

**THERMOWATT E-BCU
DIAGNOSTIC TOOL**



**Operating instructions
Istruzioni per l'uso**



420010145600

Contents Contenuti	EN IT	3
Menus overview Visione d'insieme dei menu	EN IT	4 - 6 10 - 12
Maintenance Manutenzione	EN IT	7 13
Service Assistenza	EN IT	8 14

Contents - Index - Description - Connection

Description		3
Connection		3
Menus overview	Front description	4
	Waiting signal	4
	Gas operating cycle	4
	Light oil operating cycle	5
	Lock-out messages	5
	Lock-out diagnostic	5
	Working and Fault history	6
Maintenance	Troubleshooting	7
Service	Procedure to input phone number and Customer ID	8
	Counters reset	8

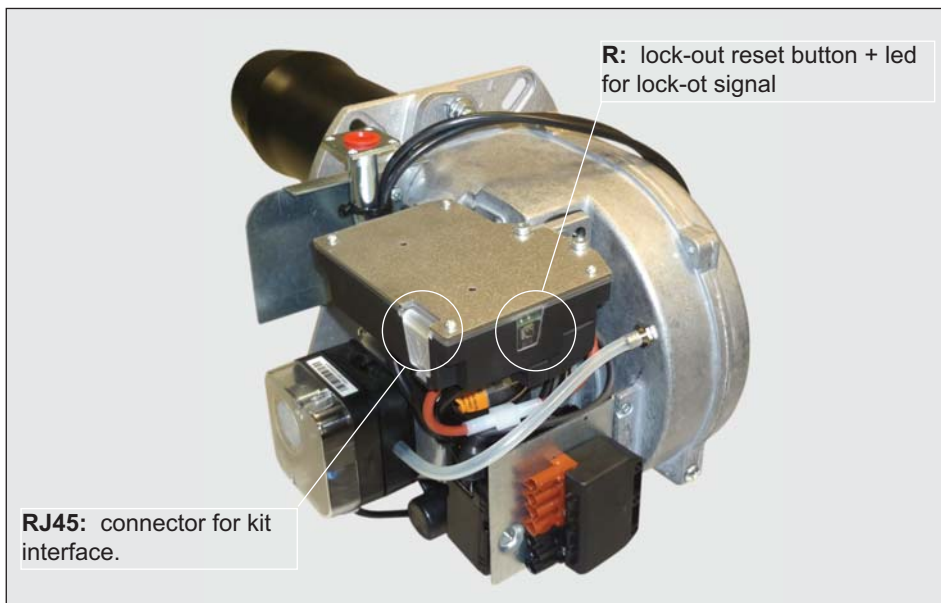
Description

The "E-BCU Diagnostic tool" can be used only on Ecoflam burners equipped with Thermowatt E-BCU control boxes and by trained personnel.

Though simple pittogtam based communication it is possible to know burner operation status (i.e. working phase, prepurge, running, etc.). Furthermore the Dignostic tool gives information on burner running and fault history (i.e. burner starts, running hours, lock-outs, etc.)



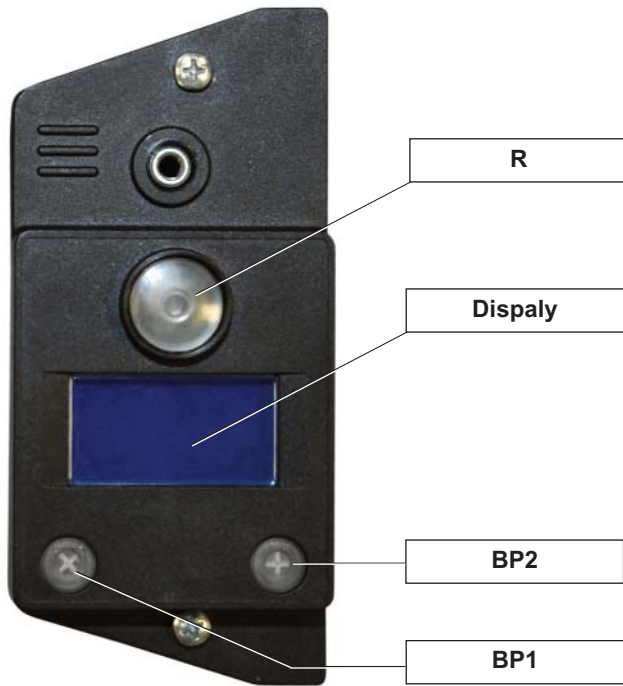
Connection



! The diagnostic tool includes connection cable with RJ45 connector. It has to be interfaced only with Ecoflam burners equipped with Thermowatt "E-BCU gas" or "E-BCU oil" control boxes. Before tool connection/disconnection switch off burner electric supply in order to injury to people or appliance.

