



QPro is a free software tool for Burner Management Systems made using Quad and TraxBus™. Using QPro it's possible to upload and download configuration parameters for the following devices:

- Quad
- Quad400
- Quad600
- TraxGateway

Configuration can be saved and retrieved from file and printed to local printer or to a text file.

QPro generates the order code for the selected configuration or retrieves the configuration entering the order code.

An useful TraxMonitor tool is available to debug and test a TraxBus network.

QPro is protected by Copyright. The source code may not be altered in any way without express permission. QPro may be freely distributed, subject to these provisions:

1. The complete package, including this license, the accompanying "Read Me" file and documentation must be included with the distribution without alteration. As an express condition of this License, you must reproduce on each copy the Authors copyright notice and any other proprietary legends that were on the original copy supplied by the Author.

2. No fee may be charged in any form for QPro or its distribution.

3. Limited Warranty and Disclaimer. QPro IS LICENSED "AS IS" THE AUTHOR AND ITS LICENSORS EXPRESSLY DISCLAIM ALL WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH REGARD TO THE SOLUTIONS AND ANY ACCOMPANYING WRITTEN MATERIALS. IN THE EVENT THAT ANY WARRANTY IS IMPOSED BY LAW, AUTHOR'S ENTIRE LIABILITY AND YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY WARRANTY WILL BE, AT THE AUTHOR'S OPTION, EXPORT OF THE USER'S DATA IN MACHINE READABLE FORM.

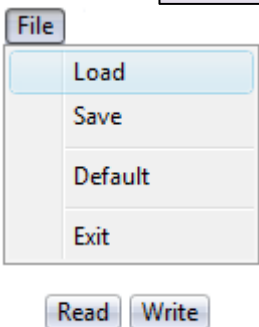
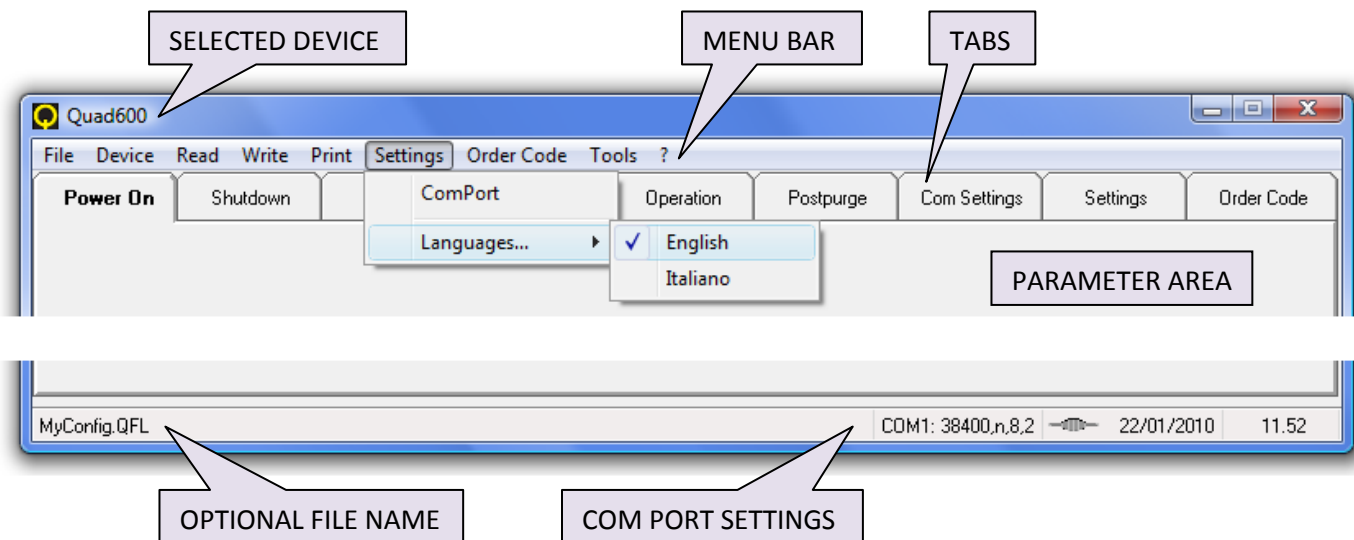
4. Limitation of Remedies and Damages. In no event will the Author, or any of the licensors, directors, officers, employees or affiliates of any of the foregoing be liable to you for any consequential, incidental, indirect or special damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information and the like), whether foreseeable or unforeseeable, arising out of the use of or inability to use the Solutions or accompanying written materials, regardless of the basis of the claim and even if the Author or a Author's representative has been advised of the possibility of such damage.

ANY ILLUSTRATIONS, PHOTOGRAPHS, OR EXAMPLES USED IN THIS MANUAL ARE PROVIDED AS EXAMPLES ONLY AND MAY NOT APPLY TO ALL PRODUCTS TO WHICH THIS MANUAL IS APPLICABLE. THE PRODUCTS AND SPECIFICATIONS DESCRIBED IN THIS MANUAL OR THE CONTENT AND PRESENTATION OF THE MANUAL MAY BE CHANGED WITHOUT NOTICE TO IMPROVE THE PRODUCT AND/OR THE MANUAL. PRODUCT NAMES, CORPORATE NAMES, OR TITLES USED WITHIN THIS DOCUMENT MAY BE TRADEMARKS OR REGISTERED TRADEMARKS OF OTHER COMPANIES, AND ARE MENTIONED ONLY IN AN EXPLANATORY MANNER TO THE READERS' BENEFIT, AND WITHOUT INTENTION TO INFRINGE.

WHILE EVERY EFFORT HAS BEEN MADE TO MAKE SURE THE INFORMATION IN THIS DOCUMENT IS CORRECT, CONTRIVE CAN NOT BE LIABLE FOR ANY DAMAGES WHATSOEVER FOR LOSS RELATING TO THIS DOCUMENT.

© COPYRIGHT 2010 CONTRIVE SRL ITALY. ALL RIGHT RESERVED.

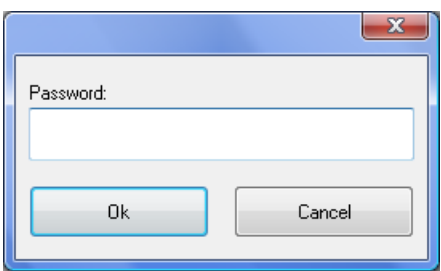
MAIN WINDOW



Select your preferred *Language* from *Settings* menu, then follow the procedure for each specific device.

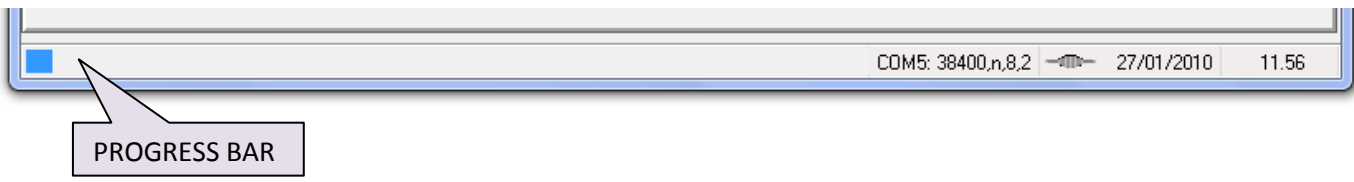
From the *File* menu is possible to *Load* a configuration from file, *Save* current configuration to a file, force current settings to *Default* and *Exit* the program.

Read will retrieve current configuration from unit through serial com port.
Write will download current configuration to unit through serial com port.



Each unit is protected by specific password.
 Before to start downloading, the device password is required.
 If the right password is provided, all the parameters (including the safety related ones) will be transferred to the unit.
 Entering a dummy or wrong password, only unprotected parameters will be downloaded to the unit.

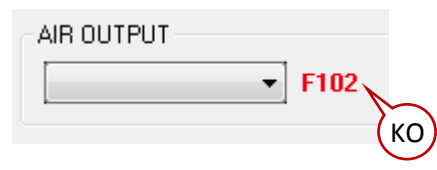
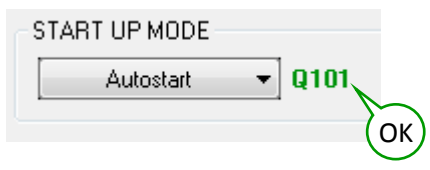
An I/O Timeout error will occur if the unit is not detected at com port.
 A progress bar is shown during data transfer.



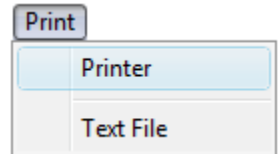
PROGRESS BAR

Once a valid data has been successfully read or write, the parameter index will be marked GREEN.

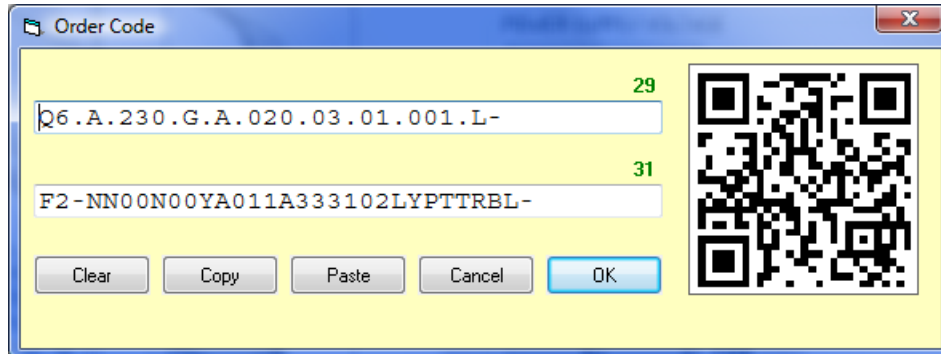
If an error occurs reading or writing a parameter, the index will be marked RED.



Select **Print** from main menu to send current configuration to system **Printer** or to save current configuration into a **Text File**.



Order code will display the current configuration code.



Clear will delete code.

Copy will transfer current code to clipboard.

Paste will take a code previously copied to clipboard.

You may also enter the code manually.

On the top of each line is reported the length of entered code.

Cancel to leave, any entered code will be discarded.

OK to confirm: a validity test is carried out and possible errors are marked directly into the code line.

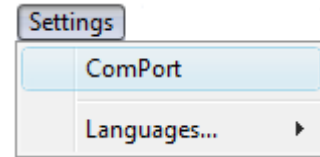
The configuration is reported also as a QRcode.

