

InteliGen4 200

Controller for multiple gen-set applications

1 Front panel elements	2
2 Display screens and pages structure	4
3 Browsing alarms	19
4 Login	20
5 Production mode	23
6 Information screen	25
7 Language selection	27
8 Display contrast adjustment	28

1 Front panel elements

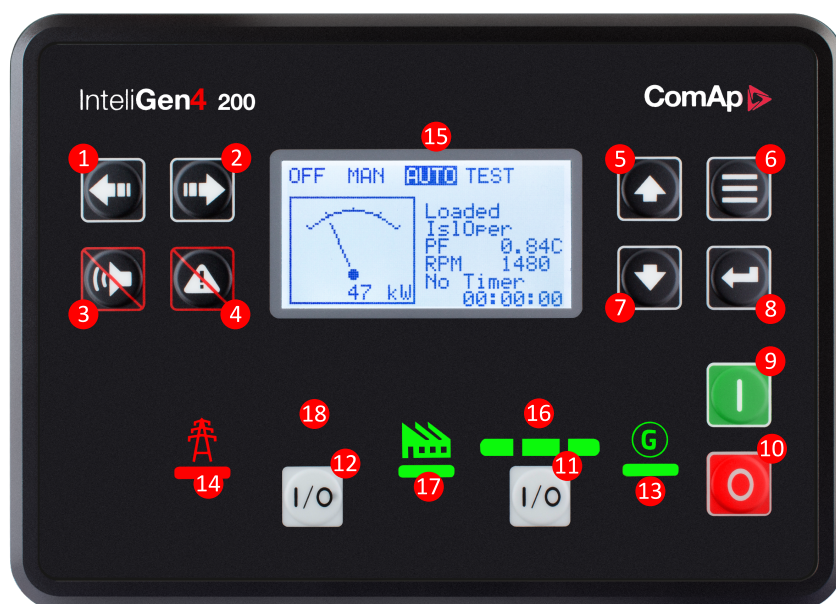


Image 1.1 Operator interface of IntelliGen4 200

Control buttons		
Position	Picture	Description
1		LEFT button. Use this button to move left or to change the mode. The button can change the mode only if the main screen with the indicator of currently selected mode is displayed. <i>Note: This button will not change the mode if the controller mode is forced by one of binary inputs listed in the Reference Guide – "Operating modes" chapter.</i>
2		RIGHT button. Use this button to move right or to change the mode. The button can change the mode only if the main screen with the indicator of currently selected mode is displayed. <i>Note: This button will not change the mode if the controller mode is forced by one of binary inputs listed in the Reference Guide – "Operating modes" chapter.</i>
3		HORN RESET button. Use this button to deactivate the horn output without acknowledging the alarms.
4		FAULT RESET button. Use this button to acknowledge alarms and deactivate the horn output. 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.

5		UP button. Use this button to move up or increase value.
6		PAGE button. Use this button to switch over display pages.
7		DOWN button. Use this button to move down or decrease value.
8		ENTER button. Use this button to finish editing a setpoint or moving right in the history page.
9		START button. Works in MAN mode only. Press this button to initiate the start sequence of the engine.
10		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.
11		GCB button. Works in MAN mode only. Press this button to open or close the GCB. This button also start the synchronization process.
12		MCB button. Works in MAN mode only. Press this button to open or close the MCB. This button also start the synchronization process.

Indicators and others

Position	Description
13	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).
14	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.
15	Graphic B/W display, 132 × 64 px.
16	GCB Status. Consists of 3 green LEDs. The middle green LED is on if GCB is closed. It is driven by GCB CLOSE/OPEN output or by GCB feedback signal. Side green LEDs are on in case the generator status indicator is ok.
17	LOAD. Green LED is ON if load is supplied by mains or by generator. It means, that Gen-set or mains is OK and proper circuit breaker is closed.
18	MCB Status. Consists of 3 green LEDs. The middle green LED is on if MCB is closed. It is driven by MCB CLOSE/OPEN output or by MCB feedback signal. Side green LEDs are on in case the mains status indicator is ok.

