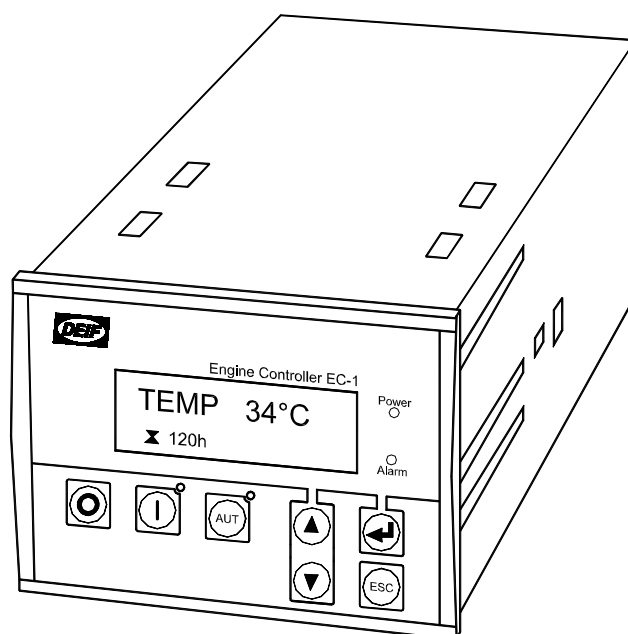


# Operator's Manual

## Engine Controller EC-1/EC-1M

4189340402B

SW 1.0X.X



- *Push-buttons*
- *LEDs*
- *Icon list*
- *Display readings*



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## 1. About this document

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### General purpose

This document is the Operator's Manual for DEIF's engine controller EC-1/EC-1M. The document includes information about push-buttons, LEDs, display readings and icon list.

The general purpose is to give the operator important information to be used in the daily operation of the unit.



**Please make sure to read this handbook before working with the EC-1 controller and the gen-set to be controlled. Failure to do this could result in damage to the equipment or human injury.**

### Intended users

This Operator's Manual is mainly intended for the daily user. On the basis of this document the operator will be able to carry out simple day-to-day procedures.

### Contents/overall structure

The document is divided into chapters, and in order to make the structure simple and easy to use, each chapter will begin from the top of a new page.

## 2. Warnings and legal information

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### Legal information and responsibility

DEIF takes no responsibility for installation or operation of the engine set. If there is any doubt about how to install or operate the engine controlled by the unit, the company responsible for the installation or the operation of the set must be contacted.

**The units are not to be opened by unauthorised personnel. If opened anyway, the warranty will be lost.**

### Electrostatic discharge awareness

Sufficient care must be taken to protect the terminals against static discharges during the installation. Once the unit is installed and connected, these precautions are no longer necessary.

### Safety issues

Installing the unit implies work with dangerous currents and voltages. Therefore, the installation should only be carried out by authorised personnel who understand the risks involved in working with live electrical equipment.



**Be aware of the hazardous live currents and voltages. Do not touch any AC measurement inputs as this could lead to injury or death.**

### Factory settings

The unit is delivered with certain factory settings. Given the fact that these settings are based on average values, they are not necessarily the correct settings for matching the individual engine. Thus precautions must be taken to check the settings before running the engine.

### Definitions

Throughout this document a number of notes and warnings will be presented. To ensure that these are noticed, they will be highlighted in order to separate them from the general text.

#### Notes



**The notes provide general information, which will be helpful for the reader to bear in mind.**

#### Warning



**The warnings indicate a potentially dangerous situation, which could result in death, personal injury or damaged equipment, if certain guidelines are not followed.**