Quad

From **Device** menu select your device type **Quad**:



Select **ComPort** from **Settings** menu:

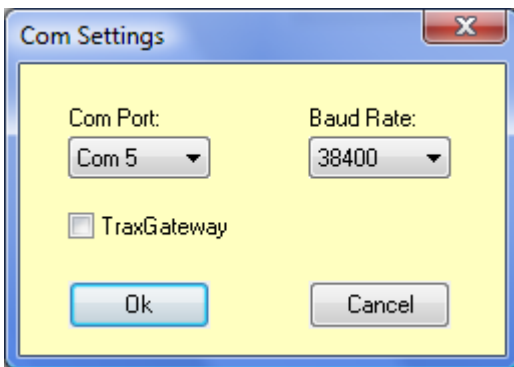


Quad can be connected using:

- internal programming socket through PAD.USB adapter
- main TraxBus interface (terminals 04|05) through TraxInterface3 (RS232 or RS422/485)
- main TraxBus interface (terminals 04|05) through TraxGateway (USB local port)

Using TraxInterface or PAD.USB:

- Select **Com Port** available on your PC
- Leave **TraxGateway** unchecked
- Select **Baud Rate** for Quad (factory default is 4800)

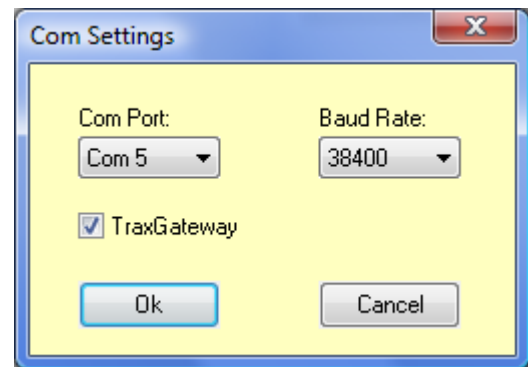


Com Settings are visible within the status line.
Grey icon: direct connection.



Using TraxGateway:

- Select **Com Port** available on your PC
- Check **TraxGateway**
- Select **Baud Rate** for Quad (factory default is 4800)



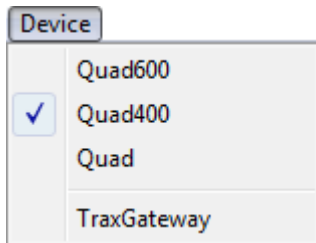
Com Settings are visible within the status line.
Green icon: connection through TraxGateway.



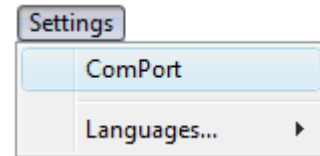
Quad must be forced to MANUAL SHUTDOWN to enter configuration mode.



From **Device** menu select your device type **Quad400**:



Select **ComPort** from **Settings** menu:



Quad400 is configured at factory.

Although it's possible, any further modification is deprecated.

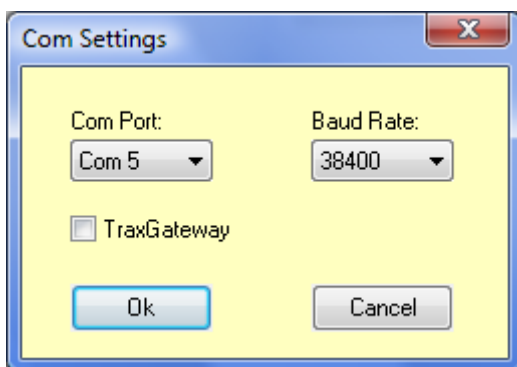
To enter configuration mode the piggyback board Q400 must be removed.

Quad400 can be connected using:

- internal programming socket through PAD.USB adapter
- main TraxBus interface (terminals 04|05) through TraxInterface3 (RS232 or RS422/485)

Using TraxInterface or PAD.USB:

- Select **Com Port** available on your PC
- Leave **TraxGateway** unchecked
- Select **Baud Rate** for Quad (factory default is 38400)



Com Settings are visible within the status line.

Grey icon: direct connection.

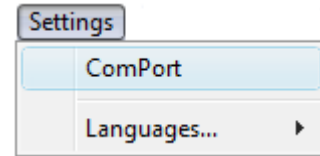


Quad400 must be forced to MANUAL SHUTDOWN to enter configuration mode.

From **Device** menu select your device type **Quad600**:



Select **ComPort** from **Settings** menu:

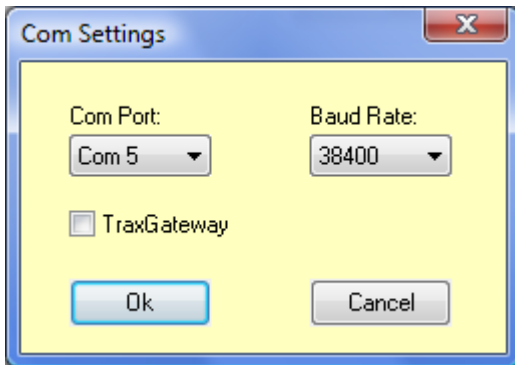


Quad600 can be connected using:

- main TraxBus interface (terminals 29|30) through TraxInterface3 (RS232 or RS422/485)
- main TraxBus interface (terminals 29|30) through TraxGateway (USB local port)

Using TraxInterface:

- Select **Com Port** available on your PC
- Leave **TraxGateway** unchecked
- Select **Baud Rate** for Quad600

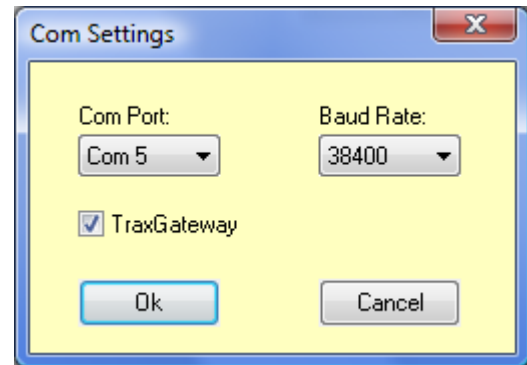


Com Settings are visible within the status line.
Grey icon: direct connection.



Using TraxGateway:

- Select **Com Port** available on your PC
- Check **TraxGateway**
- Select **Baud Rate** for Quad600



Com Settings are visible within the status line.
Green icon: connection through TraxGateway.



Quad600 must be forced to MANUAL SHUTDOWN to enter configuration mode.

CONFIGURATION PARAMETERS

During normal operation the burner can assume different status, each of them is represented by a specific tag. Available settings are shown within every tag.

The parameter index is reported beside each setting.

Parameters available for all devices are marked with a leading Q.

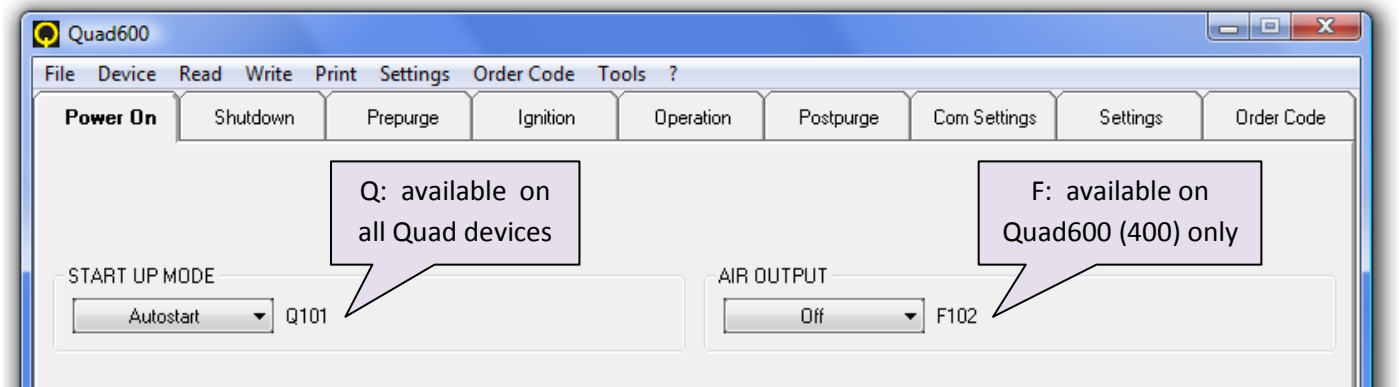
Parameters available for Quad600 only are marked with a leading F.

Some safety related parameters are protected by password and are usually set at factory.

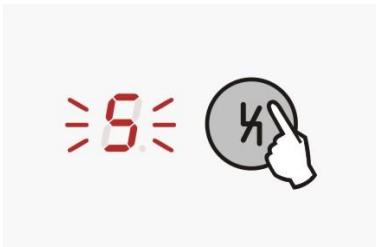
Parameters that can be freely modified are marked with symbol: ✕

1 ■ Power On

Here you can define the behavior of the burner once the power supply is provided to Burner Control Unit.



Q101 – START-UP MODE



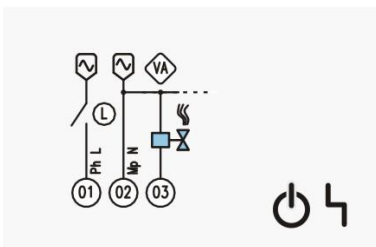
AUTOSTART

Once the self-test has been successfully completed the cycle starts automatically, unless the units has been turned off while in lockout.

STANDBY

Once the self-test has been successfully completed, the unit waits in for a manual reset operation from local push button or through remote command.

F102 – AIR OUTPUT DURING POWER-ON & LOCKOUT



ON

Air output is turned on.

OFF

Air output is turned off.

P INPUT

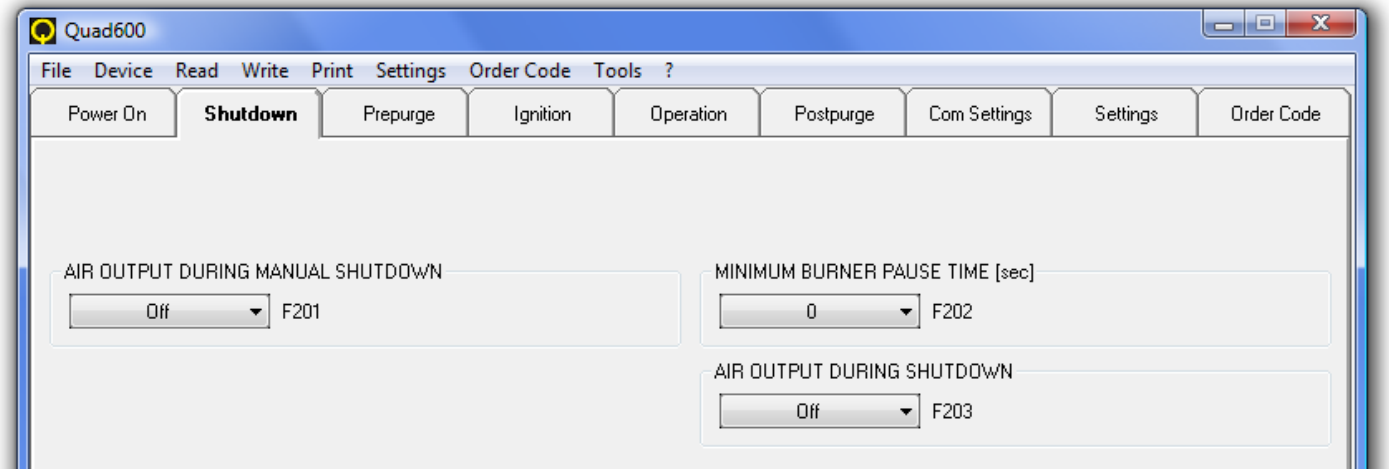
Air output is controlled by means of P input at terminal 24.