 **back to Front panel elements**

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



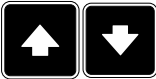
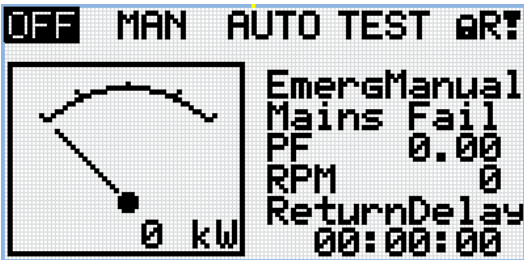
2.1.1 Symbols

- 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

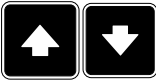
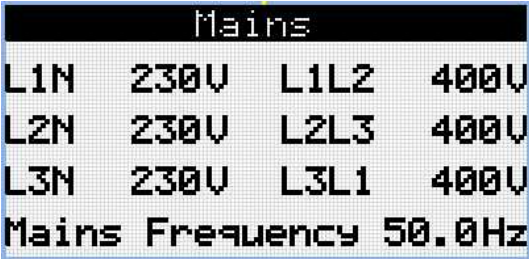
2.1.2 Optional

- Value can be chosen via setpoints **Main Screen Line 1 (page 1)** and **Main Screen Line 2 (page 1)**.
- Possibilities are: RPM, PF, Run Hours, ATT, AIN1

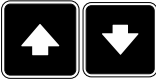
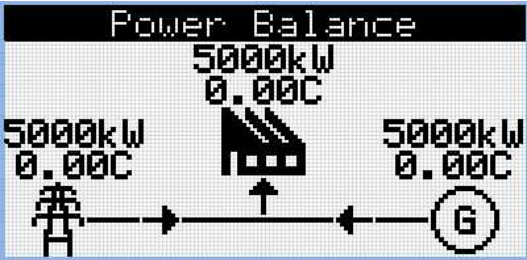
2.2 Measurement Screens



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

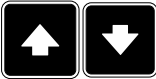
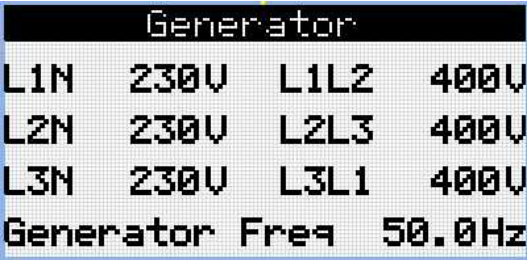


Note: Use the Up and Down buttons to move between measurement pages.



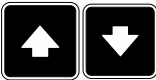
Note: Use the Up and Down buttons to move between measurement pages.

Note: Only in SPtM application.



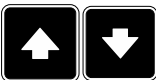
Note: Use the Up and Down buttons to move between measurement pages.

Generator Current	
L1	130A
L2	130A
L3	130A

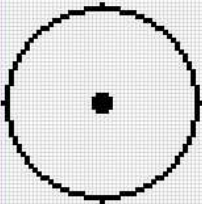


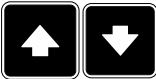
Note: Use the Up and Down buttons to move between measurement pages.

Generator Power			
	kW	PF	kVA
L1	0	0.00C	0
L2	0	0.00C	0
L3	0	0.00C	0
Σ	0	0.00C	0



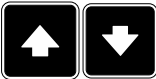
Note: Use the Up and Down buttons to move between measurement pages.

