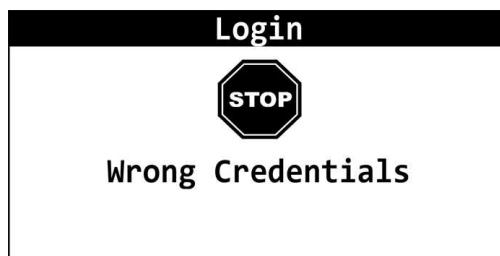
Note: *In case that invalid UserID or PIN are entered, the controller shows Wrong Credentials screen. Use the Enter button to enter Login again or the Page Button to go back to menu.*

4.1 Account break protection

The controller protects the user accounts against a brute-force attack, i.e against breaking into the controller by fast repeating attempts to login with credentials generated from the range of all possible combinations.

If the account break protection detects a possible attack and blocks an account or interface the alarm Wrn Brute Force Protection Active is activated. The alarm can be used to send an active message (e.g. e-mail) to inform about that situation. The exact behavior of the controller depends on the situation.

4.1.1 PIN protection

If a user performs **ten consecutive attempts** to login using UID/PIN, providing **correct UID** but **incorrect PIN**, the user account is permanently blocked for login using this UID/PIN. The user must login with username/password and change the PIN to unblock this login method again.

4.2 Reset accounts to factory default

If credentials (username and/or password) for administrator account are lost, it is possible to reset all user accounts to the factory default state. For more information see chapter Resetting the administrator password in Global Guide.

After reset procedure user accounts are in factory default state.

Wrn Default Password appears in Alarm list when the default administrator password is set and communication module is plugged in the controller. The purpose of the alarm is to inform that the controller

might be or is connected to an untrusted interface and cybersecurity rules are not fulfilled because there is default administrator password.

5 Logout
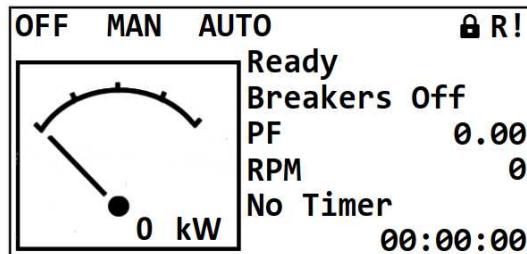
Note: From all measurement pages we can fluently go to the setpoint group page by pressing the Page button.
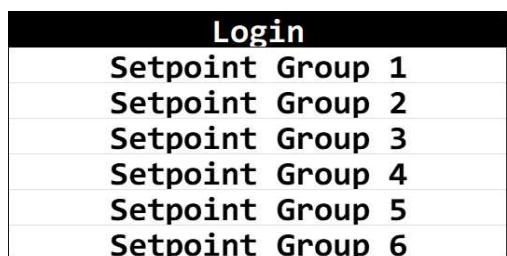
Note: Use the Up and the Down button to select setpoint group Login.

Note: Use the Enter button to enter setpoint group Login.

Note: Use Up and Down Button to select Login.

Note: Use the Enter button to enter setpoint group Login.

```
            Login
┌─────────────────────────────┐
│                             │
│  UserID  [0 0 0 0]          │
│    PIN   [0 0 0 0]          │
│                             │
│                             │
└─────────────────────────────┘
```
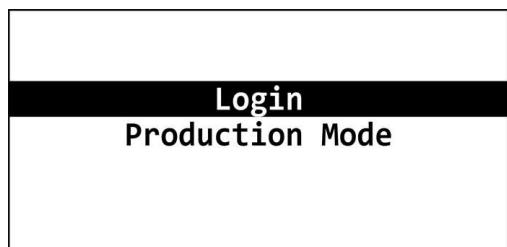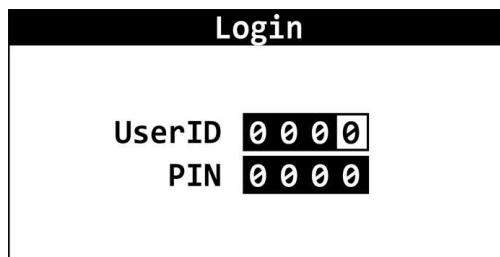
Note: Use wrong credentials – wrong UserID or PIN.