BUS

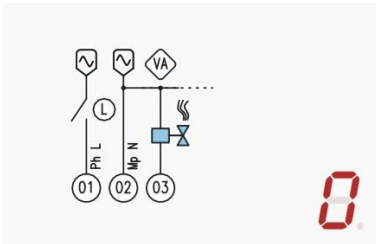
Air output is controlled from remote through fieldbus commands.

2 ■ Shutdown

Here you can define the behavior of the burner when the unit is forced to MANUAL shutdown from local push button or when the burner has been turned off from thermostat input or remote bus command.



F201 – AIR OUTPUT DURING MANUAL SHUTDOWN



ON

Air output is turned on.

OFF

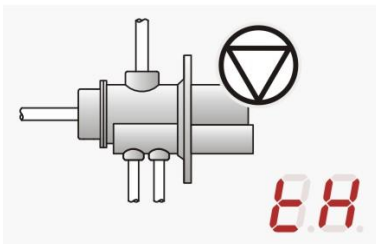
Air output is turned off.

P INPUT

Air output is controlled by means of P input at terminal 24.

BUS

Air output is controlled from remote through fieldbus commands.

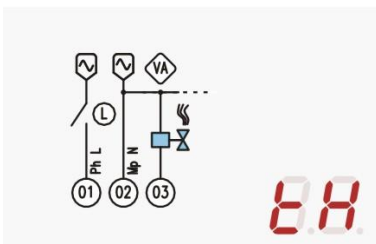


F202 – MINIMUM BURNER PAUSE TIME [sec]

0 ... 250

An immediate restart of the burner after a normal shutdown is prevented by the pause time. The pause time starts when the burner is switched off.

Any start-up will be ignored until the minimum burner pause time has elapsed.



F203 – AIR OUTPUT DURING SHUTDOWN

ON

the air output is turned on.

OFF

the air output is turned off.

P INPUT

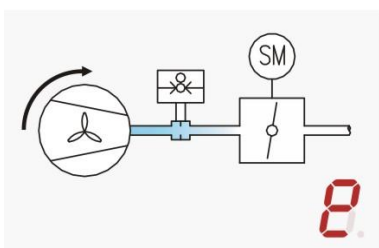
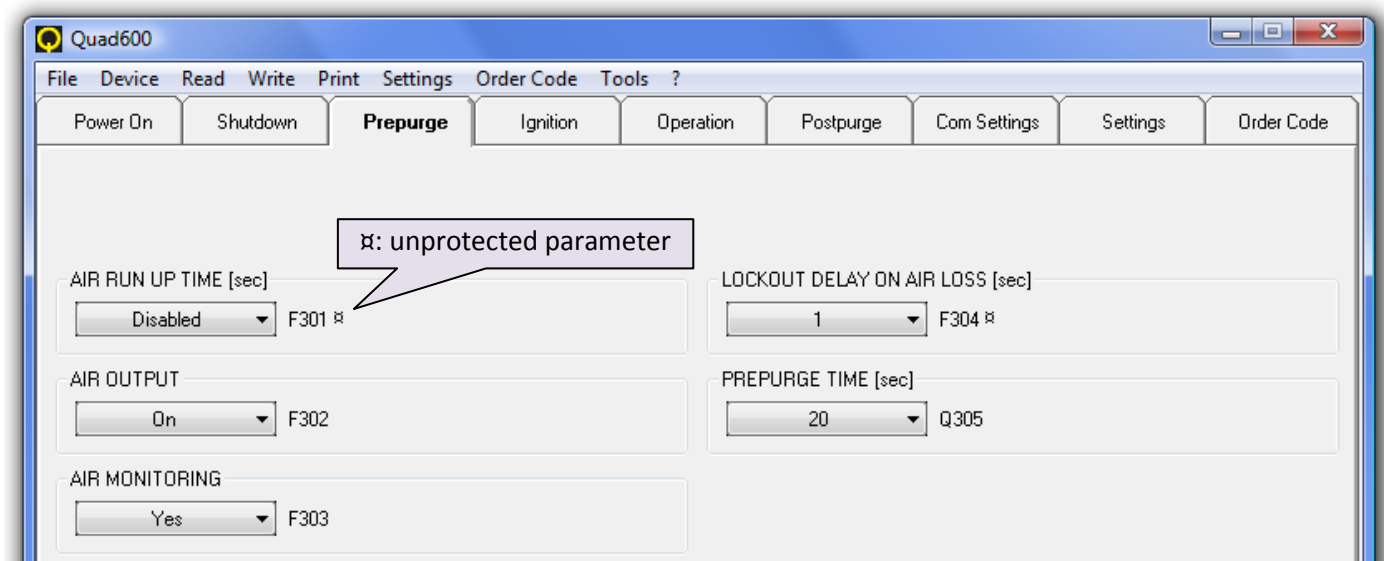
the air output is controlled by means of P input at terminal 24.

BUS

the air output is controlled from remote through fieldbus commands.

3 ■ Prepurge

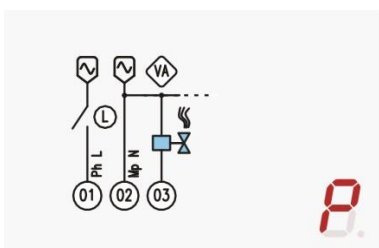
Here you can define the behavior of the burner during prepurge.



F301 – AIR RUN UP TIME [sec]

DISABLED ... 250

This parameter defines the time between the activation of the air valve (or fan) output and the beginning of prepurge in order to wait for the rated air flow, compensating a slow opening valve or the fan initial starting phase, that will be made with the butterfly valve closed, reducing the fan motor load. This delay is not introduced if the air output is already on because it has been activated before.



F302 – AIR OUTPUT DURING PREPURGE

ON

Air output is turned on.

OFF

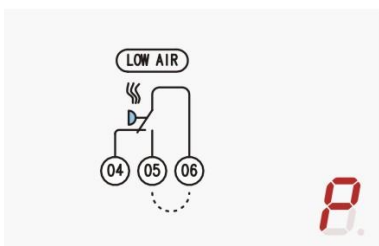
Air output is turned off.

P INPUT

Air output is controlled by means of P input at terminal 24.

BUS

Air output is controlled from remote through fieldbus commands.



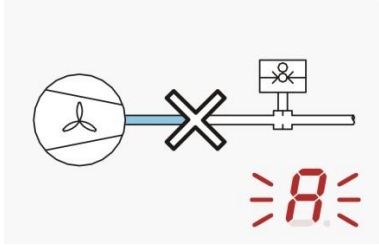
F303 – AIR MONITORING DURING PREPURGE

YES

Check the air pressure switch status.

NO

Ignore air pressure switch status.

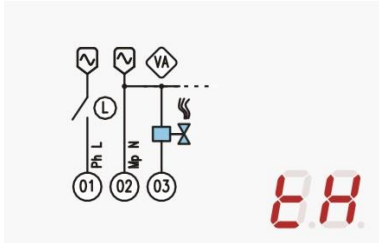


F304 – LOCKOUT DELAY ON AIR LOSS DURING PREPURGE [sec]

1 ... 250

This parameter defines the max tolerated time of missing air when the air flow is monitored by a pressure switch.

If the air pressure is restored before the end of this time no lockout occurs, but the prepurge time will be extended to compensate the missing air period.



Q305 – PREPURGE TIME [sec]

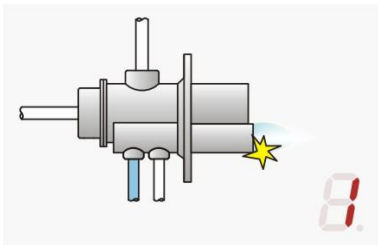
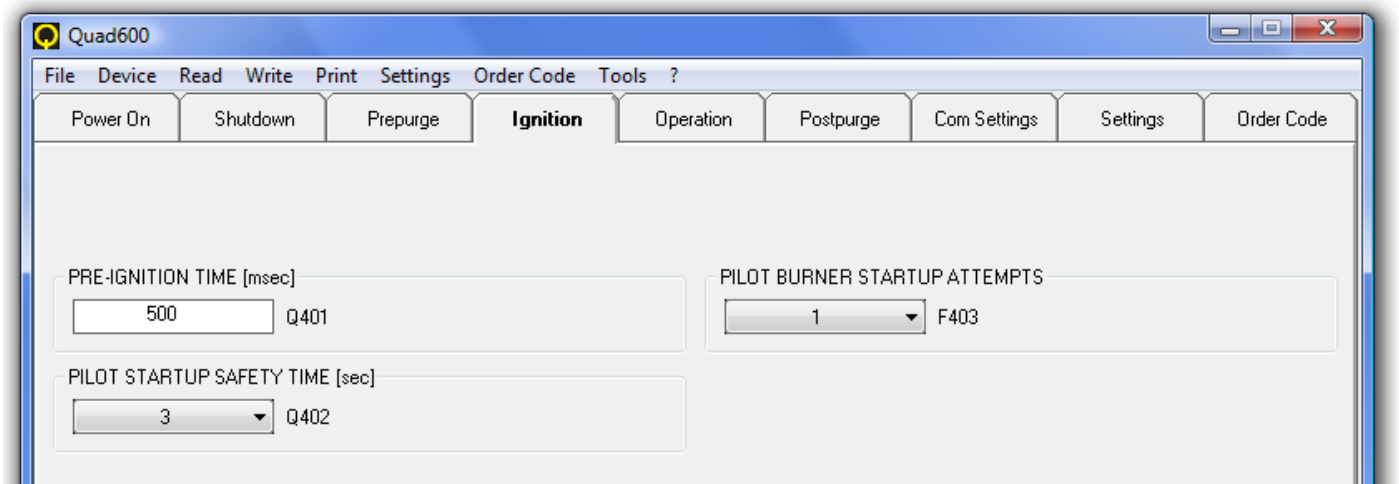
1 ... 250

Set prepurge time in forced draught burners according to EN 676 requirements. During this time air valve output is on and optional butterfly valve is open, an illegal flame test is carried out.

Prepurge could be managed also through P input or fieldbus control.