Menus overview

Front description



- R - inactive
- BP1 - Fault Code Listing
- BP2 - Operation data listing

Waiting signals



• Waiting Heat Demand the burner is in Stand-by, the boiler thermostat is open.



• Supply voltage under lower limit.



• Waiting oil pre-heater temperature.



• Gas supply pressure too low, waiting for proper pressure.

Gas operating cycle



• Burner stand-by, waiting for heat demand.



• Fan motor off, check air pressure switch status.



• Fan motor running, waiting for air pressure switch signal.



• Fan motor running, prepurge time displayed.



• Fan motor running, igniter working, preignition time displayed.



• Gas valve open, flame stabilization time.



• Post-ignition.



• Burner running, flame on, flame signal level displayed. Running time displayed.

Menus overview

Light oil operating cycle



• Burner stand-by, waiting for heat demand.



• Oil valve open, flame stabilization time.



• Burner running, flame on, flame signal level displayed. Running time displayed.



• Fan motor running, igniter working, prepurge time displayed.



• Post-ignition.

Lock-out messages

If a lock-out occurs, the display shows alternatively the following messages.



• Burner lock-out.



• Service phone number.

Lock-out diagnostic



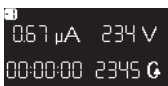
If a lock-out occurs, to show the fault cause push button BP1, the following infos will be displayed:



• 1) Last lock-out cause [-1].



• 5) Service phone number.



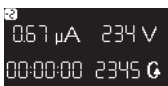
• 2) State of the burner when lock-out occurred (flame signal, supply voltage, running time, burner starts between last and previous lock-out.



• 6) Customer reference number.



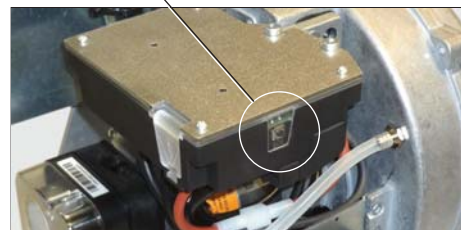
• 3) Second last lock-out cause [-2].



• 4) State of the burner when second last lock-out occurred (flame signal, supply voltage, running time, burner starts between second last and third last lock-out.

In order to reset the E-BCU, push the reset button on the control box.

R: lock-out reset button + led for lock-out signal



Menus overview

Working and Fault history



Pushing button BP2 the following infos are available (sequence):

BP2



- 1) Flame signal time (last burner ignition).



- 7) Total burner running hours from last couter reset.



- 14) Burner lock-outs due to lack of air pressure switch signal.



- 2) Average flame signal time (referred to last 5 burner ignitions).



- 8) Total stored lock-outs after last couter reset.



- 15) Not used.



- 3) Total burner ignitions.



- 9) Total burner ignitions after last lock-out reset.



- 16) Burner lock-outs due to oil pre-heater.



- 4) Total burner running hours.



- 10) Burner running hours after last lock-out reset.



- 5) Total stored lock-outs.



- 11) Burner lock-outs due to flame signal during pre-purge.



- 6) Total burner ignitions from last couter reset.



- 12) Burner lock-outs due to lack of flame signal after safety time.













- 13) Burner lock-outs due to lack of flame signal during burner operation.