Synchronization	
	Slip 123Hz
	Gen 12345V
	Bus 12345V
	SRO 12.123V
	URO 123.1%



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

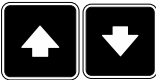
Power Management	
Engine Priority	00
ActGrpPwr	500000kW
ActResPwrRel	100%
CAN16	0000000000000000
CAN32	0000000000000000



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

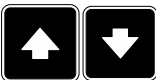
Note: Only in MINT application.


```
Power Management
Engine Priority    00
ActGrpPwr        500000kW
ActResPwr        500000kW
:
CAN16 0000000000000000
CAN32 0000000000000000
```



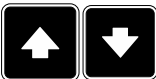
Note: Use the Up and Down buttons to move between measurement pages.

```
Analog Inputs 1/2
Oil Pressure #####Bar
:
Coolant Temp ##### °C
:
Fuel Level #####%
```



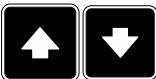
Note: Use the Up and Down buttons to move between measurement pages.

```
Analog Inputs 2/2
Not Used
:
BatteryVoltage 23.8V
:
:
:
```



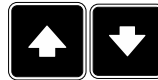
Note: Use the Up and Down buttons to move between measurement pages.

```
Binary Inputs 1/2
0000000
1 Input 0
2 Input 0
3 Input 0
4 Input 0
5 Input 0
```



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

Binary Inputs 2/2		
00000000		
6	Input	0
7	Input	0
8	Input	0



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

Binary Outputs 1/2		
00000000		
1	Output	0
2	Output	0
3	Output	0
4	Output	0
5	Output	0



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

Binary Outputs 2/2		
00000000		
6	Output	0
7	Output	0
8	Output	0



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

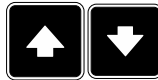
EM-BIOS-EFCP 1/2		
00101010		
Earth Fault		0.00A
IN:	Input	1
	Not Used	0
OUT:	Output	1



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

Note: Available only with plug-in module.

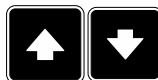
EM-BIOS-EFCP 2/2		
00101010		
IN:	Input	0
OUT:	Output	1
OUT:	Output	0
OUT:	Output	1
OUT:	Output	0



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

Note: Available only with plug-in module.

ECU Values		
Fuel Rate	#####l/h	
CoolantTemp	#####°C	
IntakeTemp	#####°C	
Oil Press	#####bar	
Boost Press	#####bar	
Load	#####%	



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

Statistics 1/3		
Genset kWh		0
Genset kVarh		0
Mains kWh		0
Mains kVarh		0
Run Hours		0
Num Starts		0



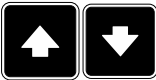
Note: Use the Up and Down buttons to move between measurement pages.

Statistics 2/3		
Num E-Stops		0
Shutdowns		0
Maintenance 1		0
Maintenance 2		0
Maintenance 3		0
Rental Timer 1		0



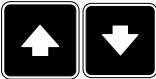
Note: Use the Up and Down buttons to move between measurement pages.

Statistics 3/3	
Rental Timer 2	000
Ex. Timer 1	00:00:00
Ex. Timer 2	00:00:00



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

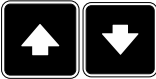
CM-4G-GPS 1/2	
Cell Signal Lev	93%
Cell ErrorRate	12%
Cell Status	/
Cell Diag Code	12
Operator	T-Mobile CZ
Connection Type	4G



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

Note: Available only with plug-in module.

CM-4G-GPS 2/2	
Latitude	0.1234
Longitude	0.1234
Altitude	123m
HomePosDist	123km
Satelites	1



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

Note: Available only with plug-in module.

```

CM-GPRS
Cell Signal Lev    93%
Cell ErrorRate     12%
Cell Status        /
Cell Diag Code     12
Operator           T-Mobile CZ

```



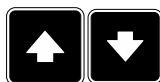
Note: Use the Up and Down buttons to move between measurement pages.

Note: Available only with plug-in module.

```

CM-Ethernet
Current IP Address
      123.123.123.123
ETH Interface Status
      Connected

```



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

Note: Available only with plug-in module.

```

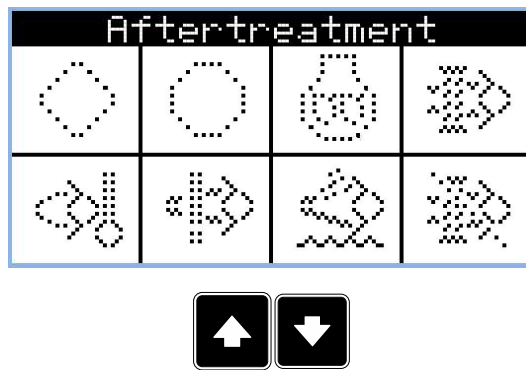
AirGate
CM-4G-GPS
AirGate ID: ABABCABCAB
AirGate Diag: 0
CM-Ethernet
AirGate ID: ABABCABCAB
AirGate Diag: 0