4 ■ Ignition

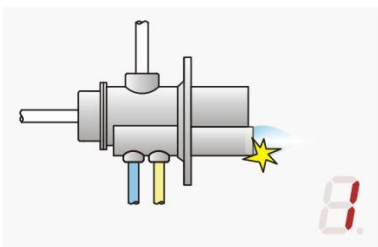
Here you can define the behavior of the burner during the ignition trial.



Q401 – PRE-IGNITION TIME [msec]

500

The ignition transformer is turned on 500 ms before the pilot gas valve to check the correct operation before to open the gas. This is a fixed time and cannot be changed.



F402 – PILOT STARTUP SAFETY TIME [sec]

2 ... 25

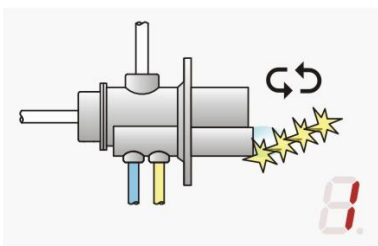
Set the correct time following EN 746-2 (or other relevant) requirements:

Natural draught burners $\leq 70 \text{ kW} \rightarrow 10''$ $> 70 \text{ kW} \rightarrow 5''$

IGNITION POWER $\leq 33\%$ NOMINAL POWER WITH MAXIMUM OF 350 KW

Forced draught burners $\leq 350 \text{ kW} \rightarrow 5''$ $> 350 \text{ kW} \rightarrow 3''$

IGNITION POWER $\leq 10\%$ NOMINAL POWER WITH MAXIMUM OF 350 KW.



F403 – PILOT BURNER STARTUP ATTEMPTS

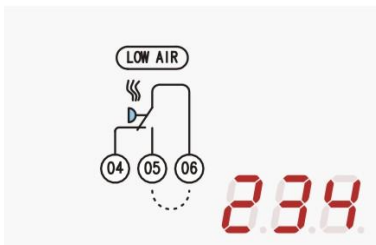
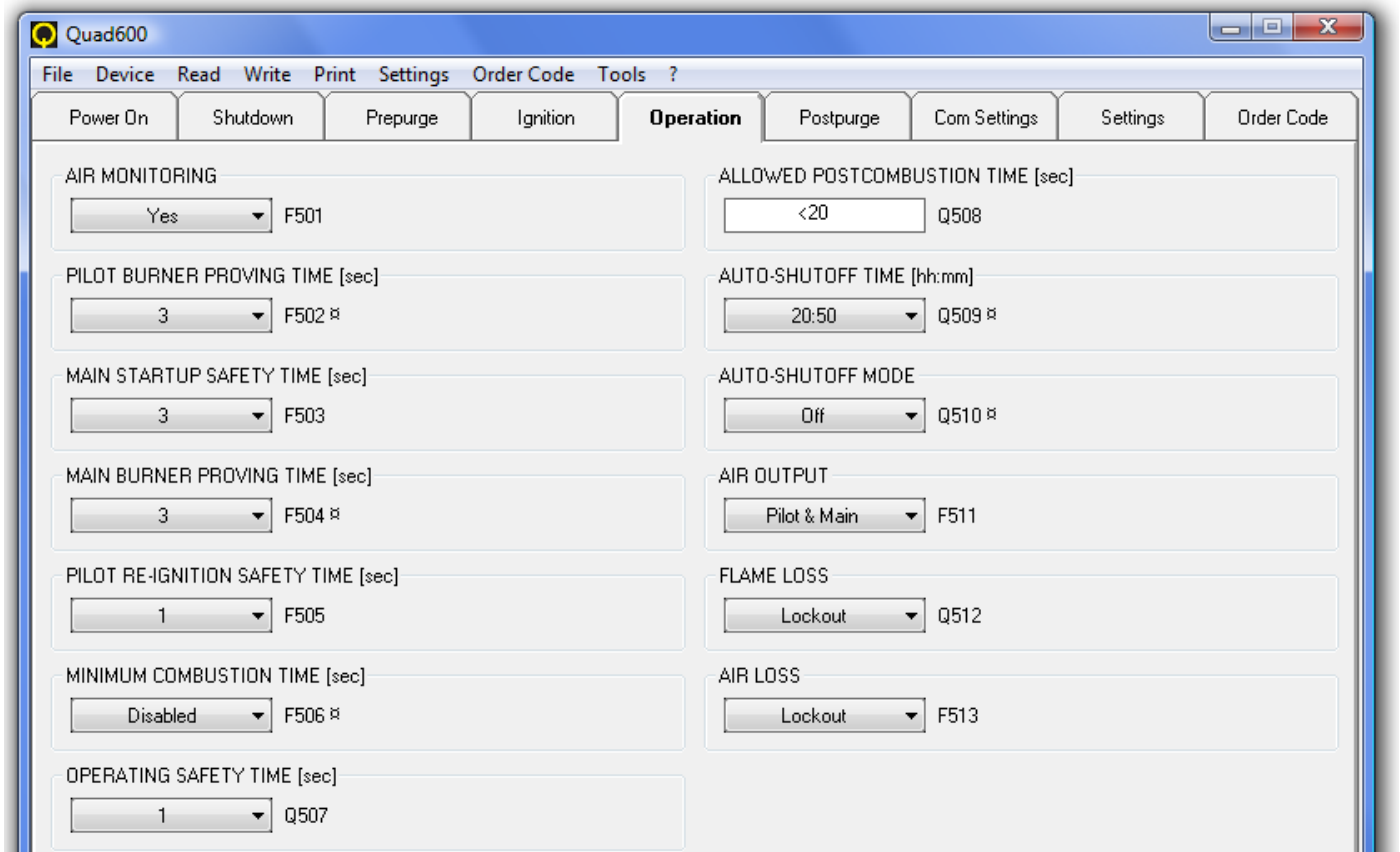
1 ... 4

In accordance with EN746-2 and EN 676, if the flame is not detected at the end of pilot startup safety time, it's possible to make up to 4 startup attempts (including the first one), when the safety of the application is not impaired, repeating the cycle from the beginning.

A lockout will occur if no flame has formed within programmed attempts.

5 ■ Operation

Here you can define the behavior of the burner once successfully ignited.



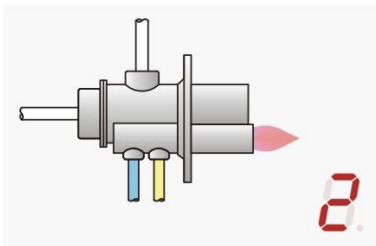
F501 – AIR MONITORING DURING OPERATION

YES

Check the air pressure switch status.

NO

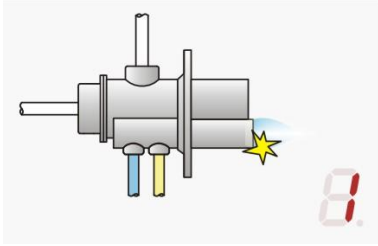
Ignore air pressure switch status.



Q502 – PILOT BURNER PROVING TIME [sec]

1 ... 25

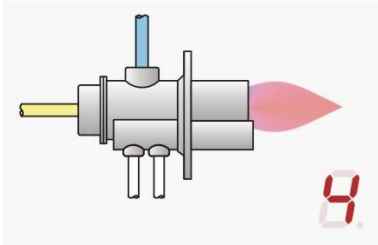
This time elapses before the unit begins the optional next program step so as to give the pilot burner flame enough time to stabilize (i.e.: the main burner could be turned on only at the end of this proving time).



F503 – MAIN STARTUP SAFETY TIME [sec]

1 ... 5

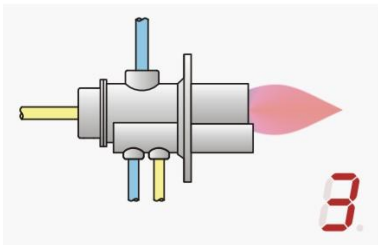
The setting of safety time is to be determined on the basis of burner capacity and relevant application standard (e.g. EN 746-2, EN 676, NFPA 85 or NFPA 86). Two switched flame sensors must be installed. V2 is opened as the safety time starts, one second before the end of the safety time v1 is closed (V1 remains open). Lockout occurs if no flame signal is detected at the end of safety time.



F504 – MAIN BURNER PROVING TIME [sec]

1 ... 4

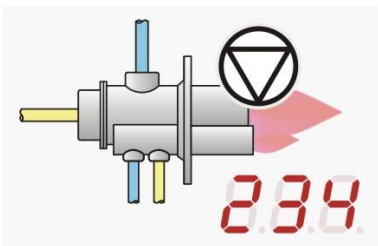
This time elapses before the unit begins the optional next program step so as to give the main burner flame enough time to stabilize. (i.e.: the pilot burner could be turned on only at the end of this proving time).



F505 – PILOT RE-IGNITION TIME [sec]

1 ... 25

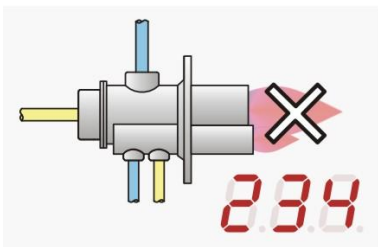
The setting of safety time is to be determined on the basis of burner capacity and relevant application standard (e.g. EN 746-2, EN 676, NFPA 85 or NFPA 86). Two switched flame sensors must be installed. v1 is opened as the re-ignition time starts, one second before the end of this time V2 is closed. Lockout occurs if no flame signal is detected at the end of re-ignition time.



F506 – MINIMUM COMBUSTION TIME [sec]

1 ... 25

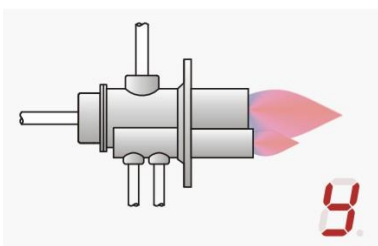
An immediate shutdown of the burner, once ignited, is prevented by the minimum combustion time. This time starts once pilot burner has been successfully ignited (after pilot safety time). Any shutdown from local thermostat ϑ 1 or remote fieldbus command will be ignored until this minimum combustion time has elapsed.



Q507 – OPERATING SAFETY TIME [sec]

1 ... 12

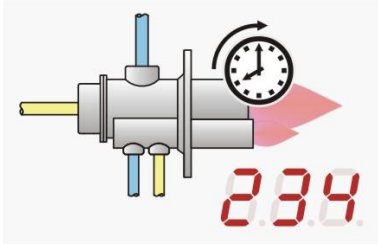
If the flame fails during operation, gas valves are switched off within this safety time that must be in accordance with relevant application standards (default for EN 298 is 1" and must not exceed 3" including valves closing time for EN 746-2).



Q508 – ALLOWED POST-COMBUSTION TIME [sec]

20

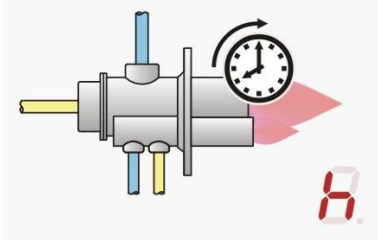
The flame signal is allowed for 20" once gas valves has been closed. Lockout occurs if the flame is detected after the post-combustion time.