[Enter button icon]

Note: Use the Enter button to accept the inputs.

```
            Login
┌─────────────────────────────┐
│         [STOP]              │
│    Wrong Credentials        │
│                             │
└─────────────────────────────┘
```
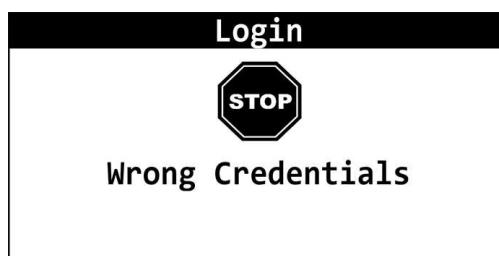
[Page button icon]

*Note:* Use the Page button to return to the Main screen.

🔺 back to Logout

6 Production mode
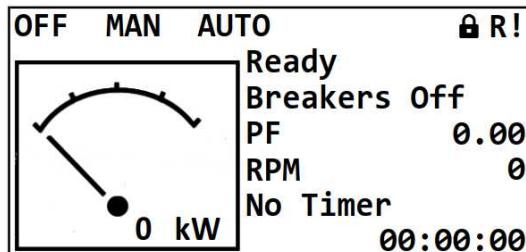
Note: From all measurement pages you can fluently go to the setpoint group page by pressing the Page button.
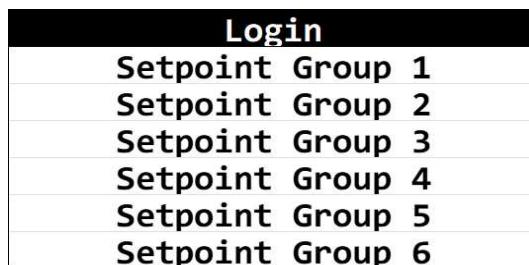
Note: Use the Enter button to enter setpoint group Login.
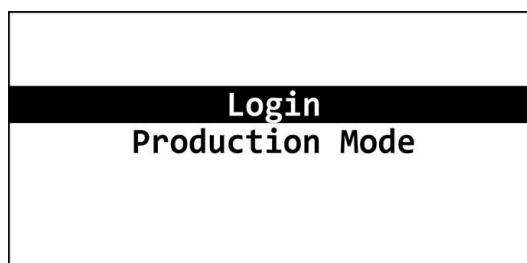
Note: Use the Up and the Down Button to select Production Mode

Note: Use the Enter button to enter the Production Mode.

```
        Production Mode

          Disabled
          Enabled


        Production Mode



          Disabled
          Enabled
```
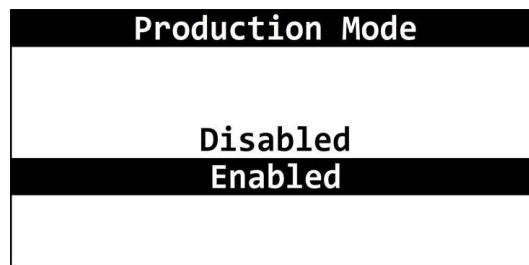
Note: *Use the Up and the Down Button to change to disabled*
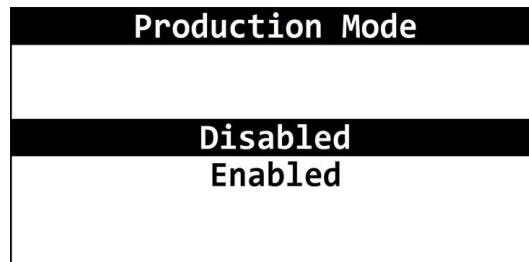
Note: *Use the Enter button to disable the Production Mode.*

```
        Production Mode


          Disabled


```
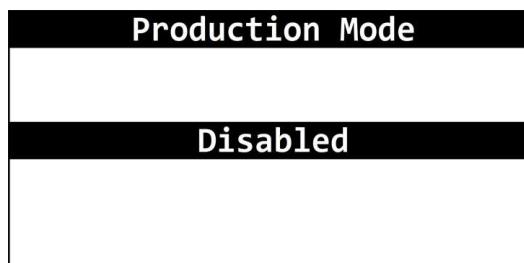
Note: *Once Disabled is confirmed by the Enter button the option Enabled is no longer on the screen and therefore it is not possible to enable Production mode by HMI display screen. Use InteliConfig to enable the Production mode.*