```



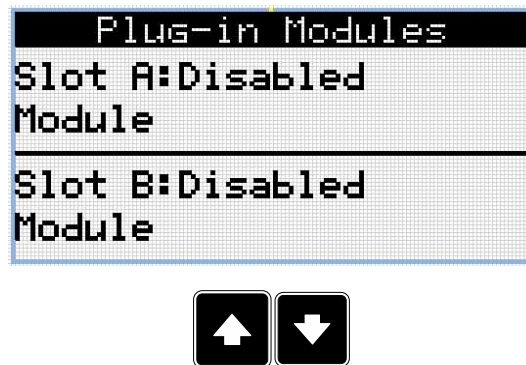
Note: Use the Up and Down buttons to move between measurement pages.

Note: Available only with plug-in module.

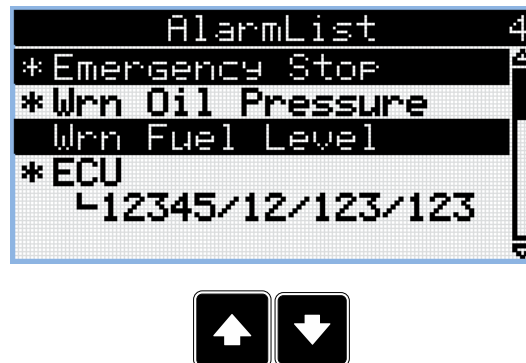


Note: Use the Up and Down buttons to move between measurement pages.

Note: Available only with ECU supported by TIER4F



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

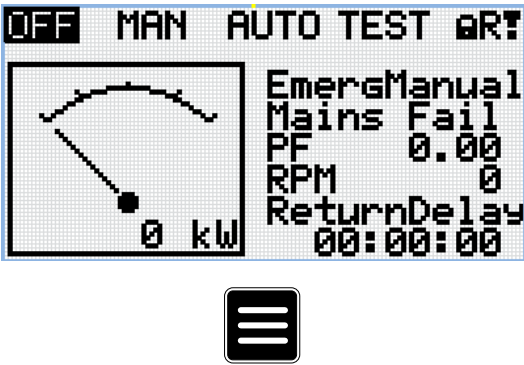


Note: Use the Up and Down buttons to move between measurement pages.

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

Note: There can be some additional screens and also some screens can be hidden. Screen's visibility depends on actual configuration (usage of extension or communication modules, ECU etc.).

2.3 Setpoint Screens

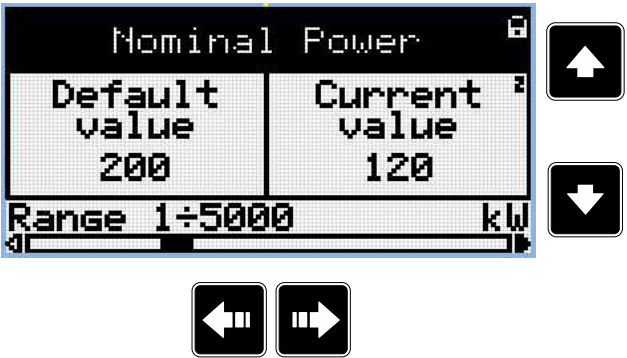


Note: From all measurement pages you can easily go to the setpoint group page by pressing the Page button.



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

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

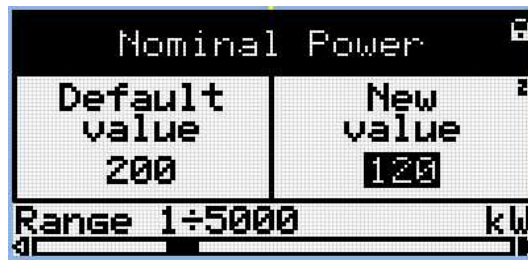


Note: Use Up and Down button to select required setpoint.