Q509 – AUTO SHUT-OFF TIME [hh:mm]

00:05 ... 20:50

An automatic shutoff is performed after the specified time since burner on.



Q510 – AUTO SHUT-OFF MODE

OFF

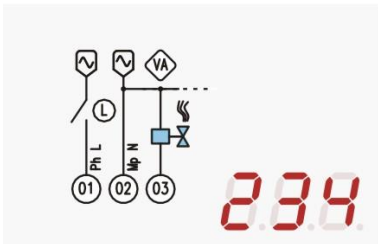
Auto shut-off disabled.

MANUAL

The burner is turned off, waiting for manual reset.

AUTOMATIC

A complete burner restart cycle is made, performing the test of the whole system, as per Standard requirements, within 24 hours of continuous operation.



F511 – AIR OUTPUT DURING OPERATION

PILOT & MAIN

Air output follows the status of pilot gas and main gas.

PILOT

Air output follows the status of pilot gas only.

MAIN

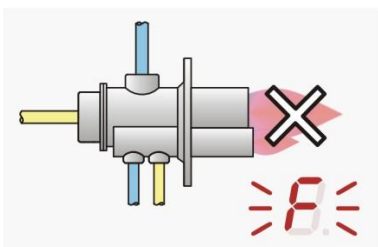
Air output follows the status of main gas only.

P INPUT

Air output is controlled by means of P input at terminal 24.

BUS

Air output is controlled from remote through fieldbus commands.



Q512 – FLAME LOSS §

LOCKOUT

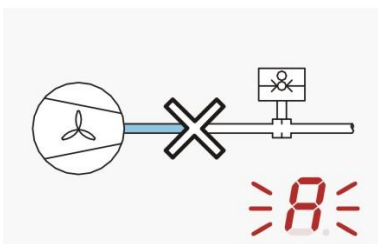
Burner lockout, waiting for reset .

RESPARK

Single respark attempt on flame loss, butterfly still open.

RECYCLE

Single recycle including self test and prepurge.



F513 – AIR LOSS DURING OPERATION [sec] §

LOCKOUT

Burner lockout, waiting for reset .

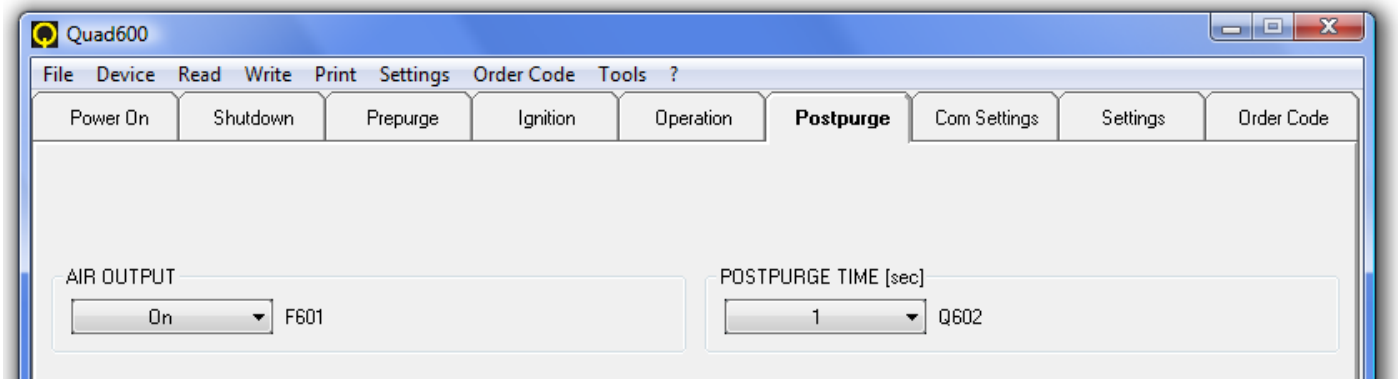
RECYCLE

Single recycle including self test and prepurge.

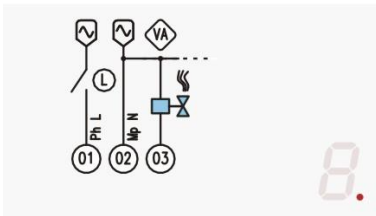
§ To be selected on the basis of burner power and relevant applicable Standards.

6 ■ Postpurge

Here you can define the behavior of the burner during postpurge.



F601 – AIR OUTPUT DURING POSTPURGE



ON

Air output is turned on during power-on and lockout status.

OFF

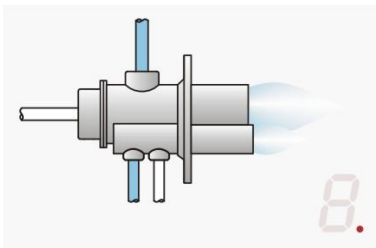
Air output is turned off during power-on and lockout status.

P INPUT

Air output is controlled by means of P input at terminal 24.

BUS

Air output is controlled from remote through fieldbus commands.



Q305 – POSTPURGE TIME [sec]

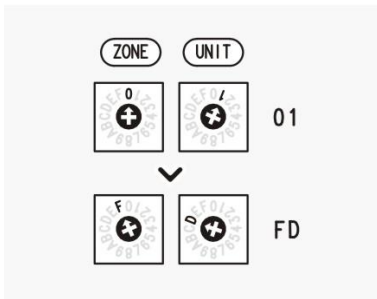
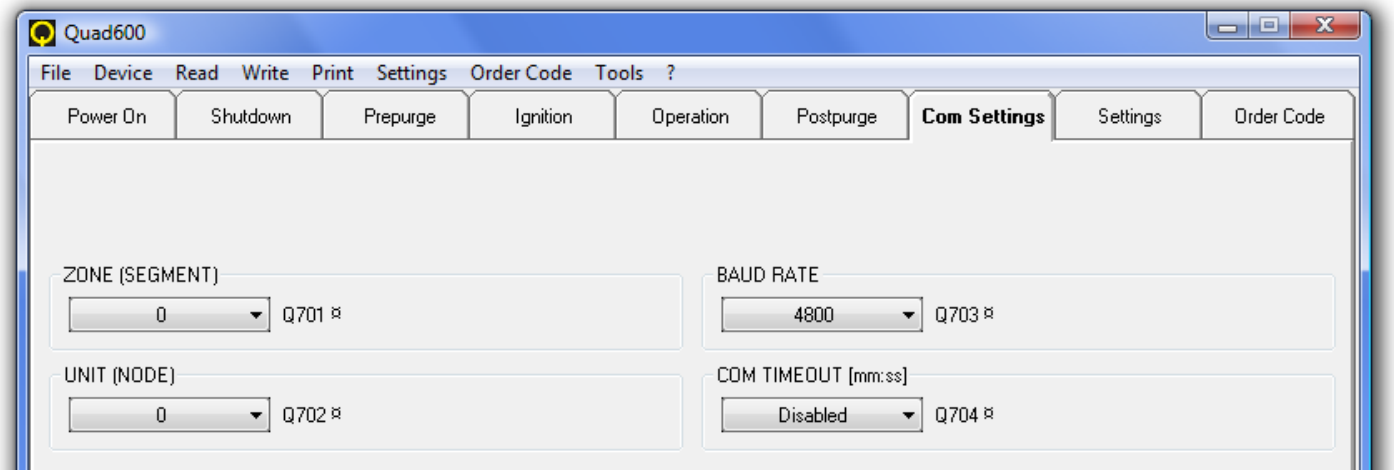
1 ... 250

Follow EN 676 requirements to set correct postpurge time in forced draught burners. During this time the optional butterfly valve is open, an illegal flame test is carried out.

Postpurge could be managed also through P input or fieldbus control.

7 ■ Com Settings

Here you can specify communication settings that will be used by this device.

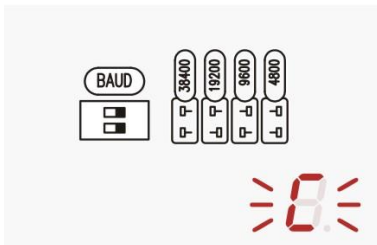


Q701 – ZONE (SEGMENT)

Communication identifier: group or zone belonging the burner control.
Read only on Quad600 (set by hardware dipswitch).

Q702 – UNIT (NODE)

Communication identifier: burner control within a given area, group or zone.
Read only on Quad600 (set by hardware dipswitch).



Q703 – BAUD RATE

4800 | 9600 | 19200 | 38400

Communication baud rate.

Read only on Quad600 (set by hardware dipswitch).

Q704 – COM TIMEOUT [mm:ss]