⬢ **back to Production mode**

7 Information screen
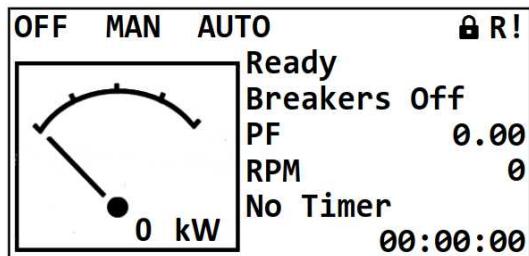
```
OFF  MAN  AUTO          🔒 R!
┌──────────────┐ Ready
│    ⌒         │ Breakers Off
│  ╱    ╲      │ PF          0.00
│ ╱      ╲     │ RPM            0
│        ●    │ No Timer
│  0  kW      │        00:00:00
└──────────────┘
```

⏎ + ☰

Note: *On Main measurement screen press the Enter and the Page button together. The Enter button has to be pressed first.*

```
        InteliNano

          ComAp


    www.comap-control.com
```

☰

Note: *Use the Page button to move to the next page.*

```
  About Controller    1/2
        InteliNano
          ComAp
      Controller Name

  Application          ABC
  Branch          Standard
```

☰
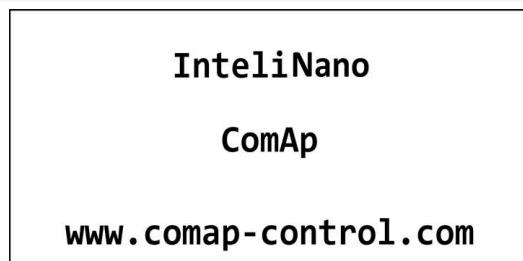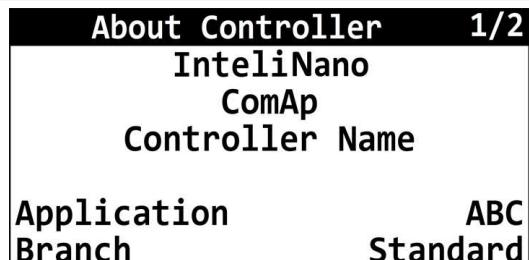
Note: *Use the Page button to move to the next page.*

```
  About Controller    2/2
SW Version     1.0.0.00
HW Version          1.0
Serial         12345678
UserID             1234
Access level          3
```


Note: Use the Up button to move back to main measurement screen.

```
        Languages

        Language1
        Language2

```


Note: Use the Up and the Down button to select required language.

Note: Use the Enter button to confirm the selected language.

Note: Use the Page button to move to the next page.

```
   Configuration Level

        Standard
        Advanced

```


Note: Use the Up and the Down button to select required configuration level.

Note: Use the Enter button to confirm selected configuration level.

Note: Use the Page button to move to the next page.

🔺 **back to Information screen**

8 Display contrast adjustment
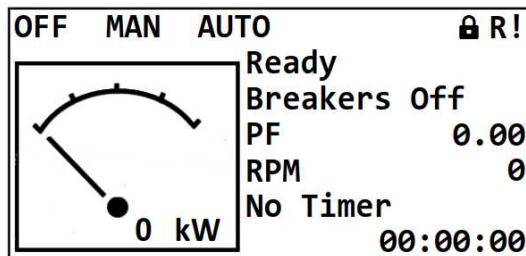
```
OFF  MAN  AUTO          🔒R!
┌─────────────┐Ready
│    ╱▔▔▔╲    │Breakers Off
│   ╱     ╲   │PF          0.00
│  ╱       ╲  │RPM            0
│ ╱      ●   │No Timer
│      0 kW  │      00:00:00
└─────────────┘
```

↵ + ☰

Note: On Main measurement screen press the Enter and the Page button together. The Enter button has to be pressed first.

↵ + ▲   ↵ + ▼

Note: On any measurement screen press the Enter and the Up button together for higher contrast.

Note: On any measurement screen press the Enter and the Down button together for lower contrast.

Note: After setting the contrast, no another action is needed.

🔺 **back to Display contrast adjustment**