Note: Use the Left and the Right 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.

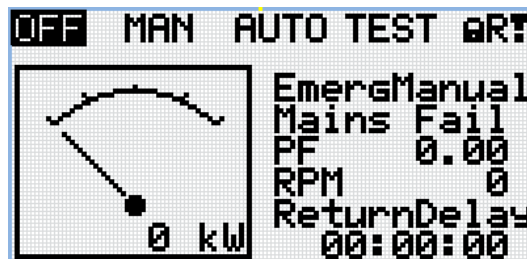


Note: Use the Enter button to confirm adjusted value of setpoint.



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
-001	GCB Closed
-002	MCB Opened
-003	MCB Closed
-004	GCB Opened
-005	GCB Closed
11:05:45	15/03/2014



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



Note: Use the Enter button to move to the next page of history log.

Time	Date
14:01:43AM	15/03/2014
11:05:45AM	15/03/2014
11:01:43AM	15/03/2014
11:04:43AM	14/03/2014
14:41:43AM	11/03/2014
-002	MCB Opened



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



Note: Use the Enter button to move to the next page of history log.

RPM	Pwr	Q
1500	15.0	15.0
0	0.0	0.0
0	0.0	0.0
1500	15.0	15.0
1500	15.0	15.0
-002	MCB Opened	



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



Note: Use the Enter button to move to the next page of history log.

PF	LChr	GFra
0.75	C	50.0
0.00	C	0.0
0.00	C	0.0
0.73	C	50.0
0.74	C	50.0
-002	MCB Opened	



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



Note: Use the Enter button to move to the next page of history log.

Ug1	Ug2	Ug3
230	230	230
0	0	0
0	0	0
230	230	230
230	230	230
-002 MCB Opened		



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



Note: Use the Enter button to move to the next page of history log.

Ug12	Ug23	Ug31
230	230	230
0	0	0
0	0	0
230	230	230
230	230	230
-002 MCB Opened		



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



Note: Use the Enter button to move to the next page of history log.

IL1	IL2	IL3
30	30	30
0	0	0
0	0	0
30	30	30
30	30	30
-002 MCB Opened		



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



Note: Use the Enter button to move to the next page of history log.

Um1	Um2	Um3
230	230	230
0	0	0
0	0	0
230	230	230
230	230	230
-002 MCB Opened		



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



Note: Use the Enter button to move to the next page of history log.

Um12	Um23	Um31
230	230	230
0	0	0
0	0	0
230	230	230
230	230	230
-002 MCB Opened		



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



Note: Use the Enter button to move to the next page of history log.

FC	FMI
0	0
0	0
0	0
0	0
0	0
-002 MCB Opened	



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



Note: Use the Enter button to move to the next page of history log.

MFrq	UBat	OilP
50.0	23.2	3.2
0.0	0.0	0.0
0.0	23.2	0.0
50.0	23.3	3.2
50.0	23.3	3.2
-002 MCB Opened		



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



Note: Use the Enter button to move to the next page of history log.

EngT	FLvl	Ain4
30.0	50	00.0
22.0	20	00.0
23.0	30	00.0
23.0	30	00.0
23.0	50	00.0
-002 MCB Opened		



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



Note: Use the Enter button to move to the next page of history log.

BIN	BOUT
01101000	11000011
11001001	01001010
01010100	01010100
11010000	01101000
11000011	01010100
-002 MCB Opened	



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



Note: Use the Enter button to move to the next page of history log.

Mode
MAN
MAN
MAN
MAN
MAN
-002 MCB Opened



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



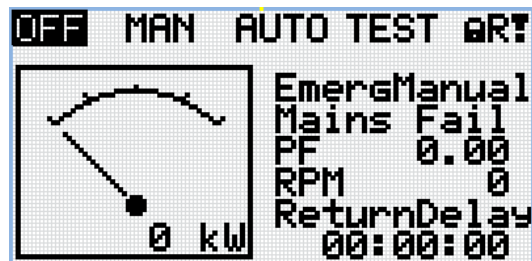
Note: Use Enter button to move to the first page of history log.