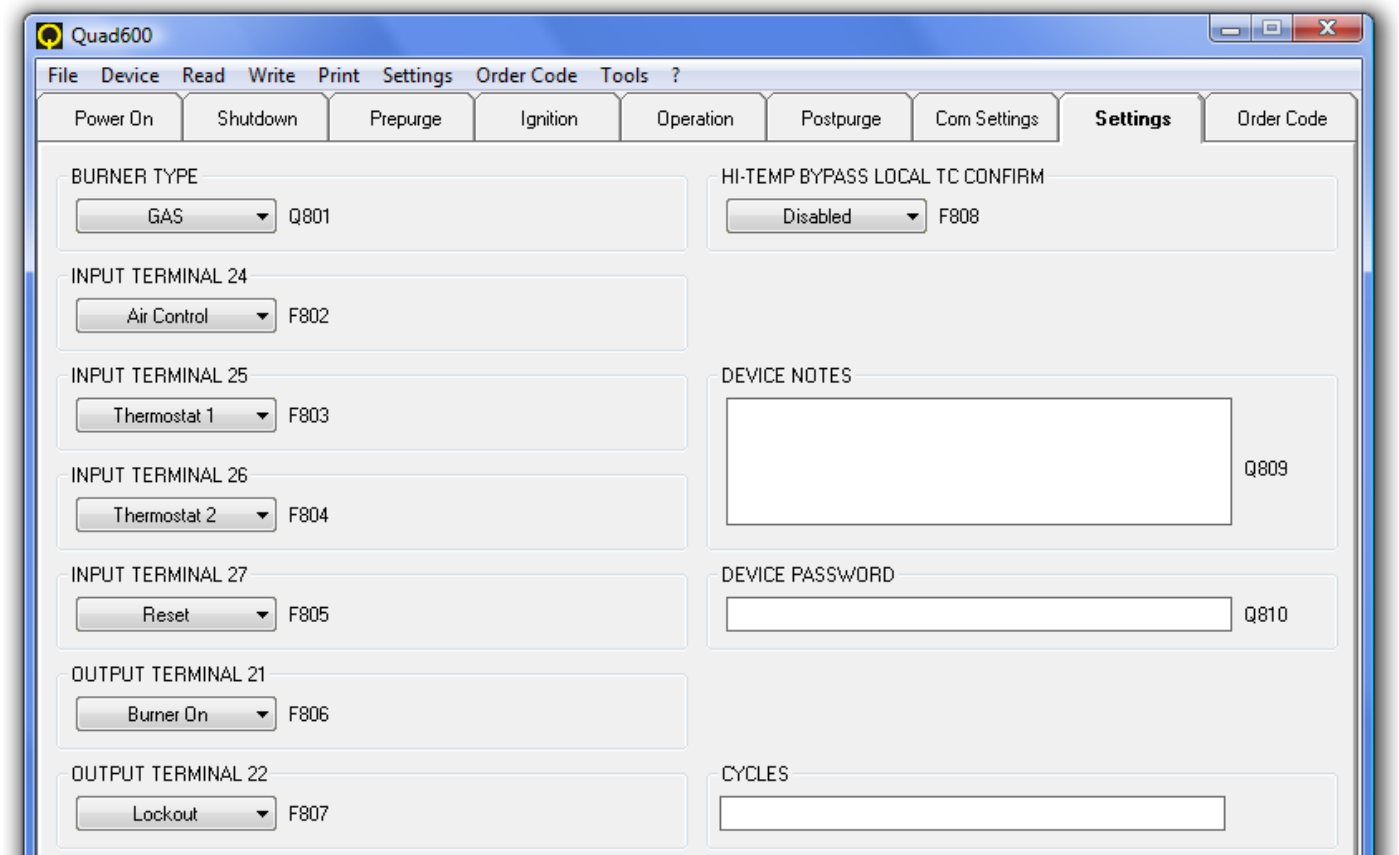
00:04 ... 16:40

Remote host must send a valid message within the specified time interval to prevent a lockout due to missing control, it could be disabled.

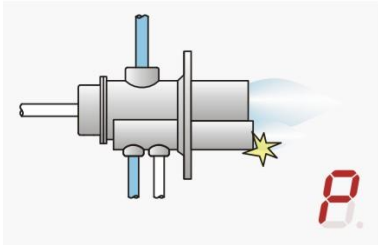
For Quad600 only could be left in Automatic mode, it will be related to baud rate settings: 200" @4800, 152" @9600, 100" @19200, 52" @38400.

8 ■ Settings

Here you can specify general hardware settings.



Q801 – BURNER TYPE



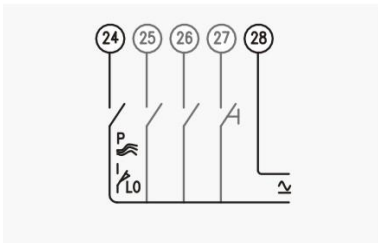
GAS

Ignition transformer is powered during ignition only.

OIL

Ignition transformer will be activated also during the prepurge to allow the detection of oil leakage that will be ignited, leading to an illegal flame detection. Application and settings must be made in accordance to EN 230 (or other relevant standard) requirements.

F802 – INPUT TERMINAL 24



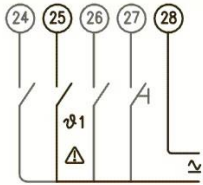
AIR CONTROL

Control of air valve (or fan) in all states where the control through P input has been enabled.

BUTTERFLY LOW FIRE

Low fire position limit switch of butterfly air valve (enabling this purpose all other related settings F804, F806 and F807 will be forced to butterfly air valve selection).

F803 – INPUT TERMINAL 25



THERMOSTAT 1

Thermostat contact to be used for burner control (ON|OFF).

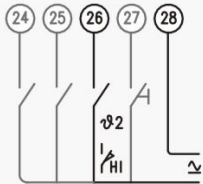
DISABLED

Unused input.

COMMISSIONING

Switch to commissioning mode, excluding remote fieldbus control (after 10 min will revert automatically to normal mode).

F804 – INPUT TERMINAL 26



THERMOSTAT 2

Thermostat contact to be used for main burner control (ON|OFF).

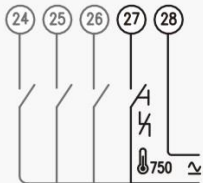
DISABLED

Unused input.

BUTTERFLY HI FIRE

High fire position limit switch of butterfly air valve (enabling this purpose all other related settings F802, F806 and F807 will be forced to butterfly air valve selection).

F805 – INPUT TERMINAL 27



RESET

Burner reset input from remote push button.

HI-TEMP BYPASS

High temperature flame surveillance bypass by means of redundant control or enabling parameter Q808 to use local thermocouple safety confirmation. Available on Quad600H only.

F806 – OUTPUT TERMINAL 21

BURNER ON

Burner on signal to external control logic (closed while running).

PILOT PROBE

Controlling dual stage burners using permanent pilot, this output could be used to switch the surveillance to pilot burner flame detector.

BUTTERFLY CLOSE

Close control to butterfly air valve (enabling this purpose all other related settings F802, F804 and F807 will be forced to butterfly air valve selection).

F807 – OUTPUT TERMINAL 22

LOCKOUT

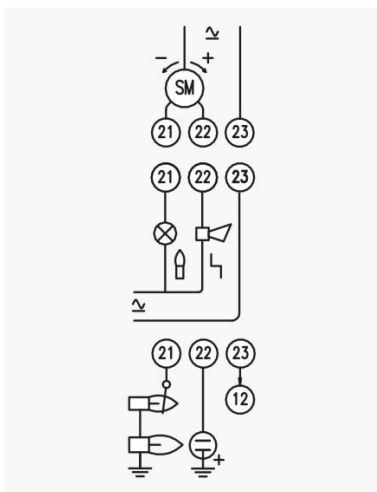
Burner lockout signal to external control logic (closed during lockout).

MAIN PROBE

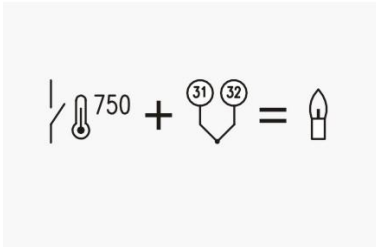
Controlling dual stage burners using permanent pilot, this output could be used to switch the surveillance to main burner flame detector.

BUTTERFLY OPEN

Open control to butterfly air valve (enabling this purpose all other related settings F802, F804 and F807 will be forced to butterfly air valve selection).



F808 – HI-TEMP BYPASS TC CONFIRM

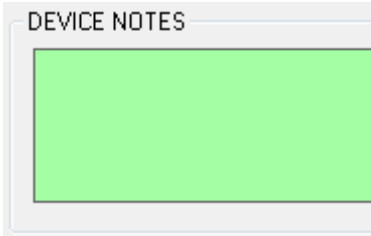


ENABLED

Instead of using redundant control on high temperature flame surveillance bypass, the local thermocouple can operate as a second channel confirmation. When this option is enabled, the bypass will be activated only when the local thermocouple input confirms that the temperature is above 750°C. Available on Quad600H only.

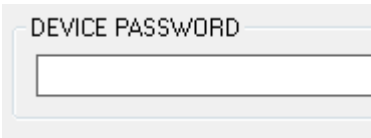
DISABLED

Feature disabled.



Q809 – DEVICE NOTES

Optional notes stored into the unit.
Text box will turn to GREEN once successfully read.
Text box will turn to RED when a reading error occurs.



Q810 – DEVICE PASSWORD

New password to be stored into the unit.
This parameters cannot be retrieved from the unit.
It's a write only data.



CYCLES

Ignition cycles performed by the unit, it's a read only data.
Text box will turn to GREEN once successfully read.
Text box will turn to RED when an error occurs reading.

0 ■ Order Code

Here you can select specific hardware configuration.

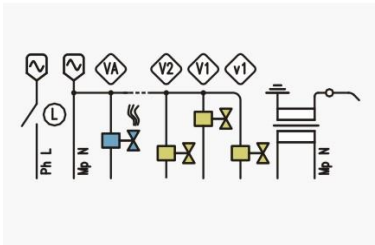
The order code built considering all settings is shown at the bottom of the page.

The screenshot shows the 'Order Code' tab in the Quad600* software. On the left is a 3D rendering of the Quad600 control unit. On the right, several configuration options are shown as dropdown menus:

- POWER SUPPLY VOLTAGE: 230V (Q001)
- ENCLOSURE: Al Standard (Q002)
- PROCESS INPUT VOLTAGE: 230V (F003)
- THERMOCOUPLE / HI-TEMP BYPASS: No (F004)

Below these options, the generated order code is displayed: **QUAD.A.230.G.A.010.03.01.001.C-F2-YN00N00YA011A333102LYPTTRBL-**

A callout box labeled 'ORDER CODE' points to the order code text.



Q001 – POWER SUPPLY VOLTAGE

230V | 115V

Power supply must be wired at terminal 01 and 02, for burner control unit and loads (air and gas valves and ignition transformer), both protected by the embedded fuse.

Optional safety interlock limits could be wired on the main supply phase.

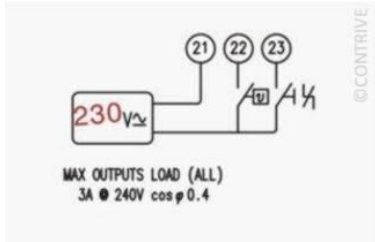
Q002 – ENCLOSURE



AL STANDARD | AL LOW PROFILE | POLYCARBONATE

Quad is available with 3 different enclosure options.

According to European Standard EN60529 a minimum protection degree IP40 must be guaranteed, raised to IP54 for open air application.

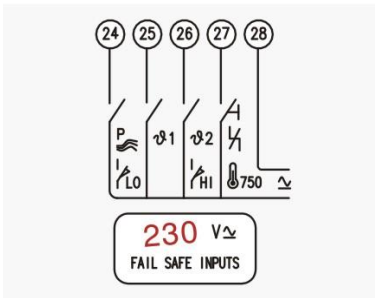


F003 – PROCESS INPUTS VOLTAGE (Quad400)

230V | 115V | 48V | 24V

Inputs coming from external control circuit are independent from device and burner power supply, allowing an isolated interface. Different voltage options are available, both alternating or direct current.

Inputs are referred to a common return at terminal 21.



F003 – PROCESS INPUTS VOLTAGE (Quad600)

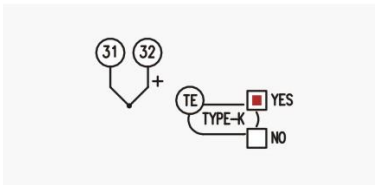
230V | 115V | 48V | 24V

Inputs coming from external control circuit are independent from device and burner power supply, allowing an isolated interface.

Different voltage options are available, both alternating or direct current.

Inputs are referred to a common return at terminal 28 and are continuously verified against possible failures, to guarantee a reliable operation.