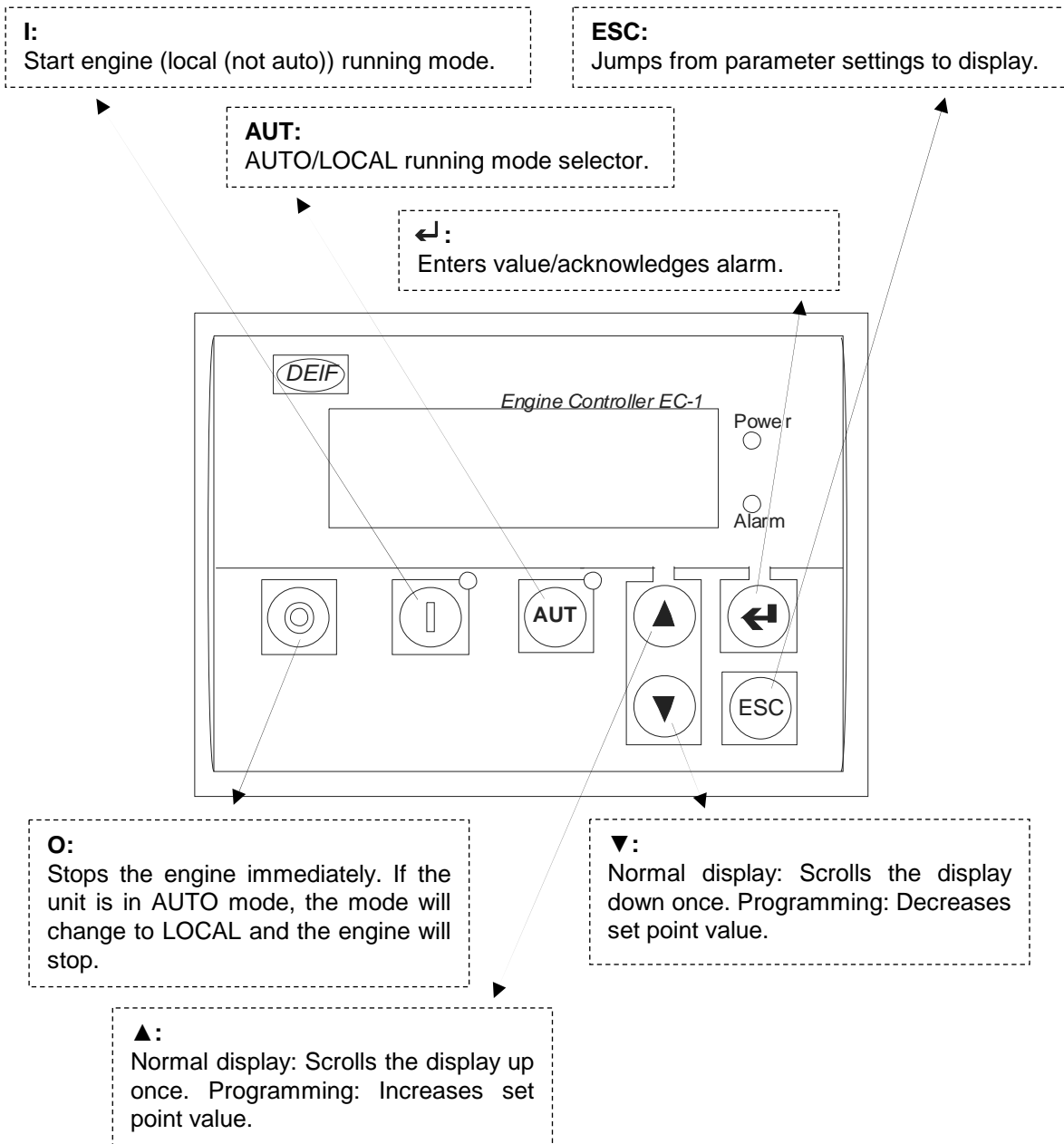
### 3. Push-buttons, LEDs and display

#### Unit

Front dimensions H x W	78 x 106 mm (3.07" x 4.17")
Unit depth	150 mm (5.91")