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

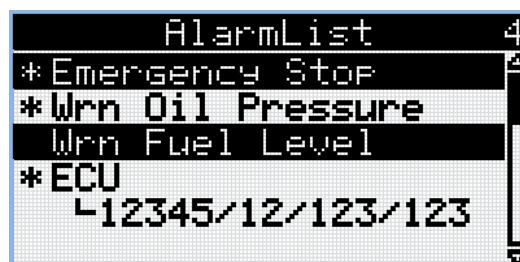
Note: This is only basic history record. There can be some additional screens in case that in controller is extension module or ECU is configured. Also it depends on connection type.

🔍 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

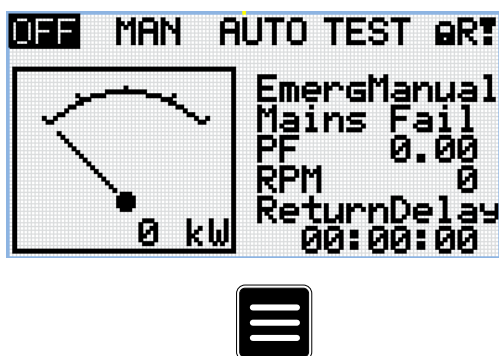
The controller comes to the customer with Production mode turned on, the default administrator password installed and with no prefilled email address for password reset. For security purposes, the following user

access management alarms will appear. Detailed description of situation when the alarms are active is provided below:

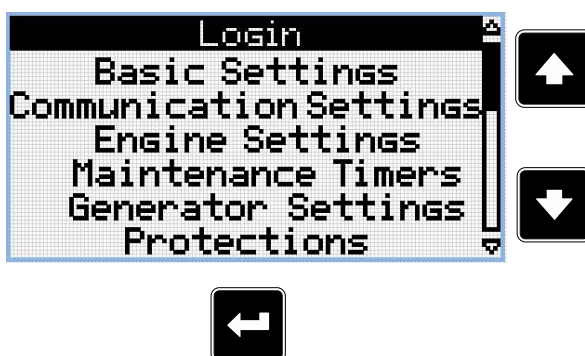
- **Wrn Production Mode** is present in the alarm list any time the production mode is turned on. To turn off the Production mode go to User management and uncheck the checkbox Production mode or go to Production Mode display screen and select disable.
- **Wrn Default Password** appears in alarm list 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.
- **Wrn Password reset e-mail address is not set** appears in alarm list when there is no email address set and the administrator password is not the default one. The purpose of alarm is to inform that there is possibility that the controller might not be accessible by administrator password due to a forgotten password. The password reset procedure cannot be performed without a filled email address. To fill out email address, the administrator password is required.

🔍 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.

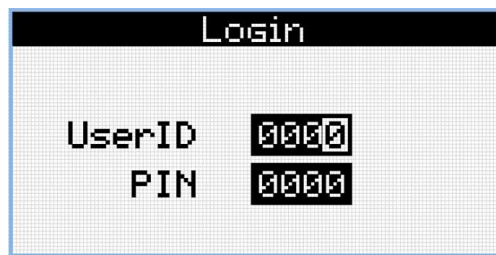
Note: Use the Enter button to enter setpoint group Login.



Note: Use the Up and the Down Button to select Login.



Note: Use the Enter button to enter Login.



UserID Edit



Note: Use the Up and the Down Button to change the digit.



Note: Use the Left and the Right buttons to move between digits.

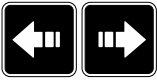


Note: Use the Enter button to confirm the UserID or Page button to cancel entering Login.

PIN Edit



Note: Use the Up and the Down Button to change the digit.



Note: Use the Left and the Right buttons to move between digits.