The symbols shown near the terminal board are related to possible associated function, to be configured by means of parameters F802, F803, F804 and F805.



F004 – THERMOCOUPLE / HI-TEMP BYPASS

YES | NO

This option is available on Quad600H: a type K (chromel-alumel) thermocouple could be connected at terminal 31 and 32 and the high temperature flame surveillance bypass will be possible.

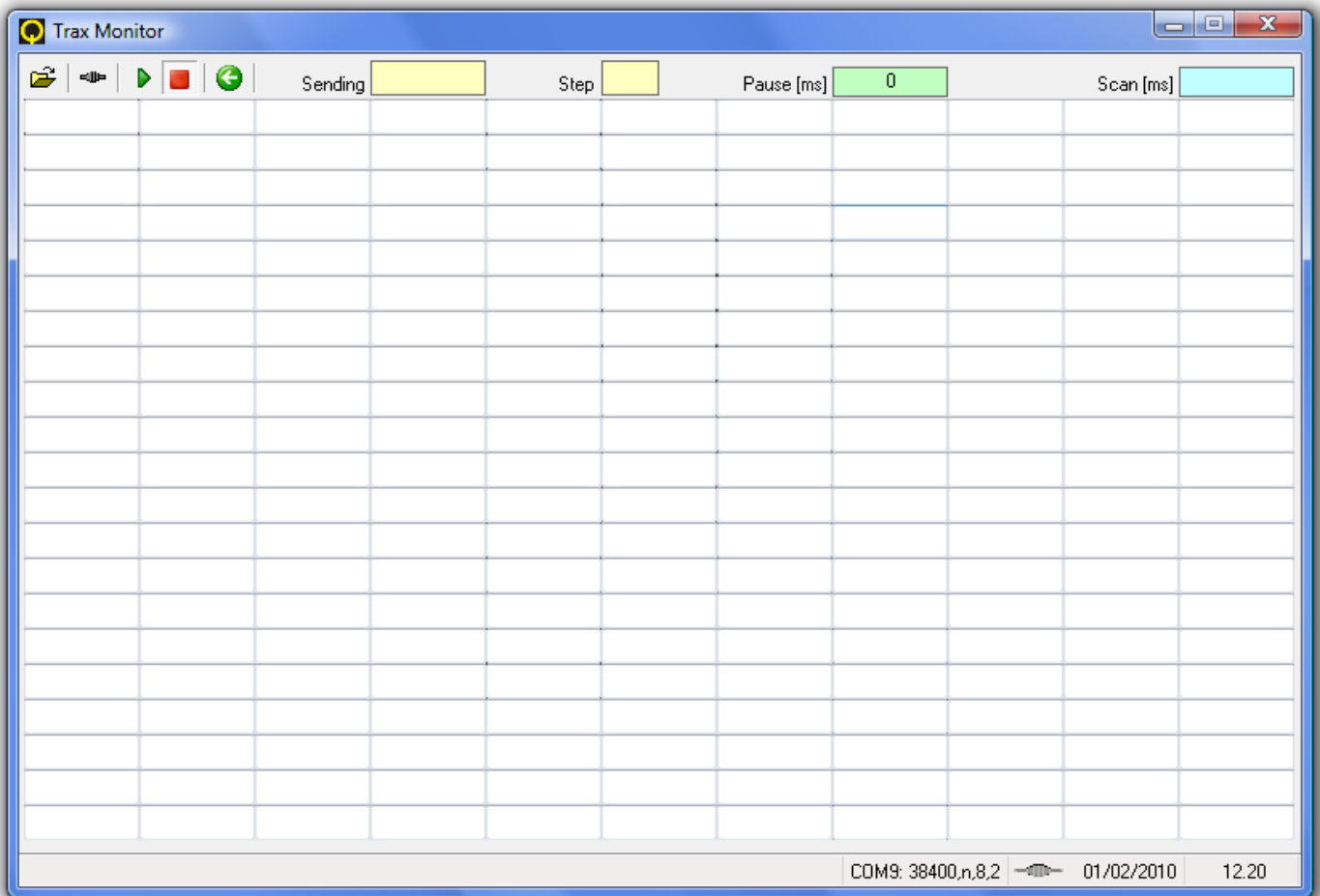
TOOLS - TraxMonitor

Tools

Trax Monitor

TraxMonitor is a debug/test utility available under **Tools** menu.

Up to 231 commands listed into a simple text file will be sent out to evaluate errors and timing for one or more connected devices.



OPEN

Open an existing command file previously created with a text editor.

COM SETTINGS

Open communication settings dialog box.



START

Start issuing commands to connected units (a file must be selected first).

STOP

Stop issuing commands to connected units.

QUIT

Exit TraxMonitor, returns to configuration environment.

Sending <00RFB

SENDING

The string sent out, taken from the selected commands file. Checksum is calculated and appended to the original string.

Step **6**

STEP

Index of currently issued command.

In this example TraxMonitor is sending the 6th string listed into commands file.

Pause [ms] **1000**

PAUSE [ms]

Option delay to be introduced between two consecutives commands.

In this example 1 second pause is introduced. This will affect the total scan time.

Scan [ms] **7535**

SCAN [ms]

Scan time used to send all the commands and receive all the answers, including pauses and retries in case of failed response. The value is updated at the end of every session. In this example polling cycle was 7,535 seconds.

| | |
|--------|--|
| >00SFE | |
| >00SFE | |
| >00SFE | |
| >00SFE | |
| | |
| | |
| >00SFE | |
| | |
| | |
| | |
| | |

MAIN TABLE

Every cell will be filled with the answer received from remote units at every issued command. At the beginning all cells are blank.

During transmission the cell will turn to YELLOW.

Receiving a correct response the cell will turn to GREEN and the received data will be shown (including checksum).

If the answer is missing or wrong TraxMonitor tries another issue, if both fails the cell will turn to RED and left blank.

Once the end of commands file is reached, the process restart from the beginning.

Since command file is continuously reloaded, it's possible to change the content of the file on-the-fly.

How to build a command file

```
1 <01R
2 <02R
3 <03R
4 <04R
5 <05R
6 <06R
7 <07R
8 <08R
9 <09R
10 <0AR
11 <0BR
12 <0CR
13 <0DH
14 <0EH
```

Commands file it's nothing more than a list of commands to be issued: one command per line, without checksum (that will be calculated automatically by TraxMonitor).

Any text editor is suitable for this purpose.

Save the file with extension *.tcf* (i.e.: *loop.tcf*, *test.tcf*).

You may test a complete network issuing one or more commands to different units like in the example on the left side.

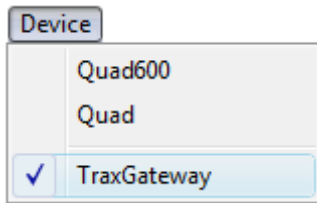
You may test a single burner cycle, issuing all commands to the same unit like in the example on the right side.

Put the word *END* where you want to stop the list: TraxMonitor will consider this point like the end and will restart from the beginning.

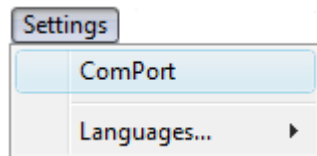
```
1 <00S
2 <00R
3 <00R
4 <00R
5 <00R
6 <00H
7 <00H
8 end
9 <01S
10 <01R
11 <01R
12 <01R
13 <01R
14 <01H
15 <01H
```

TraxGateway

From **Device** menu select **TraxGateway**:

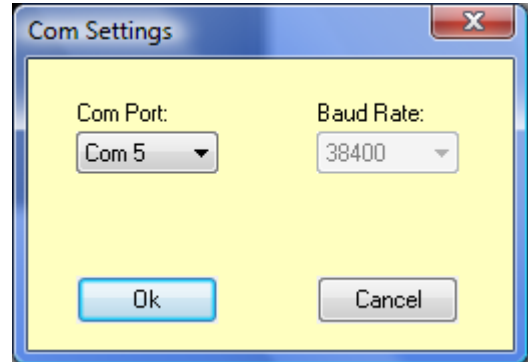


Select **ComPort** from **Settings** menu:

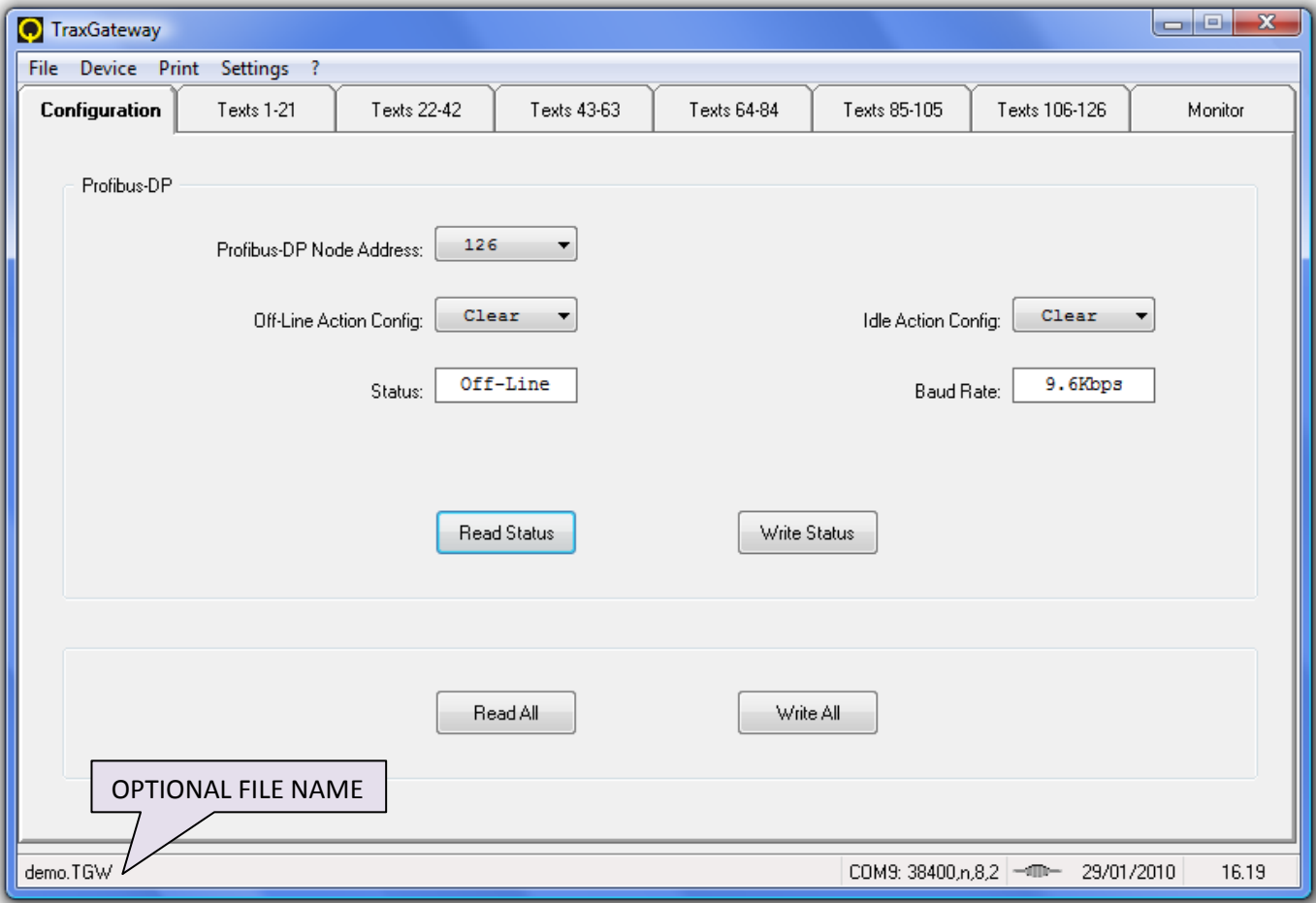


Connect local USB on TraxGateway front panel.