Only for gas version

Only for oil version

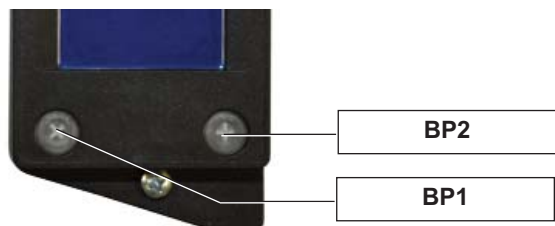
Maintenance

Troubleshooting

Symbol fault	Fault	Cause	Remedy
	Burner stand-by, waiting for heat demand.	Thermostat open or defective	Wait for heat demand. Change the thermostat.
	Supply voltage lower than minimum allowed value	Electric connection defective – BCU defective	Check electric wiring – change the BCU
	Burner lock-out	See diagnostic tool info	Unlock the burner by reset button
	Waiting oil pre-heater temperature	Before burner start the oil must reach working temperature	Wait for combustion head heating
	Gas pressure lower than minimum	Gas not available. Gas check valve closed. Wrong setting of gas pressure switch. Defective gas pressure switch	Check gas availability. Open the gas valve. Adjust pressure switch setting. Change the pressure switch
	Flame signal during pre-purge	Fuel valve defective. Ionization electrode/photocell defective. BCU defective	Change fuel valve. Change/check ionization electrode/photocell. Change the BCU
	Lack of flame signal after safety time	Fuel valve defective. Ionization electrode/photocell defective. Igniter defective.	Change fuel valve. Change/check ionization electrode/photocell. Change the BCU. Change igniter
	Lack of flame signal during burner operation	Burner wrong setting. Ionization electrode/photocell defective. BCU defective.	Verify burner setting. Change/check ionization electrode/photocell. Change the BCU.
	Lack of air pressure switch signal.	Air duct blocked. Air pressure switch defective. Air pressure switch badly adjusted.	Check air pressure connection. Change air pressure switch. Properly adjust air pressure switch setting.
	Oil pre-heater	Oil pre-heater defective	Change oil pre-heater

Service

Procedure to input phone number and Customer ID



• Service phone number.



• Customer reference number.

The phone number and the contract ID will appear if the service center has recorded them.

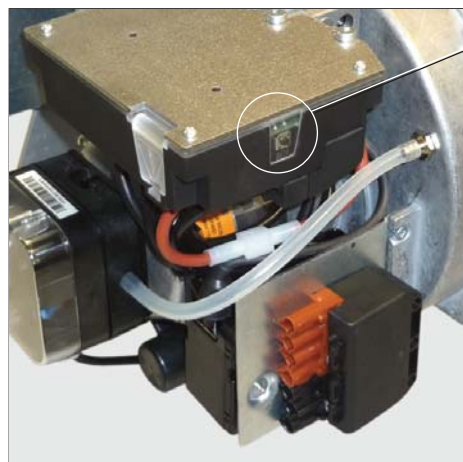
To modify the phone number:

- Enter the fault menu pushing BP1, scroll menus (again by BP1) until the desired pittogram appears.
- Press BP2 to modify the number, the first digit is flashing.
- Increase the value using BP1 button.
- Confirm the value using BP2 button.
- Repeat until last digit has been modified. After last digit has been confirmed, the complete pittogram appears for 5 sec., then the display shows functioning screen.

To modify the Customer ID:

- Enter the fault menu pushing BP1, scroll menus (again by BP1) until the desired pittogram appears (Contract number).
- Press BP2 to modify the number, the first digit is flashing.
- Increase the value using BP1 button.
- Confirm the value using BP2 button.
- Repeat until last digit has been modified. After last digit has been confirmed, the complete pittogram appears for 5 sec., then the display shows functioning screen.

Counters reset



R: lock-out reset button + led for lock-ot signal

Historical infos about burner functioning and lock-outs are stored inside the burner BCU. To reset that memory press the R button on BCU longer than 15 sec.

Ecoflam

Ecoflam Bruciatori S.p.A.

Via Roma, 64 - 31023 Resana (TV) - Italy

Tel. +39 0423 719500

Fax +39 0423 719580

<http://www.ecoflam-burners.com>

e-mail: export@ecoflam-burners.com

Società soggetta alla direzione e al coordinamento di Ariston Thermo S.p.A.
Via A. Merloni, 45 - 60044 Fabriano (AN) - CF 01026940427

Ecoflam Bruciatori S.p.A. reserves the right to make any adjustments, without prior notice, which is considered necessary or useful to its products, without affecting their main features

Ecoflam Bruciatori S.p.A. si riserva il diritto di apportare ai prodotti le modifiche che riterrà necessarie o utili, senza pregiudicare le caratteristiche principali.

La maison Ecoflam Bruciatori S.p.A. se réserve le droit d'apporter les modifications qu'elle jugera nécessaires ou utiles à ses produits sans pour autant nuire à leurs caractéristiques principales

Ecoflam Bruciatori S.p.A. se reserva el derecho a introducir en sus productos todas las modificaciones que considere necesarias o utiles, sin perjudicar sus características

"Ecoflam Bruciatori S.p.A." оставляет за собой право вносить в конструкцию оборудования любые необходимые изменения без особого предупреждения.

Ecoflam Bruciatori S.p.A. behält sich das Recht vor, ohne Beeinträchtigung der wesentlichen Eigenschaften für notwendig oder sinnvoll erachtete Änderungen an den Produkten vorzunehmen.