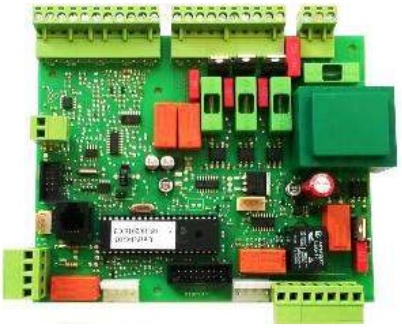
Control board for pellet operated systems
Information sheet

UniPelGD2 system is organized in two modules, main board and display.
The connection between these two modules is made by ribbon cable.

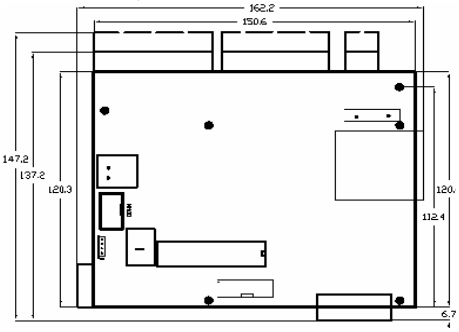
Main board



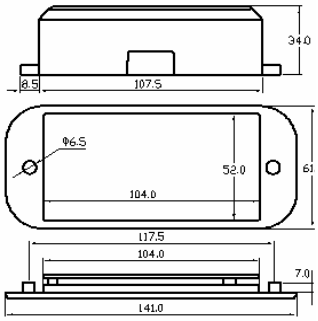
Display

Dimensions

Board 155x120mm; with connectors 162x147x35mm



Panel 141x61x34mm; installation hole 104x52mm



Main board characteristics:

10 Outputs; 12 Inputs; RTCC; Expandable
Preprogrammed Applications:
- Air /Water system
- Basic Stove / Burner / Boiler
- Combined boiler:pellets+logs

Additional extras
- Two feeding screws
- Chamber cleaning - mechanical
- Chamber cleaning - compressed air
- Ash extraction system

Display characteristics:

Display Type: LCD graphics – 2”
Push buttons – 5; buzzer
Backlight with dimming
Build in menu languages 6
Language sets available

- Secondary (flue) Fan
- Domestic hot water tank management
- Storage tank management
- Custom software available

Main board

Outputs – total 10

TRIACS, with fuses	4
- Voltage control function	2
- ON/OFF function	2
RELAYS ON/OFF	6
- At Line voltage (SPST) – 5A	3
- Voltage free (2x SPST, 1x SPDT) – 5A	3

Inputs – total 12

Analog - temperature	6
* optional 1x K type thermocouple	1*
Analog - photo sensor for flame presence	1
Digital inputs (ON/OFF)	3
Hall sensor for main fan	1
Digital input for 12V PNP	1

*Optional feedback (air flow/lambda)

Others:

- Real Time Clock
- Expansion socket
- Power Supply 230V/50Hz ±10%

- Display port
- Serial Interface for link and programming
- Optional WiFi module for remote access

TYPICAL APPLICATIONS - EXAMPLES

BURNER

Mandatory Outputs		Mandatory Inputs	
Blower fan (main fan)	VCT	Boiler temperature	TS
Dosing screw	T.O.	Photo sensor for flame presence	PS
Igniter	R.O.	Room Thermostat Switch	NCC
Main CH Pump	T.O.	Alarm input (back fire)	NCC
DHW Pump	R.O.	DHW Tank temperature	TS
Cleaning by AIR	R.O.	Over pressure/ low air flow switch	NCC
Additional Outputs		**Additional Inputs**	
Flux Fan	VCT	Flux temperature (for efficiency)	HTS
Secondary feeding screw	R.O.	Hall sensor for main fan	HS
Ash extraction	R.O.	Water system low pressure switch	NCC
Mechanical Cleaning	R.O.	Not used digital - 2, analog - 1	-

STOVE - HYDRO

Mandatory Outputs		Mandatory Inputs	
Flux Fan (main fan)	VCT	Boiler temperature	TS
Dosing screw	T.O.	Flux temperature	HTS
Igniter	R.O.	Room Thermostat Switch	NCC
Main CH Pump	T.O.	Alarm input (back fire)	NCC
DHW Pump	R.O.	DHW Tank temperature	TS
		Over pressure/ low air flow switch	NCC
		Hall sensor for main fan	HS
Additional Outputs		**Additional Inputs**	
Cleaning by AIR	R.O.	Room temperature	TS
Flux Fan	VCT	Water system low pressure switch	NCC
Secondary feeding screw	R.O.	Not used analog	1xLT
Ash extraction	R.O.	Not used digital	2xNCC
Mechanical Cleaning	R.O.		

BURNER/BOILER with STORAGE TANK

Mandatory Outputs		Mandatory Inputs	
Flux Fan (main fan)	VCT	Boiler temperature	TS
Dosing screw	T.O.	Photo sensor for flame presence	PS
Igniter	R.O.	Room Thermostat Switch	NCC
Main CH Pump	T.O.	Alarm input (back fire)	NCC
DHW Pump	R.O.	DHW Tank temperature	TS
Cleaning/Ash extraction	R.O.	Over pressure/ low air flow switch	NCC
		Hall sensor for main fan	HTS
Additional Outputs		**Additional Inputs**	
Flux Fan	VCT	Storage tank temperature	TS
Storage Tank Pump	R.O.	Mixing valve output temperature	TS
Mixing valve Command	R.O.	Water system low pressure switch	NCC
Mixing valve Direction (Open/Close)	R.O.	Not used digital	2xNCC

Other functions and/or input/output configurations are available at request

STB should be connected in series to feeding screw power supply for safety

Legend:

VCT – Voltage Control by TRIAC; T.O. – TRIAC ON/OFF function ; R.O. – Relay ON/OFF function;

TS – Temperature sensor input (t≤100°C); PS – Photo Sensor input

HTS – High Temperature (pt1000, t≤300°C) or (TC.K. t≤550°C) sensor input;/ NTC200k as option

NCC –Normally Closed Contact; HS –Hall Sensor for RPM stabilization