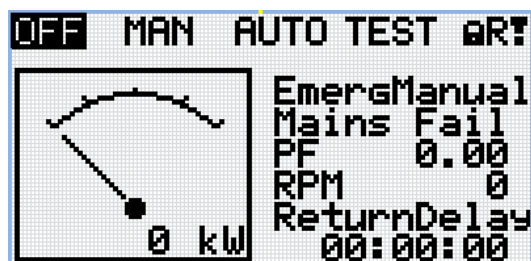


Note: Use the Enter button to confirm the PIN and Login or the Page button to cancel entering the Login.



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.

5 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.



Note: Use the Up and the Down Button to change to disabled



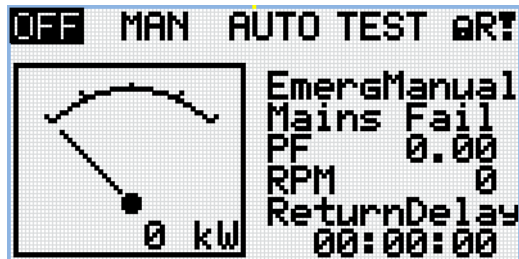
Note: Use the Enter button to disable the Production Mode.



Note: Once Disabled is confirmed by 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 IntelliConfig to enable the Production mode.

⬅ back to Production mode

6 Information screen



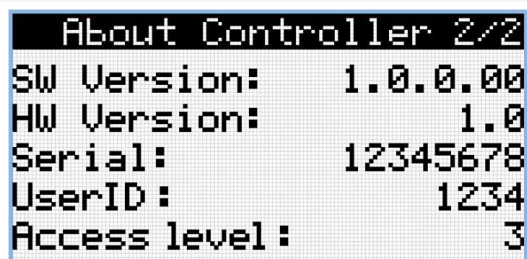
Note: On Main measurement screen press the Enter and the Page button together. The Enter button has to be pressed first.



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



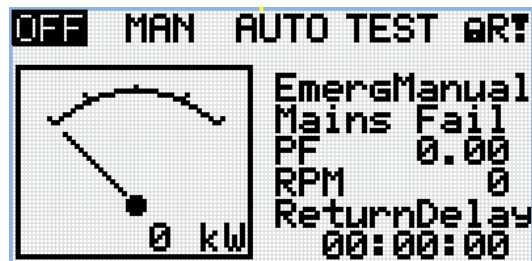
Note: Use the Page button to move to the next page.



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

 **back to Information screen**

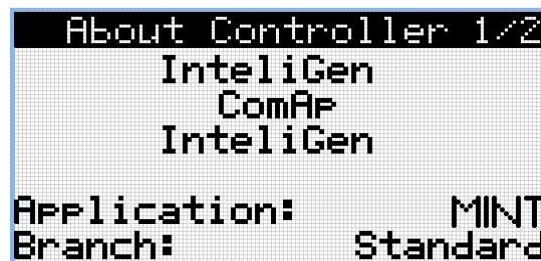
7 Language selection



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



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



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 Page button to move to the next page.

```

Languages
Language1
Language2
Language3
  
```



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



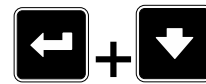
Note: Use the Enter button to confirm the selected language.

⬅ back to Language selection

8 Display contrast adjustment

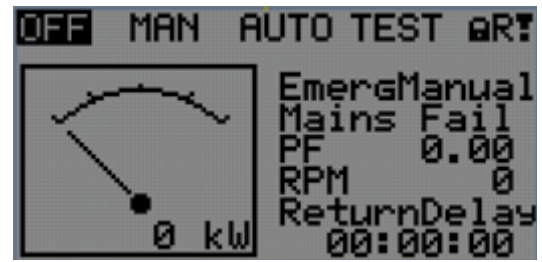
```

OFF  MAN  AUTO  TEST  OR?
┌───────────┐  EmergManual
│  ┌───┐      │  Mains Fail
│  │   │      │  PF    0.00
│  │   │      │  RPM    0
│  │   │      │  ReturnDelay
│  │   │      │  00:00:00
│  └───┐      │
│  0 kW  │
└───────────┘
  
```



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