- Select **Com Port** available on your PC
- Baud Rate 38400 (fixed)



Configuration



Profibus-DP

PROFIBUS-DP NODE ADDRESS

Fieldbus node address assigned to TraxGateway (factory default: 126).

OFF LINE ACTION CONFIG

CLEAR: all outputs are cleared when the fieldbus goes off-line

FREEZE: all outputs are kept as-is when the fieldbus goes off-line

IDLE ACTION CONFIG

CLEAR: all outputs are cleared when the fieldbus goes to idle

FREEZE: all outputs are kept as-is when the fieldbus goes to idle

STATUS

Current status of TraxGateway-PDP (On-Line, Off-Line, Idle).

BAUD RATE

Current baud rate for Profibus network (set from Profibus side).



READ Reads Profibus status and settings from TraxGateway.

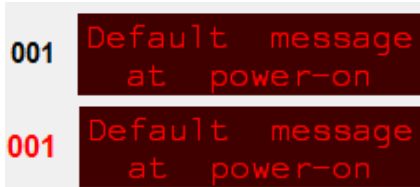
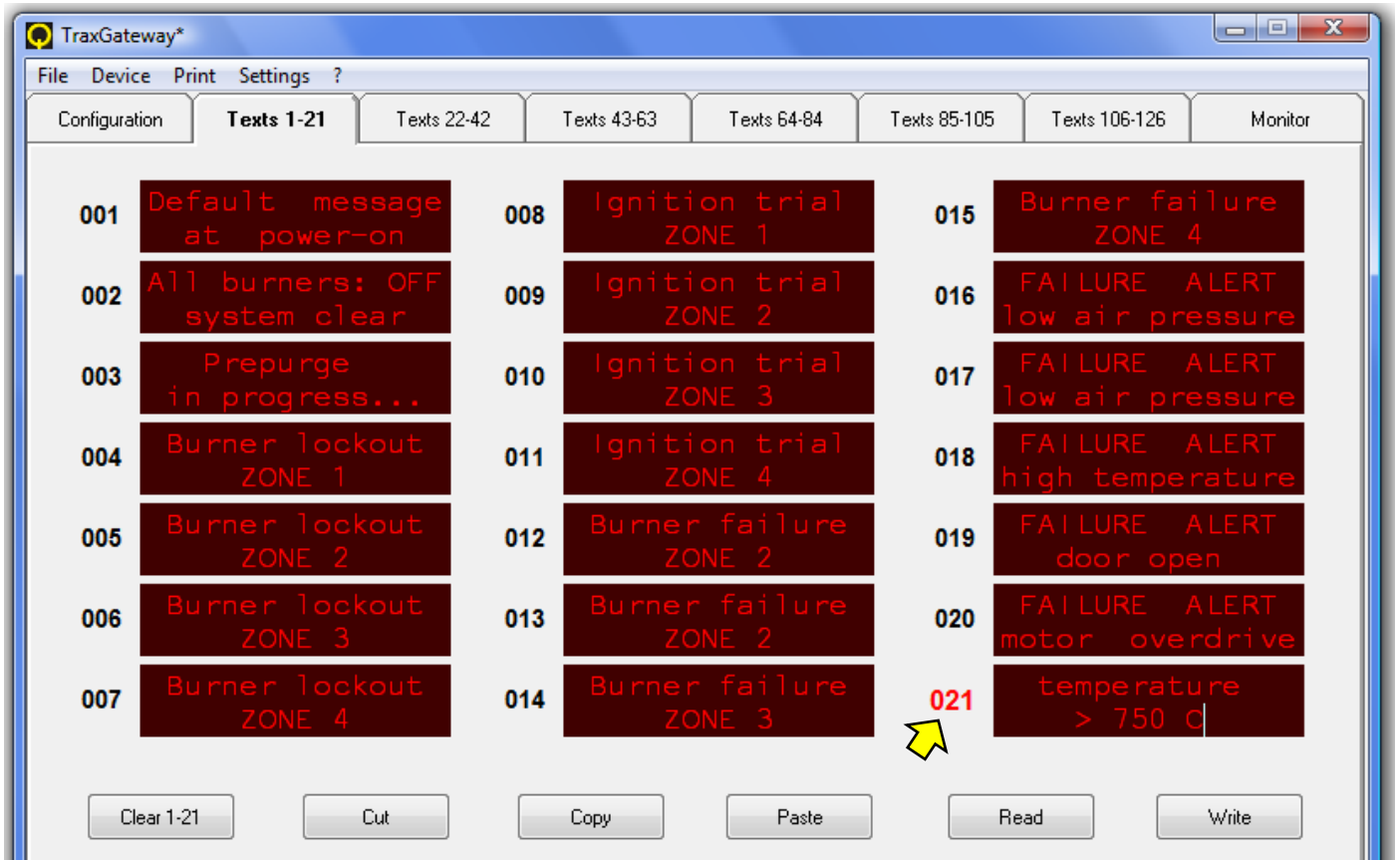
WRITE Writes current Profibus settings to TraxGateway.



READ ALL Reads all TraxGateway settings (Profibus and texts).

WRITE ALL Writes all current settings (Profibus and texts) to TraxGateway.

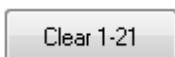
Texts



Message BOX

Text that will be shown on 2nd and 3rd rows of TraxGateway display, according to Profibus request [output 122].

Text 1 is the default message displayed at every power-on.



CLEAR

Button available on all text pages, clears all the text messages of current page.



CUT The content of current display (red index) is cut and copied to clipboard.

COPY The content of current display (red index) is copied to clipboard.

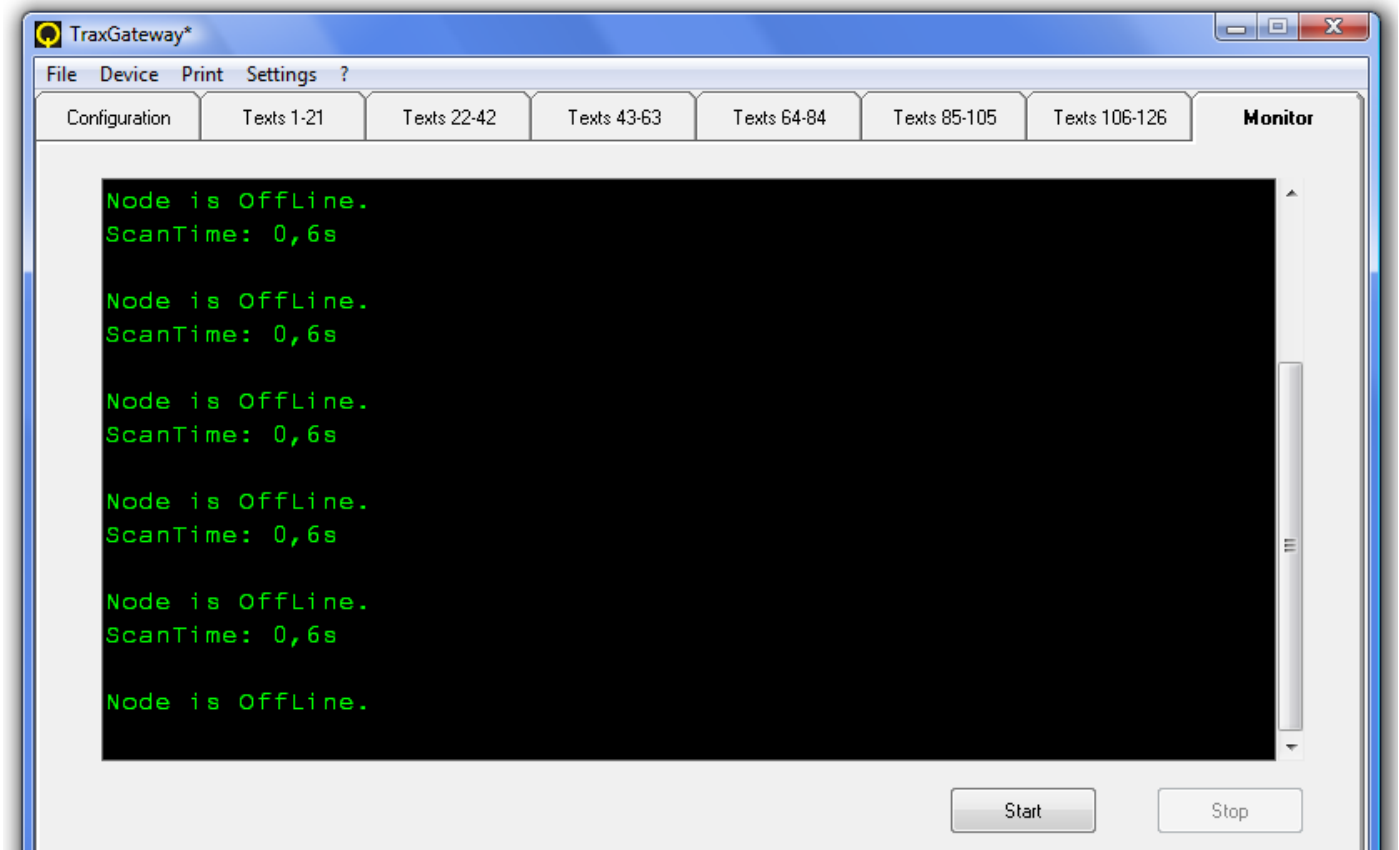
PASTE The content of current display (red index) is pasted from clipboard.



READ Retrieves from TraxGateway the texts indexed on current page.

WRITE Writes to TraxGateway the texts indexed on current page.

Monitor



From this terminal window you can inspect the activity on TraxBus.



START tracking the TraxBus activity, commands and status.

STOP tracking the TraxBus activity, commands and status.