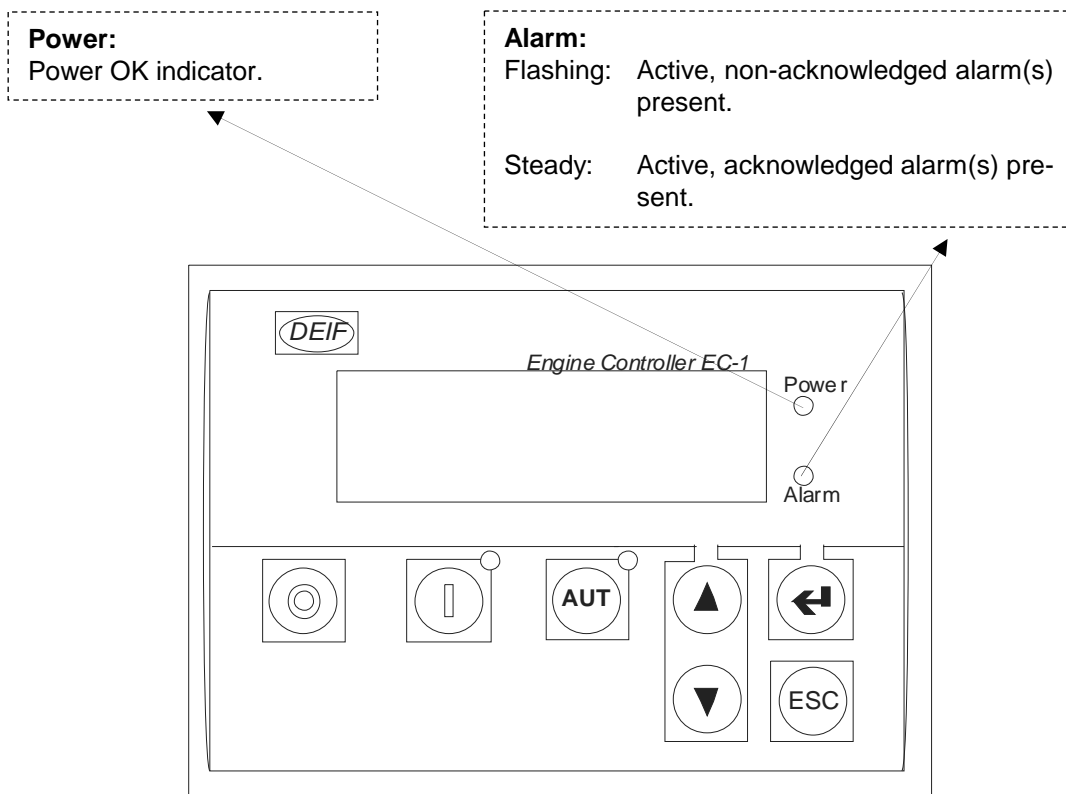
#### Push-button functions

There are 7 push-buttons on the unit with the following functions:



- I:** Start engine (local (not auto)) running mode.
- O:** Stops the engine instantaneously. If the unit is in AUTO mode, the mode will change to LOCAL and the engine will stop.
- AUT:** AUTO/LOCAL running mode selector.
- ESC:** Jumps from parameter settings to display.
- ▲:** Normal display: Scrolls the display up once. Programming: Increases set point value.
- ▼:** Normal display: Scrolls the display down once. Programming: Decreases set point value.
- ↵:** Enters value/acknowledges alarm.

**LED functions**

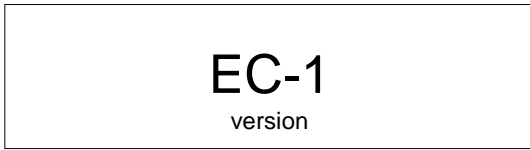


**Power:** Power OK indicator.

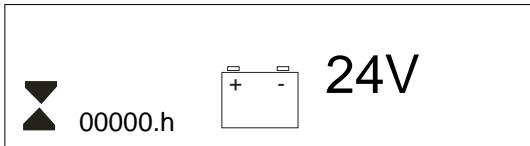
**Alarm:** Flashing: Active, non-acknowledged alarm(s) present.  
 Steady: Active, acknowledged alarm(s) present.

**Display functions**

The display indicates both readings and alarms. Illustrated below are examples with icons and English language.



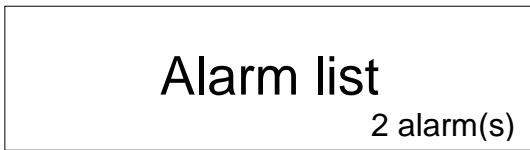
Type and software version.



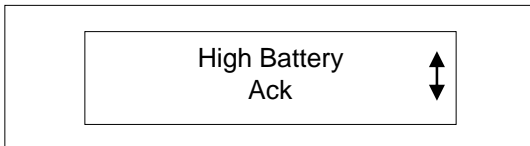
Battery voltage and running hours counter.



Service timer 1/2.



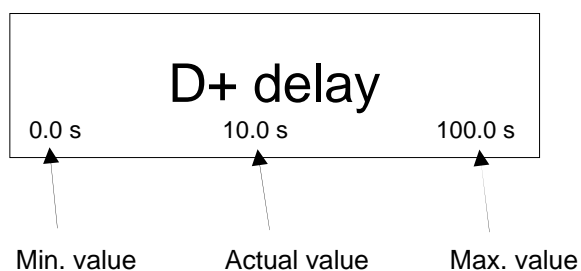
Press  $\leftarrow$  to enter the list of active alarms.



**Active alarm list.** The alarm list automatically pops up, when an alarm appears. When the arrow is present, more alarms are active. Press  $\Delta$  to scroll through the list. Exit the list by pressing ESC.



Press  $\leftarrow$  to enter the parameter setting.



Parameter example: D+ delay setting. Use ▲ or ▼ to scroll through the settings list. If change of settings is necessary, press ↵ and enter the password. Then use ▲ or ▼ to change values. Use ESC to leave settings.



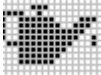
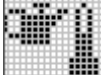
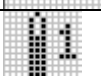

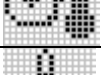
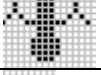
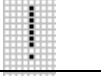
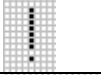
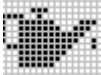
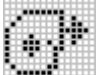
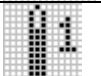
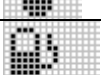
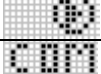
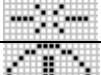
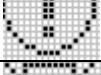

The available parameters depend on the set options. Some parameters can only be changed using the PC utility software (USW) for EC-1. The parameter list will automatically be abandoned, if no button is pressed during a 30 sec. period.




































### Icon list







The list covers all available icons including those related to the engine communication.

	Warning list	Icon
1	Low oil pressure warning	
2	EIC temp. lube oil	
3	High coolant temp. warning	
4	High intercooler temp.	
5	Defect coolant level switch	
6	EMR warning	
7	JDEC warning	
8	Oil pressure	
9	Intake manifold	
10	Coolant temperature	
11	Fuel injection pump	
12	EI comm. error	
13	EIC warning	
14	Stop limit exceeded	
15	EMS warning	
16	Charge 61	

	<b>Shutdown list</b>	<b>Icon</b>
17	Overspeed shutdown	
18	Low oil pressure shutdown	
19	EIC temp. lube oil	
20	Low coolant level shutdown	
21	High coolant temp. shutdown	
22	High oil temp. shutdown	
23	High charge air temp. shutdown	
24	High coolant temp. shutdown	
25	EMR shutdown	
26	JDEC shutdown	
27	Fuel temperature	
28	Fuel control valve	
29	ECU failure	
30	EIC shutdown	
31	EMS shutdown	

	<b>Analogue readings</b>	<b>Icon</b>
32	EIC speed	
33	EIC coolant temp.	
34	EIC oil pressure	
35	EIC faults	
36	EIC oil temp.	
37	EIC fuel temp.	
38	EIC boost pressure	
39	EIC air inlet temp.	
40	EIC coolant level	
41	EIC fuel rate	
42	EIC charge air pressure	
43	EIC charge air temp.	
44	EIC air inlet pressure	
45	EIC exhaust gas temp.	
46	EIC engine hours	
47	EIC oil f. diff. press.	
48	EIC battery voltage	
49	EIC fuel del. press.	

50	EIC oil level	
51	EIC crankcase press.	
52	EIC coolant pressure	
53	EIC water in. fuel	



**For detailed information about changing parameters and setup, please see the Installation Instructions and Reference Handbook.**

DEIF A/S reserves the right to change any of the above